

Obstetrics

Current Awareness Newsletter

March 2015

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- 2: New NICE Guidance**
- 3: Latest relevant Systematic Reviews from the Cochrane Library.**
- 4: New activity in Uptodate**

Tables of Contents from relevant journals

[Click here British Journal of Obstetrics And Gynaecology](#)

[Click here American Journal of Obstetrics and Gynecology](#)

[Click here Obstetrics and Gynaecology](#)

[New NICE Guidance](#)

New thresholds for diagnosis of diabetes in pregnancy

GPs should diagnose women with gestational diabetes if they either have a fasting plasma glucose level of 5.6 mmol/litre or above, or a 2-hour plasma glucose level of 7.8 mmol/litre or above, according to updated guidance from NICE.

[Diabetes in pregnancy \(update\) support tools NICE Pathway](#)

Latest relevant Systematic Reviews from the Cochrane Library

Active versus expectant management for women in the third stage of labour

Cecily M Begley, Gillian ML Gyte, Declan Devane, William McGuire, Andrew Weeks
Online Publication Date: March 2015

Methods of milk expression for lactating women

Genevieve E Becker, Hazel A Smith, Fionnuala Cooney
Online Publication Date: February 2015
Free Access

Calcium supplementation (other than for preventing or treating hypertension) for improving pregnancy and infant outcomes

Pranom Buppasiri, Pisake Lumbiganon, Jadsada Thinkhamrop, Chetta Ngamjarus, Malinee Laopaiboon, Nancy Medley
Online Publication Date: February 2015

Routine blood cultures in the management of pyelonephritis in pregnancy for improving outcomes

Harumi Gomi, Yoshihito Goto, Malinee Laopaiboon, Rie Usui, Rintaro Mori
Online Publication Date: February 2015

Interventions for helping to turn term breech babies to head first presentation when using external cephalic version

Catherine Cluver, Gillian ML Gyte, Marlene Sinclair, Therese Dowswell, G Justus Hofmeyr
Online Publication Date: February 2015

Group versus conventional antenatal care for women

Christine J Catling, Nancy Medley, Maralyn Foureur, Clare Ryan, Nicky Leap, Alison Teate, Caroline SE Homer
Online Publication Date: February 2015

Antibiotic regimens for postpartum endometritis

A Dhanya Mackeen, Roger E Packard, Erika Ota, Linda Speer
Online Publication Date: February 2015

Zinc supplementation for improving pregnancy and infant outcome

Erika Ota, Rintaro Mori, Philippa Middleton, Ruoyan Tobe-Gai, Kassam Mahomed, Celine Miyazaki, Zulfiqar A Bhutta
Online Publication Date: February 2015

[Antenatal lower genital tract infection screening and treatment programs for preventing preterm delivery](#)

Ussanee S Sangkomkamhang, Pisake Lumbiganon, Witoon Prasertcharoensuk, Malinee Laopaiboon

Online Publication Date: February 2015

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[New activity in UpToDate](#)

What's new in obstetrics and gynecology

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Conflict of interest policy

All topics are updated as new evidence becomes available and our [peer review process](#) is complete. **Literature review current through:** Feb 2015. | **This topic last updated:** Mar 02, 2015.

The following represent additions to UpToDate from the past six months that were considered by the editors and authors to be of particular interest. The most recent What's New entries are at the top of each subsection.

OBSTETRICS

Safety of inhaled long-acting beta agonist/glucocorticoid for asthma during pregnancy (February 2015)

An important clinical question for pregnant women with asthma is whether using a combination long-acting beta-agonist (LABA) plus inhaled glucocorticoid confers an increased risk for adverse fetal outcomes, compared with monotherapy using a higher dose of the inhaled glucocorticoid. In a study of 1302 pregnant women with asthma, the risk for a major congenital malformation was not increased when a LABA plus low dose inhaled glucocorticoid was compared with a medium dose inhaled glucocorticoid, or when a LABA plus medium-dose inhaled glucocorticoid was compared with a high-dose inhaled glucocorticoid [1]. (See "[Management of asthma during pregnancy](#)", section on 'Long-acting beta-adrenergic agents'.)

Oral anti-hyperglycemic drugs for treatment of gestational diabetes mellitus (February 2015)

Prevention of macrosomia is a major goal of treatment of gestational diabetes mellitus (GDM), but the best approach is controversial. In a 2015 systematic review and meta-analysis of randomized trials comparing neonatal outcomes in women with GDM treated with glyburide, metformin, or

insulin therapy, women assigned to glyburide had a higher rate of macrosomia than those assigned to metformin or insulin therapy [2]. Metformin therapy and insulin therapy resulted in similar rates of macrosomia. We prefer insulin therapy for women with GDM who fail nutritional therapy because it is effective and safe, while there is no information about the long-term effects of transplacental passage of oral anti-hyperglycemic drugs. However, oral anti-hyperglycemic agents are a reasonable alternative for women who refuse to take, or are unable to comply with, insulin therapy. (See ["Gestational diabetes mellitus: Glycemic control and maternal prognosis", section on 'Glyburide'.](#))

Target diastolic blood pressure in pregnancy (February 2015)

In pregnant women with chronic (preexistent) or gestational hypertension, the effect of less-tight versus tight control of hypertension on pregnancy complications is unclear. A randomized trial that assigned pregnant women with gestational or chronic hypertension to diastolic blood pressure treatment targets of 85 or 100 mmHg reported similar maternal, fetal, and neonatal outcomes in both groups [3]. More women in the 100 mmHg target group developed severe hypertension, although this was not associated with an increase in transient ischemic attack or stroke. The trial was not powered to exclude a clinically important increase in fetal growth restriction in the 85 mmHg target group. For these reasons, we continue to suggest a diastolic pressure target of 90 to 100 mmHg for pregnant women with hypertension without end-organ damage. (See ["Management of hypertension in pregnant and postpartum women", section on 'Blood pressure goal'.](#))

Risk of depression among pregnant women with epilepsy (February 2015)

Individuals with epilepsy have an increased prevalence of depression compared with individuals without epilepsy, and this appears to be true during pregnancy and the postpartum period as well. In a population-based study that included 706 pregnancies in women with epilepsy and over 100,000 pregnancies in those without epilepsy, peripartum depression affected 27 percent of women with epilepsy compared with 23 percent of women with other chronic diseases and 19 percent of the entire non-epilepsy population [4]. Risk factors for depression included high seizure frequency, antiepileptic drug use, and prepregnancy depression or anxiety. Detection of depression during pregnancy is important because both pharmacologic and nonpharmacologic treatments are available, and untreated illness may have consequences for both mother and child. (See ["Risks associated with epilepsy and pregnancy", section on 'Other risks'.](#))

Mortality decreasing for extremely preterm infants (January 2015)

Although infants born extremely premature have the highest mortality rate, mortality has decreased with advances in prenatal and neonatal care. This was illustrated in a large prospective study of 22,248 extremely premature infants (defined as gestational age between 22 and 28 6/7 weeks) conducted by the National Institute of Child Health and Human Development Neonatal Research Network that compared mortality across three time periods (2000 to 2003, 2004 to 2007, and 2008 to 2011) [5]. In this analysis, mortality was lowest in the third time period (2008 to 2011) due to decreased rates of deaths related to pulmonary causes (neonatal respiratory distress syndrome and bronchopulmonary dysplasia), immaturity, infection, and central nervous system injury. The study also documented improved prenatal care among mothers of these preterm infants, as the percentage of women who received prenatal care increased throughout the three study periods including higher

rates of prenatal glucocorticoid administration. (See "[Incidence and mortality of the premature infant](#)", section on 'Extremely preterm infants'.)

Timing of antiretroviral initiation during pregnancy (January 2015)

The risk of HIV transmission from an infected mother to her infant is proportional to the level of maternal viremia at delivery. Among women not already taking an antiretroviral regimen, viral suppression at delivery is more likely when a regimen is initiated earlier during gestation. In a large US cohort of antiretroviral-naïve HIV-infected women who initiated a combination antiretroviral regimen during pregnancy, a detectable viral load at delivery was documented in 13 percent overall, but in 24 percent of those who initiated the regimen during the third trimester [6]. See "[Use of antiretroviral medications in pregnant HIV-infected patients and their infants in resource-rich settings](#)", section on 'When to initiate antiretroviral medications during pregnancy'.)

Risk of congenital anomalies in offspring of consanguineous couples (January 2015)

There is increasing evidence that the prevalence of congenital and genetic disorders among offspring of consanguineous couples is about double that compared to non-consanguineous couples. In a retrospective study of a multiethnic population referred to a specialist center in Berlin, Germany, the prevalence of major anomalies among fetuses with consanguineous and non-consanguineous parents was 6.1 and 2.8 percent, respectively [7]. This information is useful for managing pregnancy in a consanguineous couple or counseling consanguineous couples who are contemplating pregnancy. (See "[Genetic and environmental causes of birth defects](#)", section on 'Consanguinity'.)

No change to recommendations for pain medicine use in pregnancy (January 2015)

Studies of pain medicine use by pregnant women have suggested associations between prescription nonsteroidal antiinflammatory drugs (NSAIDs) and the risk of miscarriage, the use of acetaminophen and subsequent childhood attention deficit hyperactivity disorder (ADHD), and the use of opioids and the development of fetal neural tube defects. A 2015 US Food and Drug Administration (FDA) Drug Safety Communication has found methodologic limitations to these studies and inconclusive results regarding NSAIDs and acetaminophen use [8]. Further investigation is needed regarding maternal opioid use and the risk of fetal neural tube defects. It is always advisable for pregnant women to avoid medications that are not clearly needed. However, specific recommendations regarding analgesic use need not change based on this current analysis. (See "[Initial prenatal assessment and first trimester prenatal care](#)", section on 'Treatment of pain and fever'.)

Success of preterm labor induction (January 2015)

Induction of labor is less likely to be successful in very preterm pregnancies, but reliable estimates of success rates have not been published. In a study of data from the National Institute of Child Health and Human Development Consortium on Safe Labor, 57 percent of pregnancies induced at 24 to 28 weeks, and 54 percent of those at 28 to 31 weeks had a successful vaginal delivery [9]. Success rates were highest in multiparous women and pregnancies ≥ 34 weeks. (See "[Induction of labor](#)", section on 'Predicting a successful induction'.)

Congenital anomalies associated with increased nuchal translucency on prenatal ultrasonography (December 2014)

Measurement of fetal nuchal translucency on prenatal ultrasonography is a first trimester screening test for Down syndrome. Increased nuchal translucency is associated with Down syndrome, but also with an increased risk of congenital cardiac and noncardiac anomalies. In a large population-based study of euploid liveborn infants without critical congenital heart defects, the risk of hydrocephalus, osteodystrophy, and anomalies of the lung, diaphragm, and small intestine was increased approximately threefold in infants with first trimester nuchal translucency measurement \geq 95th percentile compared with those $<$ 95th percentile [10]. These findings highlight the importance of a thorough fetal anatomic survey when increased fetal nuchal translucency is identified. (See "[First trimester cystic hygroma and increased nuchal translucency](#)", section on 'Noncardiac'.)

Blunt versus sharp uterine incision expansion (December 2014)

The uterine incision at cesarean delivery can be expanded using a blunt or sharp technique. In a 2014 meta-analysis of randomized trials of blunt versus sharp incision expansion, blunt expansion resulted in a 50 percent reduction in the rate of unintended extensions and a lower drop in postpartum hemoglobin and hematocrit, and reduced operative time by two minutes [11]. These data support our recommendation for blunt incision expansion. (See "[Cesarean delivery: Technique](#)", section on 'Procedure'.)

Low Apgar scores: Predictors of neonatal and infant deaths (November 2014)

Although not used to guide resuscitation, Apgar scores, first introduced in 1953, have been used as a measure of the newborn's overall clinical status and response to resuscitation during the first minutes after delivery. The accurate predictability of low Apgar scores for mortality was confirmed by a study that reviewed discharge and mortality data for all births in Scotland between 1992 and 2010 [12]. Linear regression analysis showed Apgar scores \leq 3 at five minutes, compared with normal scores (between 7 and 10), were associated with 300-fold increased risk of early neonatal death (birth to seven days of life), 30-fold increased risk of late neonatal death (7 to 28 days of life), and 50-fold increased infant death (up to one year of age). (See "[Neonatal resuscitation in the delivery room](#)", section on 'Apgar scores'.)

Risk of gestational hypertension or preeclampsia in kidney donors (November 2014)

The assessment of risk conferred by living kidney donation is critically important in determining the suitability of individual donor candidates. A retrospective cohort study demonstrated an increased risk of gestational hypertension or preeclampsia compared with well-matched nondonors [13]. Women of childbearing age who wish to donate a kidney should be advised of this increased risk. (See "[Evaluation of the living kidney donor and risk of donor nephrectomy](#)", section on 'Maternal and fetal outcomes'.)

Anticoagulation and placenta-mediated complications (October 2014)

Placenta-mediated pregnancy complications include pregnancy loss, severe/early-onset preeclampsia, and birth of small for gestational age infant. Anticoagulation has been recommended to prevent placenta-mediated pregnancy complications in women with thrombophilia, but the effectiveness of this approach is controversial. In a multinational randomized trial (TIPPS), prophylactic use of dalteparin in women with thrombophilia and a history of previous placenta-

mediated pregnancy complications did not reduce the occurrence of the composite outcome (pregnancy loss, severe/early-onset preeclampsia, birth of small for gestational age infant, major venous thromboembolism) compared with women who did not receive dalteparin [14]. We believe the available evidence supports not prescribing anticoagulants to prevent adverse obstetrical outcomes in pregnant women with thrombophilia. (See "[Inherited thrombophilias in pregnancy](#)", section on '[Prevention of pregnancy complications](#)'.)

Aspirin for preventing preeclampsia (September 2014)

For women at high risk of developing preeclampsia, the US Preventive Services Task Force (USPSTF) now recommends use of low dose aspirin after 12 weeks of gestation to reduce the risk of preeclampsia, preterm birth, and fetal growth restriction [15]. Low dose aspirin prophylaxis results in potentially substantial benefit and no more than minimally harmful effects. This recommendation is consistent with recommendations of other professional organizations. The USPSTF also offered a pragmatic approach for selecting a high risk population, while acknowledging that there are no validated methods for identifying these women. (See "[Preeclampsia: Prevention](#)", section on '[Approach to therapy](#)'.)

OFFICE GYNECOLOGY

Interim guidelines for cervical cancer screening with primary HPV testing (February 2015)

Interim guidelines from the Society of Gynecologic Oncology and the American Society for Colposcopy and Cervical Pathology are the first US guidelines to suggest primary human papillomavirus (HPV) testing as an option for cervical cancer screening in women starting at age 25 years (table 1) [16]. This option is provided based on a randomized trial comparing primary HPV testing with cytology (Pap test) or co-testing (Pap test and HPV testing) [17]. Among women ≥ 25 years, primary HPV testing was more sensitive for the detection of cervical intraepithelial neoplasia (CIN) 3 or greater. However, the study is limited by having only three years of follow-up, use of a surrogate outcome (CIN3 rather than cancer), and highly structured follow up protocols that may not be feasible in practice. Given these limitations, we continue to suggest that women age <30 years not be screened for cervical cancer with primary HPV testing. (See "[Screening for cervical cancer](#)", section on '[Primary HPV testing](#)'.)

Urine testing for human papillomavirus (November 2014)

Urine tests for human papillomavirus (HPV) DNA have been developed for detecting cervical HPV infection in women, although this testing is not clinically available. The efficacy of urine testing for different genotypes of HPV was evaluated in a meta-analysis of 14 studies including 1443 women [18,19]. For detection of high-risk HPV, the sensitivity was 77 percent and specificity was 88 percent. For detection of HPV 16 and 18 specifically, sensitivity was 73 percent and specificity was 98 percent. This method of testing may have potential in large research studies or as an alternative test where routine cervico-vaginal exams are not economically feasible or less likely to be performed due to cultural barriers. (See "[Cervical cancer screening tests: Techniques for cervical cytology and human papillomavirus testing](#)", section on '[Other methods](#)'.)

Long-acting reversible contraception for adolescents (October 2014)

The intrauterine device and etonogestrel implant are two types of long-acting reversible contraception (LARC). Although LARC is more effective than other methods, few adolescents choose LARC. Lack of access to services, lack of information, and increased cost may be barriers to LARC for adolescents. Removal of these barriers appears to be associated with increased use of LARC and decreased rates of pregnancy. In a prospective study, 1404 urban adolescents 15 to 19 years of age were educated about reversible contraception (emphasizing the benefits of LARC), provided with their choice of reversible contraception at no cost, and followed for two to three years [20]. Nearly three-quarters of participants chose LARC. The pregnancy rate among participants was nearly five times less than that in a contemporaneous cohort of sexually active teenagers in the United States (34.0 versus 158.5 per 1000). The American Academy of Pediatrics now recommends the etonogestrel implant and intrauterine device as first-line contraceptive options for adolescents [21]. (See ["Contraception: Overview of issues specific to adolescents", section on 'Overcoming barriers'.](#))

Levonorgestrel IUD in endometrial carcinoma prevention (September 2014)

The levonorgestrel-releasing intrauterine device (LNg-IUD) is a popular option for both contraception and treatment of abnormal uterine bleeding (AUB). It also appears to have a preventive effect on endometrial carcinoma, at least in women with AUB. One of the largest studies of this issue was a national registry study from Finland that reported that women using the LNg-IUD for treatment of menorrhagia had one-half the expected incidence of endometrial carcinoma [22]. The results of this study support a potential preventive, as well as therapeutic, role of the LNg-IUD in women with AUB. (See ["Endometrial carcinoma: Epidemiology and risk factors", section on 'Hormonal contraceptives'.](#))

KEEPS hormone therapy trial in newly menopausal women (September 2014)

The Women's Health Initiative (WHI), a set of menopausal hormone therapy (MHT) trials in older postmenopausal women (average age 63 years) reported an excess risk of coronary heart disease (CHD) with MHT. Emerging data, including secondary analyses from the WHI, now suggest that use of MHT in the early menopausal years is not associated with excess CHD risk. The Kronos Early Estrogen Prevention Study (KEEPS) is the first randomized trial of MHT in younger menopausal women (727 women ages 45 to 54 years) [23]. When combined with cyclical monthly oral progesterone, low dose oral conjugated estrogen (0.45 mg daily) or transdermal estradiol (50 mcg daily) for four years relieved menopausal symptoms. While several markers of cardiovascular risk improved in the MHT group, there was no significant effect on surrogate markers of atherosclerosis progression (coronary artery calcium and carotid intima-medial thickness) when compared to placebo. This trial provides additional reassurance that early use of MHT is safe for the treatment of menopausal symptoms, though it does not support a role for MHT in prevention. (See ["Menopausal hormone therapy and cardiovascular risk", section on 'Timing of exposure'.](#))

Injectable progestins and risk of venous thrombosis (September 2014)

In contrast to other progestin-only contraceptives, depot medroxyprogesterone acetate (DMPA) use may be associated with an increased risk of venous thrombosis and embolism (VTE). In a case-control study, women with a first episode of VTE were twice as likely to be DMPA users than were controls in the general population [24]. In this study, VTE was not associated with use of progestin-only pills, the levonorgestrel-releasing intrauterine device, or the progestin-only contraceptive

implant. However, in the absence of data about absolute risk of VTE in DMPA users, we continue to think that the advantages of using DMPA generally outweigh the risks for women with a history of VTE. (See "[Depot medroxyprogesterone acetate for contraception](#)", section on 'Cardiovascular risk'.)

GYNECOLOGIC SURGERY

Efficacy of surgical treatment for ovarian remnant syndrome (February 2015)

Ovarian remnant syndrome is the presence of residual ovarian tissue after oophorectomy, which may cause pelvic pain. Most studies have reported high success rates with surgical treatment. In a retrospective series of women with ovarian remnant syndrome or the related disorder ovarian retention syndrome (when the ovaries are purposefully left intact), rates of success with surgical treatment were lower than described in previous studies [25]. Only 10 of 20 women with ovarian remnant syndrome experienced improvements in pain scores. Endometriosis was a significant risk factor for lack of treatment success. (See "[Ovarian remnant syndrome](#)", section on 'Choice of treatment method'.)

GYNECOLOGIC ONCOLOGY

FDA approval for bevacizumab for cervical cancer (August 2014)

For women with advanced, recurrent, or metastatic cervical cancer, a Gynecologic Oncology Group randomized trial (GOG 240) showed that chemotherapy plus bevacizumab significantly improved outcomes, including a prolongation of overall survival, compared with the administration of chemotherapy alone. Based on these results, the US Food and Drug Administration approved the use of bevacizumab in combination with chemotherapy for these patients in August 2014 [26]. Despite these developments, issues related to costs of therapy may need to be considered, especially in underdeveloped areas. (See "[Management of recurrent or metastatic cervical cancer](#)", section on 'Chemotherapy plus bevacizumab as first-line treatment'.)

REPRODUCTIVE ENDOCRINOLOGY

First live birth after uterine transplantation (October 2014)

Uterine transplantation is an investigational procedure performed in a few centers worldwide. The first live birth after uterine transplantation was recently reported [27]. The donor was a 61-year-old unrelated family friend. The recipient was a 35-year-old woman with congenital Müllerian agenesis who delivered a healthy, appropriately grown infant via cesarean section at 32 weeks because of preeclampsia. The mother and baby were doing well two weeks postdelivery. This report supports the feasibility of uterine transplantation as a potential treatment for uterus-associated infertility. (See "[Surgical management of congenital uterine anomalies](#)", section on 'Uterine transplantation'.)

Letrozole versus clomiphene citrate for ovulation induction in PCOS (October 2014)

Clomiphene citrate (CC) has been the first line ovulation induction drug for women with polycystic ovary syndrome (PCOS) for many years. However, a multicenter trial in 750 women with PCOS suggests that letrozole results in higher cumulative birth rates (over five cycles) when compared to CC (27.5 percent and 19.1 percent, respectively) [28]. Body mass index (BMI) had a significant impact on live birth rates. For women with a BMI \leq 30.3, the cumulative live birth rate (approximately 30 percent)

was similar in the CC and letrozole groups. For women with a BMI ≥ 30.3 , the cumulative live birth rates were significantly higher with letrozole when compared to CC (20 versus 10 percent). The possible advantage of letrozole was supported by a meta-analysis of six trials, including this multicenter trial, comparing letrozole and CC, which found higher birth rates with letrozole although BMI data were not provided [29].

Safety data suggest that letrozole is not associated with an increased risk of congenital malformations, but the evidence is based upon a relatively small number of pregnancies. Unlike CC, letrozole is not approved in any country for ovulation induction. However, based upon available data, for women with PCOS pursuing ovulation induction, we now suggest letrozole for those with a BMI >30 kg/m², while we still suggest CC for those with a BMI ≤ 30 kg/m².

(See "[Ovulation induction with letrozole](#)", section on 'Ovulation induction in PCOS'.)

UROGYNECOLOGY

Transobturator versus retropubic slings for stress urinary incontinence in women (December 2014)

Five-year follow-up data from the Trial of Midurethral Slings (TOMUS), which randomized women to either a retropubic sling or a transobturator sling, demonstrated decreasing continence rates for women in both treatment groups [30]. The continence rate was higher in retropubic sling patients as compared with transobturator sling patients, but not statistically different (51.3 percent versus 43.4 percent). A greater proportion of women who underwent a transobturator sling procedure reported a "much better or very much better" urinary status. The overall mesh erosion rate was low, but new mesh exposures developed remote from surgery. Both retropubic slings and transobturator slings are reasonable choices for the surgical management of stress urinary incontinence in women, but the continence rates of both procedures decrease with time. (See "[Surgical management of stress urinary incontinence in women: Choosing a type of midurethral sling](#)", section on 'Transobturator versus retropubic midurethral slings'.)

OTHER GYNECOLOGY

New human papillomavirus (HPV) vaccine targets nine HPV types (February 2015)

Infection with human papillomavirus (HPV) types 16, 18, 31, 33, 45, 52, and 58 is implicated in approximately 90 percent of invasive cervical cancers. The US Food and Drug Administration has approved Gardasil 9, a 9-valent HPV vaccine that targets those seven HPV types in addition to the two types associated with genital warts (6 and 11), for the prevention of HPV-related disease [31]. In a trial that included approximately 14,000 females randomly assigned to receive the 9-valent or quadrivalent HPV vaccine, immune responses with the two vaccines were comparable for the HPV types targeted by both (6, 11, 16, and 18). Additionally, the 9-valent HPV vaccine was 97 percent effective for preventing precancerous and cancerous lesions of the cervix, vagina, and vulva associated with the other targeted HPV types (31, 33, 45, 52, and 58). Safety profiles were overall similar. We favor the 9-valent HPV vaccine for its broader HPV type coverage.

Routine immunization should be offered to boys and girls aged 11 to 12, but can be administered as early as nine years of age. Catch-up vaccination should be offered for males between the ages of 13

to 21 and females between 13 to 26 years who have not been previously vaccinated. Repeat vaccination with the 9-valent vaccine is likely not warranted for individuals who have completed a series with a different HPV vaccine.

(See "[Recommendations for the use of human papillomavirus vaccines](#)", section on 'Available vaccines'.)

Circulating influenza A H3N2 viruses and influenza vaccine effectiveness in the United States (December 2014, MODIFIED January 2015)

In December 2014, the United States Centers for Disease Control and Prevention (CDC) released a health advisory stating that more than half of influenza A H3N2 viruses collected and analyzed in the United States in October and November 2014 were antigenically different (drifted) from the H3N2 antigen included in this season's influenza vaccines [32]. Most isolated influenza viruses to date have been H3N2 strains. During previous seasons in which influenza A H3N2 viruses have predominated, higher hospitalization and mortality rates have been reported among older people, very young children, and individuals with certain medical conditions. In seasons where predominant circulating influenza viruses have antigenically drifted, decreased vaccine effectiveness has been observed. Nevertheless, vaccination typically provides some cross-protection against drifted viruses and should still reduce hospitalization and death. As of early January 2015, overall vaccine effectiveness against laboratory-confirmed influenza associated with medically attended acute respiratory illness was only 23 percent [33]. Influenza vaccination is still highly recommended [32]. The CDC health advisory was issued to reemphasize the importance of the use of neuraminidase inhibitors (eg, oseltamivir, zanamivir) when indicated for the treatment and prevention of influenza infection as an adjunct to vaccination. (See "[Seasonal influenza vaccination in adults](#)", section on 'Drifted H3N2 viruses during the 2014 to 2015 influenza season' and "[Seasonal influenza in children: Prevention with vaccines](#)", section on 'Drifted H3N2 viruses during the 2014 to 2015 influenza season'.)

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Literature Search

Search History:

1. EMBASE; ("Intrapartum care" OR pre-eclampsia OR "preterm labour" OR "multiple pregnancy" OR "maternal medicine" OR "fetal abnormal*" OR "fetal growth").ti,ab; 28940 results.
2. EMBASE; 1 [Limit to: English Language and Publication Year Current-2015]; 0 results.
3. EMBASE; 1 [Limit to: English Language and Publication Year 2014-2015]; 2190 results.
4. EMBASE; (manage OR management).ti,ab; 979462 results.
5. EMBASE; 3 AND 4 [Limit to: English Language and Publication Year 2014-2015]; 271 results.

Title: A novel role for GSK3 in the regulation of the processes of human labour

Citation: Reproduction, February 2015, vol./is. 149/2(189-202), 1470-1626;1741-7899 (01 Feb 2015)

Author(s): Lim R., Lappas M.

Language: English

Abstract: Preterm birth remains the largest single cause of neonatal death and morbidity. Infection and/or inflammation are strongly associated with preterm delivery. Glycogen synthase kinase 3 (GSK3) is known to be a crucial mediator of inflammation homeostasis. The aims of this study were to determine the effect of spontaneous human labour in foetal membranes and myometrium on GSK3alpha/beta expression, and the effect of inhibition of GSK3alpha/beta on pro-labour mediators in foetal membranes and myometrium stimulated with Toll-like receptor (TLR) ligands and pro-inflammatory cytokines. Term and preterm labour in foetal membranes was associated with significantly decreased serine phosphorylated GSK3alpha and beta expression, and thus increased GSK3 activity. There was no effect of term labour on serine phosphorylated GSK3beta expression in myometrium. The specific GSK3alpha/beta inhibitor CHIR99021 significantly decreased lipopolysaccharide (ligand to TLR4)-stimulated pro-inflammatory cytokine gene expression and release; COX2 gene expression and prostaglandin release; and MMP9 gene expression and pro MMP9 release in foetal membranes and/or myometrium. CHIR99021 also decreased FSL1 (TLR2 ligand) and flagellin (TLR5 ligand)-induced pro-inflammatory cytokine gene expression and release and COX2 mRNA expression and prostaglandin release. GSK3beta siRNA knockdown in primary myometrial cells was associated with a significant decrease in IL1beta and TNFalpha-induced pro-inflammatory cytokine and prostaglandin release. In conclusion, GSK3alpha/beta activity is increased in foetal membranes after term and preterm labour. Pharmacological blockade of the kinase GSK3 markedly reduced pro-inflammatory and pro-labour mediators in human foetal membranes and myometrium, providing a possible therapeutics for the management of preterm labour.

Publication Type: Journal: Article

Source: EMBASE

Title: Sleep position, fetal growth restriction, and late-pregnancy stillbirth: The sydney stillbirth study

Citation: Obstetrics and Gynecology, February 2015, vol./is. 125/2(347-355), 0029-7844;1873-233X (06 Feb 2015)

Author(s): Gordon A., Raynes-Greenow C., Bond D., Morris J., Rawlinson W., Jeffery H.

Language: English

Abstract: OBJECTIVE:: To identify potentially modifiable risk factors for late-pregnancy stillbirth. METHODS:: This was a population-based matched case-control study of pregnant women at 32 weeks of gestation or greater booked into tertiary maternity hospitals in metropolitan Sydney between January 2006 and December 2011. The case group consisted of women with singleton pregnancies with antepartum fetal death in utero. Women in the control group were matched for booking hospital and expected delivery date with women in the case group. Data collection was performed using a semistructured interview and included validated questionnaires for specific risk factors. Adjusted odds ratios (ORs) were calculated for a priori-specified risk factors using conditional logistic regression. RESULTS:: There were 103 women in the case group and 192 women in the control group. Mean gestation was 36 weeks. Supine sleeping was reported by 10 of 103 (9.7%) of women who experienced late-pregnancy stillbirth and by 4 of 192 (2.1%) of women in the control group (adjusted OR 6.26, 95% confidence interval [CI] 1.2-34). Women who experienced stillbirth were more likely to: have been followed during pregnancy for suspected fetal growth restriction, 11.7% compared with 1.6%

(adjusted OR 5.5, 95% CI 1.36-22.5); not be in paid work, 25.2% compared with 9.4% (adjusted OR 2.9, 95% CI 1.1-7.6); and to have not received further education beyond high school, 41.7% compared with 25.5% (adjusted OR 1.9, 95% CI 1.1-3.5). None of the deaths to women who reported supine sleeping were classified as unexplained. **CONCLUSION:** This study suggests that supine sleep position may be an additional risk for late-pregnancy stillbirth in an already compromised fetus. The clinical management of suspected fetal growth restriction should be investigated further as a means of reducing late stillbirth.

Publication Type: Journal: Article

Source: EMBASE

Full Text:

Available from *Ovid* in [Obstetrics and Gynecology](#)

Title: Recent advances in the diagnosis and management of pre-eclampsia

Citation: F1000Prime Reports, February 2015, vol./is. 7/, 2051-7599;2051-7599 (03 Feb 2015)

Author(s): Duhig K.E., Shennan A.H.

Language: English

Abstract: Pre-eclampsia complicates around 5% of pregnancies and hypertensive disorders of pregnancy are responsible for over 60,000 maternal deaths worldwide annually. Pre-eclampsia is characterized by hypertension and features of multiple organ disease. Diagnosis remains a challenge as clinical presentation is highly variable and even with severe disease a woman can be asymptomatic. Pre-eclampsia is characterized by abnormal placentation with subsequent maternal inflammatory and vascular response. Improved understanding of the underlying pathophysiology relating to the role of angiogenic factors, has emerged and placed intense interest on their role in prognostic modelling or diagnosis of pre-eclampsia. This article summarizes new developments in diagnosis with a focus on angiogenic biomarkers for prediction of disease onset, and recent advances in management strategies for patients with pre-eclampsia.

Publication Type: Journal: Article

Source: EMBASE

Title: In women under 35 with unexplained infertility, IUI cycle outcomes using 50 mg of clomiphene citrate are similar to those using 100 mg

Citation: Fertility and Sterility, February 2015, vol./is. 103/2 SUPPL. 1(e31), 0015-0282 (February 2015)

Author(s): Park A.L., Craig L.B., Hansen K.R., Wild R.A., Quaas A.M.

Language: English

Abstract: **BACKGROUND:** Clomiphene Citrate (CC) is commonly used for ovulation induction in treatment of unexplained infertility. Ultrasound monitoring is often utilized to determine optimal timing for intrauterine insemination (IUI). Though the lead follicle size, and number of dominant follicles is often used to manage CC dosing, there is little data available with regards to ultrasound findings and subsequent pregnancy outcomes. **OBJECTIVE:** To evaluate dominant follicle characteristics, and clinical pregnancy rates in patients <35 with unexplained infertility undergoing 50 mg vs. 100 mg CC+IUI cycles. **MATERIALS AND METHODS:** Couples with female age <35 and a diagnosis of unexplained infertility treated with CC+IUI at a dose of 50 or 100 mg at the physician's discretion from July 2012 to August 2014 were included. Patients with multiple inseminations during the same treatment cycle and those using frozen sperm were excluded. Assessed outcomes were dominant follicle number and sizes, as well as clinical pregnancy rates (defined as a positive heartbeat on ultrasound at 6-9 weeks gestation). Data was collected on up to three cycles in each patient meeting inclusion criteria. Statistical analysis was performed using Chi Square testing and Student's t-test. A p-value of < 0.05 was considered statistically significant. **RESULTS:** Of the 119 patients meeting inclusion criteria, 55 were treated with 50 mg and 64 with 100 mg of CC initially. Demographic and clinical characteristics are listed in Table 1.

Ninety-nine patients underwent ultrasound monitoring and data was collected on a total of 195 cycles. The rates of ultrasound monitoring were the same in each group. The number of follicles measuring greater than 15 mm in the 50 mg and 100 mg were, respectively, 1.7 and 1.8 (p=0.32). The mean size of the dominant follicle was 19.4 and 20.1 (p= 0.23). Clinical pregnancy rates in the 50 mg and 100 mg group were 16.7% and 17.2% (p=0.93). One multiple pregnancy was identified in the 100 mg group (1%, p=0.32). **CONCLUSIONS:** In our population <35 with unexplained infertility undergoing CC+IUI cycles, follicular responses and clinical pregnancy rates were not different with a higher dose of clomiphene citrate. Since it can be speculated that the lower dose may be associated with fewer side effects, clinicians may choose to use 50 mg as a starting dose for patients <35 with unexplained infertility.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Posterior reversible encephalopathy syndrome in pre-eclampsia presenting as Anton syndrome

Citation: Sri Lankan Journal of Anaesthesiology, 2015, vol./is. 23/1(29-31), 1391-8834 (2015)

Author(s): Hewavitharane C.G., Manoj E.M., Perera D.S., Wanigasuriya R.U., Jayasinghe S., Liyanage H.

Language: English

Abstract: Introduction: Posterior reversible encephalopathy syndrome (PRES) is a transient clinical neuroradiological entity caused by reversible ischemia most commonly of the posterior cerebral vasculature. Diagnosis of PRES might be obscured when the patient presents with visual anosognosia (Anton syndrome) as the initial manifestation. Case report: An 18 year old lady presented with vomiting, severe headache and oedema at 32 weeks gestation. She had severe-preeclampsia evidenced by blood pressure of 160/110mmHg, hyperreflexia and albuminuria. She further had visual anosognosia (cortical blindness) and a post-partum convulsion prompting the consideration of PRES, which was later confirmed by Magnetic Resonance imaging. She underwent immediate delivery by caesarean section followed by rapid reduction of blood pressure resulting in complete recovery within 48 hours. Conclusion: Prompt recognition of Posterior Reversible Encephalopathy Syndrome (PRES), which has a strong association with pre-eclampsia, is extremely important to prevent the associated morbidity and mortality. Eventhough, the vigilant management of PRES during ante-partum period might be complicated, this case consolidates the fact that early diagnosis of PRES leads to a favourable outcome.

Publication Type: Journal: Article

Source: EMBASE

Title: Diagnosis and management of non-criteria obstetric antiphospholipid syndrome

Citation: Thrombosis and Haemostasis, 2015, vol./is. 113/1(13-19), 0340-6245 (2015)

Author(s): Arachchillage D.R.J., Machin S.J., Mackie I.J., Cohen H.

Language: English

Abstract: Accurate diagnosis of obstetric antiphospholipid syndrome (APS) is a prerequisite for optimal clinical management. The international consensus (revised Sapporo) criteria for obstetric APS do not include low positive anticardiolipin (aCL) and anti beta2 glycoprotein I (abeta₂GPI) antibodies (< 99thcentile) and/or certain clinical criteria such as two unexplained miscarriages, three non-consecutive miscarriages, late preeclampsia, placental abruption, late premature birth, or two or more unexplained in vitro fertilisation failures. In this review we examine the available evidence to address the question of whether patients who exhibit non-criteria clinical and/or laboratory manifestations should be included within the spectrum of obstetric APS. Prospective and retrospective cohort studies of women with pregnancy morbidity, particularly recurrent pregnancy loss, suggest that elimination of aCL and/or IgM abeta₂GPI, or low positive positive aCL or abeta₂GPI from APS laboratory

diagnostic criteria may result in missing the diagnosis in a sizeable number of women who could be regarded to have obstetric APS. Such prospective and retrospective studies also suggest that women with non-criteria obstetric APS may benefit from standard treatment for obstetric APS with low-molecular-weight heparin plus low-dose aspirin, with good pregnancy outcomes. Thus, non-criteria manifestations of obstetric APS may be clinically relevant, and merit investigation of therapeutic approaches. Women with obstetric APS appear to be at a higher risk than other women of pre-eclampsia, placenta-mediated complications and neonatal mortality, and also at increased long-term risk of thrombotic events. The applicability of these observations to outcomes in women with non-criteria obstetric APS remains to be determined.

Publication Type: Journal: Review

Source: EMBASE

Title: The impact of body mass index on pregnancy complications

Citation: American Journal of Obstetrics and Gynecology, January 2015, vol./is. 212/1 SUPPL. 1(S421), 0002-9378 (January 2015)

Author(s): Schuster M., Neubert A., Kirchner L., Paglia M.

Language: English

Abstract: OBJECTIVE: The intent of this study is to investigate the specific relative risk for various obstetric complications in relation to pre-pregnancy body mass index (BMI) so that patients can be better counseled about the effect maternal weight has on pregnancy outcomes. STUDY DESIGN: We performed a retrospective cohort study of 6907 pregnant women with singleton births who delivered at two large hospitals in northeast Pennsylvania between January 2004 and August 2013. The cohort was stratified according to pre-pregnancy BMI category (underweight BMI <18.9, normal weight BMI 19- 24.9, overweight BMI 25-29.9, class I obese BMI 30-34.9, class II obese BMI 35-39.9 and class III obese BMI >40). Primary outcomes which were evaluated included: gestational diabetes (GDM), pre-eclampsia, macrosomia and fetal growth restriction. The outcome in each BMI category was compared to the normal weight/underweight patient cohort. Adjusted relative risks (RRs) were estimated using Poisson regression model controlling for race, marital status, smoking status and age. The model for macrosomia also controlled for the development of GDM. RESULTS: Women were more likely to develop GDM and preeclampsia as the BMI class increase. The risk of having a macrosomic infant also increased with BMI class. Women who had class III BMI were at highest risk of developing GDM, pre-eclampsia or a macrosomic neonate. The risk for fetal growth restriction increased with increasing BMI category but the trend was not statistically significant. Furthermore the RR for fetal growth restriction was lower in patients with elevated BMI compared to normal BMI. CONCLUSION: This large retrospective cohort study showed that with every increase in BMI category, there was a significant increase in the risk of developing GDM or pre-eclampsia, or having a macrocosmic neonate when compared to normal weight patients. These findings provide valuable information which will help improve the counseling provided to obese women and optimize the management of prenatal care provided to women with an elevated BMI. (Table Presented).

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: The relationship of umbilical artery doppler measurement discordance and persistence of abnormal results in fetuses with growth restriction

Citation: American Journal of Obstetrics and Gynecology, January 2015, vol./is. 212/1 SUPPL. 1(S408), 0002-9378 (January 2015)

Author(s): Mackeen A.D., Ross J., Betz A., Paglia M.

Language: English

Abstract: OBJECTIVE: To assess the relationship of umbilical artery Doppler (UAD) S/D ratio measurement discordance to persistence of abnormal results in fetuses with fetal growth restriction (FGR). STUDY DESIGN: Singleton gestations with fetal growth restriction (FGR), defined as an estimated fetal weight less than the tenth percentile, were prospectively observed at a tertiary referral center from 2012-2014. Fetuses with FGR were evaluated with weekly umbilical artery Doppler evaluation of the individual umbilical arteries. S/ D ratios were identified as normal (per gestational age nomograms) or abnormal (elevated, absent, or reversed end-diastolic flow). UAD results were assessed for discordance, defined as a discrepancy in the results between each artery. Management was per departmental guidelines and was based on the most abnormal measurement. RESULTS: Abnormal UAD flow was seen in 48 fetuses over 141 visits. Abnormalities occurred in both arteries more often (56%) than in a single artery (44%). For the 7 fetuses with an abnormality in only one artery on multiple occasions, six (86%) had normal values following the abnormal and one (14%) did not return for further measurements. Among the 17 fetuses with only a single abnormal visit, fourteen (82%) had an abnormal result in only one artery, while 3 (18%) had abnormalities in both vessels. CONCLUSION: Fetuses with abnormalities in both arteries had a higher frequency of persistent abnormal results than in fetuses with abnormalities of a single artery (89% vs 33%) Isolated abnormal visits were more common when the observed abnormality occurred in a single artery. Nearly every fetus that demonstrated multiple abnormal values in a single artery had a normal value on follow-up. This observational data suggests that fetuses with abnormal UAD measurements of both arteries have more significant pathology than fetuses with abnormalities in only a single artery. (Table Presented).

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: What should a MFM do with an abnormal umbilical artery doppler (UAD) study in a normally grown fetus?

Citation: American Journal of Obstetrics and Gynecology, January 2015, vol./is. 212/1 SUPPL. 1(S407), 0002-9378 (January 2015)

Author(s): Al Hamayel N.A., Werner E., Baghlaif H., Alomari K., Ricketts K., Burd I., Crino J.

Language: English

Abstract: OBJECTIVE: UAD is beneficial for management of abnormal fetal growth; however, there is little evidence about interpretation of abnormal UAD indices (systolic to diastolic ratio (S/D), resistance index (RI), and pulsatility index (PI)), with normal fetal growth. Our objectives were 1) to determine whether there is a relationship between abnormal UAD in normally grown fetuses and subsequent development of small for gestational age (SGA) neonates and 2) to compare different UAD indices in predicting SGA. STUDY DESIGN: We conducted a retrospective cohort study between 2005 and 2011, at the time when UAD was routinely performed at all growth scans in our university center. All women who had an UAD after 26 weeks and delivered at our center were included. Women who had a fetus with IUGR (EFW below the 10th%ile), congenital anomaly or multiple gestations were excluded. The primary outcome was birthweight below the 10th%ile (SGA). Associations were tested using logistic regression model. RESULTS: 2950 women with a normally grown fetus had UAD. 430/ 2950 (14.6%) had SGA neonates. 63/2950 (2.1%) had elevated S/D. 14.1% (408/2887) of women who had a normal S/D and 34.9% (22/ 63) of women who had an elevated S/D had an SGA neonate (OR 3.3; 95%CI 1.9-5.5). After adjusting for potential confounders (gravity, hypertension, preeclampsia, and gestational age at delivery), aOR was 3.3; 95%CI 1.9-5.6. Of 408 women who had normal S/D with a SGA neonate, 100% had a normal RI while 2.2% had an elevated PI, which was significantly associated with SGA (p<0.05). In comparing different indices, of 63 women who had an elevated S/D with a SGA neonate, 71.4% had elevated RI while 85.7% had elevated PI, and were both significantly associated with SGA (p<0.05). CONCLUSION: Obtaining UAD in normally grown fetuses is not the standard of care; however, occasionally MFMs are faced with an abnormal result obtained by an ultrasonographer. Our data suggest that in these cases follow up may be warranted.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: The postnatal morbidity associated with second-trimester miscarriage

Citation: American Journal of Obstetrics and Gynecology, January 2015, vol./is. 212/1 SUPPL. 1(S303-S304), 0002-9378 (January 2015)

Author(s): Morris A., Meaney S., Spillane N., O'Donoghue K.

Language: English

Abstract: OBJECTIVE: Second-trimester (or 'late') miscarriage is defined as pregnancy loss after the 12th and before the 24th week of gestation. Those who suffer a second-trimester loss represent a small cohort but experience significant morbidity associated with both their index loss and subsequent pregnancies¹. The literature on such morbidity is limited. STUDY DESIGN: A retrospective observational study of women who experienced a second-trimester miscarriage was undertaken in a large, tertiary hospital (8,500 deliveries per annum). All cases of pregnancy loss that occurred between 14⁺⁰ and 23⁺⁶, with a previously documented dating ultrasound, were identified from July 2009 to June 2013. Charts were reviewed, examining mechanism of loss and subsequent management. We identified the frequency of complications amongst this cohort. Logistic regression was conducted to assess associations with clinical presentation. RESULTS: During this 4-year period, 184 pregnancies (0.5% of our population) resulted in a second-trimester loss at a mean gestation of 18⁺² weeks (SD: 15.9 days). 64.7% of losses were intrauterine deaths (IUD) with 17.4% following preterm premature rupture of membranes (PPROM) and 17.9% following preterm labour (PTL). Table 1 illustrates the management of these pregnancies, stratified by presentation. All patients required inpatient admission with a mean stay of 2.68 days (SD: 2.97). 57.8% required medical induction of labour. Table 2 further illustrates morbidities associated with these cases. On examining these clinical presentations, and as expected, PPRM cases have increased odds of requiring antibiotic therapy (OR 13.91 CI: 4.93-39.17). There is no statistical difference where blood products, analgesia, MROP or readmission is concerned. CONCLUSION: Those who experience a second-trimester miscarriage are a distinct cohort whose management is complicated by considerably higher rates of morbidity. An awareness of these risks should inform, not only our clinical practice but, also, our counselling and management of patient expectations. (Table Presented).

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Utility of sonographic evaluation of fetal growth in morbidly obese women with and without comorbidities

Citation: American Journal of Obstetrics and Gynecology, January 2015, vol./is. 212/1 SUPPL. 1(S301-S302), 0002-9378 (January 2015)

Author(s): Kneitel A., Maben-Feaster R., Langen E.

Language: English

Abstract: OBJECTIVE: To assess the utility of sonographic assessment of fetal growth in morbidly obese women, and to compare the utility in women with and without comorbidities. STUDY DESIGN: This is a retrospective cohort study of 202 obese women who underwent sonography at an academic medical center. Included women had body mass index > 40, singleton gestation, and at least one ultrasound performed at > 24 weeks gestation. Pregnancies complicated by fetal anomalies were excluded. Women with conditions that are usually considered indications for serial sonographic evaluation of fetal growth (such as diabetes or chronic hypertension) were included in the study but were considered to have a comorbidity. Outcomes considered included estimated fetal weight > 90th percentile, estimated weight < 10th percentile, abdominal circumference < 10th percentile, oligohydramnios, and polyhydramnios. We compared outcomes and number needed to screen between the groups with and without comorbidities. RESULTS: There were 59 women with comorbidities who underwent 104 screening ultrasounds, and 143 women without comorbidities who underwent 204 screening ultrasounds. 17.3% of ultrasounds performed in women with comorbidities and 11.3% of performed in women without comorbidities detected an abnormality (p = 0.14). LGA was most the most common abnormality,

occurring in 14 patients with comorbidities and 18 patients without comorbidities [OR 2.2 (0.99, 4.70)]. SGA was much more frequently detected in women with comorbidities [OR 9.5, 95% CI 1.9,47.2]. In the group with comorbidities, 5.8 ultrasounds would have to be performed to find one abnormality, compared to 8.9 ultrasounds in the group without comorbidities. **CONCLUSION:** Abnormalities affecting clinical management are frequently found on third trimester screening ultrasounds for morbidly obese women. While SGA is more often diagnosed in women with comorbidities, the rate of abnormalities is high in both groups. This supports the utility of screening ultrasound in all morbidly obese women.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Characteristics of umbilical artery doppler measurement discordance in fetuses with resolved growth restriction

Citation: American Journal of Obstetrics and Gynecology, January 2015, vol./is. 212/1 SUPPL. 1(S297-S298), 0002-9378 (January 2015)

Author(s): Mackeen A.D., Ross J., Betz A., Paglia M.

Language: English

Abstract: **OBJECTIVE:** To assess characteristics of discordance in umbilical artery Doppler (UAD) S/D ratio measurements in fetuses initially diagnosed with fetal growth restriction (FGR) who demonstrated improvements in growth on long-term follow-up. **STUDY DESIGN:** Singleton gestations were assessed for fetal growth restriction (FGR), defined as an estimated fetal weight (EFW) less than the tenth percentile. Eligible fetuses were prospectively observed at a tertiary referral center from 2012 to 2014 with weekly UAD measurements of the umbilical arteries. Two S/D ratio measurements were obtained for each artery, and results were classified as normal (per gestational age nomograms) or abnormal (elevated, absent, or reversed end-diastolic flow). Management occurred per departmental guidelines. If discordant results were obtained, the most abnormal measurement was used to dictate patient care. If a fetus was initially diagnosed with FGR but grew to an EFW greater than the tenth percentile, weekly visits continued until a second growth ultrasound confirmed normal growth. **RESULTS:** Abnormal UAD measurements were seen in 48 fetuses during 141 visits. During the course of follow-up, eleven fetuses (23%) demonstrated improvement in fetal growth to an EFW greater than the tenth percentile. There were 8 fetuses (38%) with abnormal S/D ratios in a single artery that demonstrated resolution of FGR; five (63%) had abnormal UAD measurements when measuring above the tenth percentile. Only 3 fetuses (11%) with abnormalities in both arteries demonstrated growth above the tenth percentile; all 3 (100%) had abnormal S/D ratios during the period of improved growth. **CONCLUSION:** Abnormal UAD measurements were seen in 73% of the fetuses in our study with resolved FGR. This may reflect imprecision in the classification of FGR. Alternatively, another mechanism, such as incomplete maturation of placental anastomoses, may be present to cause abnormal UAD measurements. (Table Presented).

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Use of cerebroplacental ratio to predict outcome in late onset fetal growth restriction (FGR)

Citation: American Journal of Obstetrics and Gynecology, January 2015, vol./is. 212/1 SUPPL. 1(S269-S270), 0002-9378 (January 2015)

Author(s): Crimmins S., Fitzgerald G., Block-Abraham D., Atkins K., Harman C., Turan O.

Language: English

Abstract: **OBJECTIVE:** To evaluate the utility of multivessel Doppler for prediction of adverse outcome in suspected late onset fetal growth restriction. **STUDY DESIGN:** Retrospective review of singleton fetuses with suspected FGR (estimated fetal weight < 10 percentile) who delivered >32 weeks with a multivessel Doppler

exam within 7 days of delivery between 1998-2012. Doppler indices of umbilical artery (UA), middle cerebral artery (MCA), and cerebroplacental ratio (CPR= MCA PI/UA PI) were converted to their z-scores and indices > 2 SD were considered abnormal. Individual outcome parameters evaluated include: birth weight percentile and arterial pH. In addition, composite adverse fetal outcome defined as any of: arterial pH<7.0, Base excess >-12, or fetal demise was recorded. RESULTS: A total of 192 late onset growth restricted singleton pregnancies met inclusion criteria. Median gestational age at delivery was 37.4 weeks (range 32-42 weeks). The median birth weight percentile was 8.6% (range 0-53.3%). The cesarean delivery rate was 40.6% (78/192) of which 76% (59/78) had cesarean delivery prior to initiation of labor. Rate of c-section (pre-determined in the majority) and gestational age at delivery (also generally limited by management protocol) did not differ with Doppler values. Low birth-weight percentile and low arterial pH correlated with increasing severity of all three individual Doppler indices (p<0.01 for all). Nine adverse fetal outcomes occurred including 2 stillbirths. None of the individual Doppler indices significantly grouped adverse outcome. In terms of management utility, only the Cerebral Placental Ratio was a significant predictor (p< 0.038) for adverse neonatal outcome (sensitivity: 87.5%, specificity: 56%) (Figure). CONCLUSION: In late onset FGR, multivessel Doppler assessment has an important role in prediction of intrauterine status. CPR has the strongest association with adverse outcomes. In the late-onset FGR population, both MCA and UA should be analyzed in order to improve outcome. (Figure Presented).

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Cysteinyl leukotriene receptor antagonist montelukast for the management of spontaneous preterm labour-a pilot randomized controlled trial

Citation: American Journal of Obstetrics and Gynecology, January 2015, vol./is. 212/1 SUPPL. 1(S176), 0002-9378 (January 2015)

Author(s): Pasquier J.-C., Blouin S., Corriveau S., Roy-Lacroix M.-E., Chaillet N.

Language: English

Abstract: OBJECTIVE: Inflammation play a major role in preterm birth. Cysteinyl leukotrienes (cys-LTs) are potent mediators of inflammation derived from arachidonic acid. Montelukast, a cys-LTs receptor antagonist and anti-inflammatory agent, is a consistent tocolytic in vitro (Corriveau 2014). In this study, we aimed to prepare a randomised control trial (RCT) to evaluate the impact of Montelukast on the rate of spontaneous preterm birth. STUDY DESIGN: The proposed trial was a two-arm, double-blinded RCT involving 60 pregnant women hospitalized for spontaneous preterm labour occurring between 24 and 34 weeks of pregnancy. In addition to a prescription of nifedipine for tocolysis, participants were asked to take a daily capsule of either montelukast (10 mg) or placebo, until delivery or 35 weeks of pregnancy. The primary outcome was the time interval between the beginning of treatment and delivery. Urine samples were collected to assess concentrations of LTE4. Others secondary outcomes included the recruitment rate, the rate of preterm birth, and a composite determination of neonatal mortality and morbidity. RESULTS: We approached 105 eligible women, of whom 60 agreed to participate (57%). Five women stopped the treatment (Montelukast or placebo). Mean gestational age at randomization was 31.1 weeks for both groups. Time interval between the beginning of treatment and delivery were 30.5 days (21.6) and 23.8 days (17,3) in Montelukast and control group respectively (p=0,21). Adverse perinatal outcome was not significantly different between the groups. CONCLUSION: For the first time the effectiveness of maintenance tocolysis with Montelukast was used in a clinical study. Our pilot study in women with threatened preterm labor showed that 1) a RCT is feasible, 2) a prolongation of pregnancy of 6.7 days could be expected with Montelukast. In a perspective of personalized medicine, only women with higher concentrations of urinary LTE4 could be selected to receive Montelukast treatment.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Does artificial rupture of membranes in the latent phase of labor enhance myometrial electrical activity?

Citation: American Journal of Obstetrics and Gynecology, January 2015, vol./is. 212/1 SUPPL. 1(S175), 0002-9378 (January 2015)

Author(s): Foroutan J., Rosenn B., Herrera K., Bimson B., Brustman L.

Language: English

Abstract: OBJECTIVE: Artificial rupture of membranes (AROM) is a common practice in the management of obstetric patients in labor. Our objective was to characterize uterine electrical activity changes after AROM. STUDY DESIGN: Patients in latent labor were recruited to join an IRB approved prospective observational study. Inclusion criteria: term singleton gestation, vertex presentation and admission to L&D for spontaneous or induction of labor. Exclusion criteria: ROM, active labor (>6 cm), IUGR, preeclampsia and known fetal abnormality. The electrical uterine myography device (EUM) uses electromyography (EMG) to noninvasively monitor uterine contractility from the abdominal surface. Myometrial signal strength was recorded as peak Root Mean Square (pRMS). Results were reported using a scoring index of 1-5 mWS. Patients were placed on the EUM 1 hour before AROM and disconnected 1 hour after AROM. EMG data were analyzed by individuals blinded to study group. A mixed model was used to compare the intensity of contractions pre and post AROM. Statistical analyses were performed using SAS Version 9.2. RESULTS: EUM data from 55 women were analyzed: 24 augmented with pitocin followed by AROM, 31 augmented with AROM only. Patient demographics were similar between the two groups. When the average scoring index for contraction strength was compared before and after AROM, there was a significant increase in contraction strength post AROM. When the data were analyzed using only patients who did not receive pitocin, there was a significant increase in the strength of contractions post AROM (Table 1). To evaluate whether the increase in contraction strength depends on cervical dilation, patients who underwent AROM >4cm were compared to those <4cm. In patients whose cervix was >4 cm at AROM, there was a significant increase in contraction strength post AROM but not in those whose cervix was <4cm. CONCLUSION: AROM in latent labor significantly increases the strength of contractions as measured by uterine electrical activity. (Table Presented).

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Fetal growth restriction < 5% versus 5-9%: Multi-center study for comparison of neonatal morbidity (ULTRA TOT)

Citation: American Journal of Obstetrics and Gynecology, January 2015, vol./is. 212/1 SUPPL. 1(S109), 0002-9378 (January 2015)

Author(s): Mlynarczyk M., Chauhan S., Baydoun H., Wilkes C., Earhart K., Goodier C., Chang E., Lee N., Mize E.K., Owens M., Babbar S., Maulik D., DeFranco E., McKinney D., Abuhamad A.

Language: English

Abstract: OBJECTIVE: While it is known that neonatal birth weight < 5% has greater morbidity than those at 5-9% for gestational age (GA), there is paucity of publications with fetal growth restriction (FGR) categorized according to sonographic estimated fetal weight (SEFW) < 5 vs. 5-9% for GA. Our objective was to determine if the composite neonatal morbidity (CNM) differed for FGR < 5% vs. 5-9%. STUDY DESIGN: Our retrospective study (UTLRA TOT) involved 5 centers and included non-anomalous singletons, with reliable estimated due date, FGR (SEFW <10% for GA, using Hadlock equation) and delivery from 2009 to 2012, at one of the participating centers. CNM was RDS, proven sepsis, IVH grade III or IV, NEC, thrombocytopenia, seizures and death. Data were extracted by physicians and a priori sample size calculation indicated that 300 FGR are needed in each group to show 10% difference in CNM (30% to 20%; 80% power, two-tailed alpha of 0.05). Adjusted odds ratio for 8 variables and 95% confidence intervals (CI) were calculated. RESULTS: Of 834 FGR, 513 (62%) had SEFW <5% and 321 (38%), 5-9% for GA. The mean GA at delivery were similar (35.7 + 3.6 vs. 35.6 +/- 3.6 wks), though FGR <5% group were more likely to deliver < 32 wks (20% vs. 9%; P <0.0001). For delivery before 34 weeks, antenatal corticosteroids were administered similarly (94% and 91%). Admission to NICU differed significantly (29% vs. 15%; P < 0.001). The CNM among <5% group was higher than 5-9% group (32% vs. 13%; Table 1). Similar findings were noted when the analysis was limited to SEFW within 28 days of delivery (Table 2). CONCLUSION: To our knowledge this is the only multi-center study in

the US on FGR which linked SEFW with neonatal morbidity. Our data is useful for counseling women with FGR, ensuring delivery at centers with resources, and planning intervention trial to determine optimal management, including timing of delivery. (Table Presented).

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Predictors of donor demise after selective fetoscopic laser surgery (FLS) for twin-twin transfusion syndrome (TTTS)

Citation: American Journal of Obstetrics and Gynecology, January 2015, vol./is. 212/1 SUPPL. 1(S35), 0002-9378 (January 2015)

Author(s): Snowise S., Moise Jr. K., Johnson A., Bebbington M., Mann L., Boring N., Morales Y., Campbell G., Canon E., Papanna R.

Language: English

Abstract: OBJECTIVE: Fetal demise following FLS for TTTS is an unpredictable complication. The risk factors for demise are not well understood. The objective of this study is to determine the incidence and the predictors of demise after FLS. STUDY DESIGN: This is a prospective observational cohort study of 154 TTTS cases at a single institution. Prior to the onset of labor fetal demise was diagnosed in 19(12.4%) donors, 4(2.6%) recipients and in both in 1(0.1%). We focused on donor fetal demise. Comparisons were made with the remaining cases in the cohort excluding the dual demise. Pre- and intraoperative variables found to demonstrate a statistical difference on univariate analysis ($p < 0.1$) were then evaluated in a stepwise logistic regression model. RESULTS: The median time to donor demise after FLS was 4 days (range 1-89). Risk factors showing statistical significance on the univariate analysis are shown in Table 1. Fetal growth discordance was further categorized using an ROC curve (AUC: 0.77) to determine an optimal cut-off of $>30\%$ as the best predictor of donor demise. On multivariate logistic regression analysis growth discordance $>30\%$, reversed end diastolic flow in the donor umbilical artery (REDF) and the number of anastomoses were significantly associated with donor demise. The only factor associated with donor demise on postoperative day 1 (N=9) was an increased number of anastomoses (OR 1.2; 95% CI 1.1-1.5). All 4 cases that presented with both growth discordance $>30\%$ and the presence of REDF had a demise ($p < 0.001$). CONCLUSION: Three risk factors significantly impacting acute and delayed donor demise after FLS were identified. The presence of both growth discordance $>30\%$ and REDF was 100% predictive of fetal demise. Knowledge of these risk factors can aid the physician in counseling, and the patient in choosing, the most appropriate intervention in the management of advanced TTTS. (Table Presented).

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Atypical Eclampsia and postpartum status epilepticus

Citation: Pan African Medical Journal, 2015, vol./is. 20/, 1937-8688;1937-8688 (2015)

Author(s): Dag Z.O., Is?k Y., Turkel Y., Alpua M., Simsek Y.

Language: English

Abstract: Preeclampsia is an entity that may present from 20th week of gestation up to 48 hours postpartum and is associated with hypertension and proteinuria. Eclampsia is emergence of convulsions pre-eclampsia in pregnant women with signs and symptoms. Recent studies showed that in some women, preeclampsia and even eclampsia may occur without hypertension or proteinuria. Here, we present a case of 26 years old women who had an uneventful pregnancy until 30 weeks' of gestation. She had only proteinuria in laboratory tests and was diagnosed as status epilepticus in early postpartum period. Preeclampsia and eclampsia is related with serious fetal and maternal morbidity and mortality and may present with atypical course. The awareness of atypical

cases of preeclampsia enhances early diagnosis and management which are critical to avoid fetomaternal complications.

Publication Type: Journal: Article

Source: EMBASE

Title: Activin and NADPH-oxidase in preeclampsia: Insights from in vitro and murine studies

Citation: American Journal of Obstetrics and Gynecology, January 2015, vol./is. 212/1(86.e1-86e12), 0002-9378;1097-6868 (01 Jan 2015)

Author(s): Lim R., Acharya R., Delpachitra P., Hobson S., Sobey C.G., Drummond G.R., Wallace E.M.

Language: English

Abstract: Objective Clinical management of preeclampsia has remained unchanged for almost 5 decades. We now understand that maternal endothelial dysfunction likely arises because of placenta-derived vasoactive factors. Activin A is one such antiangiogenic factor that is released by the placenta and that is elevated in maternal serum in women with preeclampsia. Whether activin has a role in the pathogenesis of preeclampsia is not known. Study Design To assess the effects of activin on endothelial cell function, we cultured human umbilical vein endothelial cells in the presence of activin or serum from normal pregnant women or pregnant women with preeclampsia, with or without follistatin, a functional activin antagonist or apocynin, a NADPH oxidase (Nox2) inhibitor. We also administered activin to pregnant C57Bl6 mice, with or without apocynin, and studied maternal and fetal outcomes. Last, we assessed endothelial cell Nox2 and nitric oxide synthase expression in normal pregnant women and pregnant women with preeclampsia. Results Activin and preeclamptic serum induced endothelial cell oxidative stress by Nox2 up-regulation and endothelial cell dysfunction, which are effects that are mitigated by either follistatin or apocynin. The administration of activin to pregnant mice induced endothelial oxidative stress, hypertension, proteinuria, fetal growth restriction, and preterm littering. Apocynin prevented all of these effects. Compared with normal pregnant women, women with preeclampsia had increased endothelial Nox2 expression. Conclusion An activin-Nox2 pathway is a likely link between an injured placenta, endothelial dysfunction, and preeclampsia. This offers opportunities that are not novel therapeutic approaches to preeclampsia.

Publication Type: Journal: Article

Source: EMBASE

Title: The transcription factor Nrf2 is decreased after spontaneous term labour in human fetal membranes where it exerts anti-inflammatory properties

Citation: Placenta, January 2015, vol./is. 36/1(7-17), 0143-4004;1532-3102 (01 Jan 2015)

Author(s): Lim R., Barker G., Lappas M.

Language: English

Abstract: Introduction Inflammation plays a central role in the terminal processes of human labour and delivery, including the rupture of fetal membranes. Recent studies show a role for the transcription factor Nrf2 (NF-E2-related factor 2) in regulating inflammation. The aims of this study were to determine the effect of human spontaneous term and preterm labour on Nrf2 expression in fetal membranes; and Nrf2 siRNA knockdown on pro-inflammatory cytokines. Methods Fetal membranes, from term and preterm, were obtained from non-labouring and labouring women. Primary amnion cells were used to determine the effect of Nrf2 siRNA knockdown on pro-inflammatory cytokines in the presence of inflammation or infection. Results Nrf2 mRNA expression and nuclear protein expression were significantly decreased after spontaneous term labour and delivery. There was, however, no effect of spontaneous preterm labour and delivery on Nrf2 mRNA expression and nuclear protein expression. On the other hand, Nrf2 gene expression was significantly lower in fetal membranes obtained from women at preterm with histologic chorioamnionitis compared to fetal

membranes obtained from women at preterm without histologic chorioamnionitis. Nrf2 silencing by siRNA in primary amnion cells was associated with a significant increase in IL-6 and IL-8 mRNA expression and release induced by IL-1beta, TNF-alpha, flagellin and poly(I:C). Discussion Nrf2 has an anti-inflammatory effect in human fetal membranes. It is decreased with term labour and preterm chorioamnionitis; and Nrf2 silencing increases inflammation- and infection-induced pro-inflammatory cytokines. Further studies are required to determine if agents that can increase Nrf2 expression may be a potential therapeutic strategy in the treatment and management of infection-induced preterm labour.

Publication Type: Journal: Article

Source: EMBASE

Title: Anemia during the pregnancy: The management and outcomes depending on the etiology

Citation: Blood, December 2014, vol./is. 124/21, 0006-4971 (06 Dec 2014)

Author(s): Vinogradova M.A., Fedorova T.A., Strelnikova E.V., Rogachevsky O., Shmakov R.G., Polushkina E.S.

Language: English

Abstract: Background: Anemia is the most common hematological abnormality in pregnant women. The main cause of anemia in pregnancy and puerperium is the deficiency of iron. Iron requirements increase during pregnancy, and a failure to maintain sufficient levels of iron may result in adverse maternal-fetal consequences. Antenatal iron deficiency anemia (IDA) must be adequately and safely treated to avoid complications during the pregnancy. Other causes of anemia in pregnancy require early diagnosis and precise therapy. Aim. Establishment of algorithms for management of pregnancy, delivery and postpartum period in different types of anemia is crucial to pregnancy outcomes. We have been optimizing strategies for the management of pregnant patients with anemia. Results: From 2012 to 2014 we observed 1284 pregnant women aged 19-44 years. 312(24,3%) of them had decreased hemoglobin (Hb) during the pregnancy. IDA was diagnosed in 267(85,6%), myeloproliferative neoplasms (MPN) -18(5,8%), hemoglobinopathies -7(2,2%), hematological malignancies (MHD) in remission -6(1,9%), folic acid or B12 deficiency -5(1,6%), paroxysmal nocturnal hemoglobinuria (PNH) -4(1,3%), aplastic anemia (AA) -3 (1%), myelodysplastic syndrome (MDS) -2(0,6%). Hb level was below 90 g/l in 58(18,6%) patients. The most of anemia cases were identified during the pregnancy - 187(59,9%), others existed before that. For IDA diagnosis we used the serum ferritin level, ratio of serum iron and total iron-binding capacity and transferrin. 88 (33%) of IDA patients had already had IDA during their lifespan. IDA was treated with ferric carboxymaltose intravenously weekly after the first trimester of pregnancy in Hb up to 90 g/l (the course summary dose -1500-2000 mg). In other cases we administered ferric (III) hydroxide polymaltosate per os (100-200 mg daily during 1-3 months). Hb was normalized by delivery in 216 (80,9%) patients. We have analyzed the outcomes of pregnancy in IDA. The most common complaint was impaired physical performance (91%). Spontaneous miscarriages were registered in 2(0,8%) cases. We did not observe a neonatal mortality. 242 (90,6%) pregnancies ended up with a birth of full-term healthy infants without birth defects. Preterm birth occurred in 23(8,6%) cases, IDA persisted in 19 (82,6%) of them. 38(14,3%) of patients with IDA in third trimester reported maternal and fetal complications, such as chronic placental insufficiency (36,8%), fetal growth retardation syndrome and low birth weight for gestational age (57,9%), placental abruption (5,3%), postpartum hemorrhage (10,5%). IDA was diagnosed in 14(5,3%) neonates and 26(9,8%) women noted the reduced lactation. Anemia in postpartum period was registered in 43(16,2%) patients. Also we have analyzed outcomes of 44 pregnancies in women with non-IDA anemia. The majority of them were patients remained in complete or partial remission of MHD, MPN, AA, PNH, MDS, who underwent the special treatment. Some of them required special treatment during the pregnancy (interferon in MPN, eculizumab in PNH). The non-severe types of hemoglobinopathies required observation and supportive care until postpartum period. Macrocytic anemia with folic or B12 deficiency was successfully treated with folic acid or cyanocobalamin. The level of Hb by delivery was below 110 g/l in 32(72,7%) non-IDA women (blood transfusion required 2 patients). 40(90,9%) of pregnancies ended up with a birth of full-term infants. Preterm birth occurred in 4(9,1%) cases. In our study exposure to special therapy was not associated with congenital anomalies, and no spontaneous miscarriages were registered. The fetal growth retardation syndrome and low birth weight registered in 3(6,8%) patients. No hemorrhagic complications during labor or postpartum period have been observed. Conclusion: Despite the regular antenatal observation, maternal anemia is still high. Anemia during pregnancy is a diverse group of disorders with varied pathophysiology, treatment options and

overall prognosis. IDA is the most frequent anemia reason. We have concluded that the prognosis for pregnant women timely treated for IDA is similar to that of healthy women. Mothers with persistent IDA reported different pregnancy complications. The modern IDA treatment approaches allow the majority of patients to achieve the effect in shortest time. Another anemia reasons require diagnosis and special treatment of underlying disease.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Incidence and aetiology of thrombocytopenia in twin pregnancies in a tertiary referral centre

Citation: Blood, December 2014, vol./is. 124/21, 0006-4971 (06 Dec 2014)

Author(s): Danaee A., Robinson S., Okoli S., Kyle P., Vieira M.C., Pasupathy D.

Language: English

Abstract: Introduction Thrombocytopenia is well described in pregnancy with an incidence of 6-10%. The majority of data with regards to platelet counts in pregnancy and aetiology of pregnancy related thrombocytopenia, however, derives from studies conducted in singletons. There is little information available on this subject in higher order pregnancies Aim This longitudinal study aims to identify the incidence and aetiology of thrombocytopenia in twin pregnancies in order to guide investigation and management. As a reference we also investigate changes in platelet counts in a cohort of uncomplicated twin pregnancies from our population Methods Full blood counts (FBC) and pregnancy outcome data were obtained retrospectively from electronic patient records for 676 twin pregnancies over a five year period at our institution. All women required three FBCs to be performed during their pregnancy (booking, second trimester and delivery) to be included in the study. Women with pre-existing medical co-morbidities or medication known to be associated with thrombocytopenia were excluded. A total of 381/676 women were included in the final analysis. From that original cohort, those women with uncomplicated pregnancies who delivered at term (36/40 onwards) were selected to investigate and report a reference interval for platelet count during pregnancy and compare with known reference intervals in singletons. A total of 301/676 women were included in this sub-analysis Results The mean maternal age was 32.3 years with a mean gestational age of 36.7 weeks at delivery. We defined thrombocytopenia as mild: platelets $100-150 \times 10^9/L$, moderate: platelets $50-100 \times 10^9/L$ and severe: platelets $< 50 \times 10^9/L$. The table below summarises our results The overall rate of thrombocytopenia was 23%. The commonest cause of thrombocytopenia in this population was gestational thrombocytopenia (75%), followed by pre-eclampsia (15%) other hypertensive disorders (5.7%) and the remaining 4.3% included other complications such as sepsis and obstetric cholestasis The platelet ranges for our cohort of women with uncomplicated pregnancies were as shown in the table below. These results are in keeping with changes which occur in platelet counts in singleton pregnancies. Conclusion This study demonstrates that while the incidence of thrombocytopenia is double the rate in twin when compared to singleton pregnancies, the overall distribution in terms of aetiology is very similar. Interestingly this differs somewhat from data in triplet pregnancies where the majority of thrombocytopenia appears to be secondary to pre-eclampsia in one case series. This is an important finding as it indicates that like in most singleton pregnancies the majority of cases are benign and as such investigation and management pathways regarding thrombocytopenia should not differ from investigation and management in singleton pregnancies. However the increased incidence of thrombocytopenia in twin pregnancies overall requires further investigation. (Table Presented).

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Unstressed antepartum cardiotocography in the management of the fetus suspected of growth retardation

Citation: BJOG: An International Journal of Obstetrics and Gynaecology, December 2014, vol./is. 121/s7(14-18), 1470-0328;1471-0528 (01 Dec 2014)

Author(s): Flynn A.M., Kelly J., O'Connor M.

Language: English

Abstract: A detailed analysis of the antenatal cardiotocographs (CTGs) in 57 patients with suspected fetal growth retardation is presented. Four traces were normal and 53 were 'non-reactive'. 'Non-reactive' traces can be sub-divided into three categories, which, in order of severity are, 'suspect', 'flat' and 'ominous'. When compared with the 'suspect' group, perinatal mortality was significantly increased and the Apgar scores at one and five minutes significantly decreased in the 'flat' and 'ominous' groups. The presence of fetal distress in labour was significantly higher in the 'flat' group as compared with the 'suspect' group. Intrauterine deaths occurred only in the 'ominous' group. With experience, ten patients later in the series with 'ominous' patterns were delivered within 24 hours of the detection of such and nine infants survived. At follow-up between 6 and 34 months after birth, psychomotor development was normal in 47 of the 49 surviving infants.

Publication Type: Journal: Article

Source: EMBASE

Title: Hypertensive disorders of pregnancy: A systematic review of international clinical practice guidelines

Citation: PLoS ONE, December 2014, vol./is. 9/12, 1932-6203 (01 Dec 2014)

Author(s): Gillon T.E.R., Pels A., Von Dadelszen P., MacDonell K., Magee L.A.

Language: English

Abstract: Background: Clinical practice guidelines (CPGs) are developed to assist health care providers in decision-making. We systematically reviewed existing CPGs on the HDPs (hypertensive disorders of pregnancy) to inform clinical practice. Methodology & Principal Findings: MEDLINE, EMBASE, Cochrane Central Register of Controlled Trials, Cochrane Methodology Register, Health Technology Assessments, and Database of Abstracts of Reviews of Effects (Ovid interface), Grey Matters, Google Scholar, and personal records were searched for CPGs on the HDPs (Jan/03 to Nov/13) in English, French, Dutch, or German. Of 13 CPGs identified, three were multinational and three developed for community/midwifery use. Length varied from 3-1188 pages and three guidelines did not formulate recommendations. Eight different grading systems were identified for assessing evidence quality and recommendation strength. No guideline scored >80% on every domain of the AGREE II, a tool for assessing guideline methodological quality; two CPGs did so for 5/6 domains. Consistency was seen for (i) definitions of hypertension, proteinuria, chronic and gestational hypertension; (ii) pre-eclampsia prevention for women at increased risk: calcium when intake is low and low-dose aspirin, but not vitamins C and E or diuretics; (iii) antihypertensive treatment of severe hypertension; (iv) MgSO₄ for eclampsia and severe pre-eclampsia; (v) antenatal corticosteroids at <34 wks when delivery is probable within 7 days; (vi) delivery for women with severe pre-eclampsia pre-viability or pre-eclampsia at term; and (vii) active management of the third stage of labour with oxytocin. Notable inconsistencies were in: (i) definitions of pre-eclampsia and severe pre-eclampsia; (ii) target BP for non-severe hypertension; (iii) timing of delivery for women with preeclampsia and severe pre-eclampsia; (iv) MgSO₄ for non-severe pre-eclampsia, and (v) postpartum maternal monitoring. Conclusions: Existing international HDP CPGs have areas of consistency with which clinicians and researchers can work to develop auditable standards, and areas of inconsistency that should be addressed by future research.

Publication Type: Journal: Article

Source: EMBASE

Full Text:

Available from *National Library of Medicine* in [PLoS ONE](#)

Available from *ProQuest* in [PLoS One](#)

Title: Systematic review: Calcium channel blockers are effective as first line for tocolysis in the management of preterm labour

Citation: Evidence-Based Medicine, December 2014, vol./is. 19/6(214), 1356-5524;1473-6810 (01 Dec 2014)

Author(s): Brown R.G., MacIntyre D.A.

Language: English

Publication Type: Journal: Article

Source: EMBASE

Full Text:

Available from *Highwire Press* in [Evidence-Based Medicine](#)

Title: Understanding the placental aetiology of fetal growth restriction; Could this lead to personalized management strategies?

Citation: Fetal and Maternal Medicine Review, November 2014, vol./is. 760/, 0965-5395;1469-5065 (11 Nov 2014)

Author(s): Worton S.A., Sibley C.P., Heazell A.E.P.

Language: English

Abstract: Fetal growth restriction (FGR) is defined as the failure of a fetus to attain its full genetic growth potential. It is a leading cause of stillbirth, prematurity, cerebral palsy and perinatal mortality. Small size at birth increases surviving infants' lifelong risk of adverse health outcomes associated with the metabolic syndrome. The pathophysiology of abnormal fetal growth is extremely complex and incompletely understood, with a plethora of genetic, signalling and metabolic candidates under investigation, many of which may result in abnormal structure and function of the placenta. In contrast to, or maybe because of, the underlying complexities of FGR, the strategies clinicians have for identifying and managing this outcome are conspicuously limited. Current clinical practice is restricted to identifying pregnancies at risk of FGR, and when FGR is detected, using intensive monitoring to guide the timing of delivery to optimise fetal outcomes. Abnormal Doppler indices in the umbilical artery are strongly associated with poor perinatal outcomes and are currently the gold standard for clinical surveillance of the growth-restricted fetus.

Publication Type: Journal: Review

Source: EMBASE

Full Text:

Available from *ProQuest* in [Fetal and Maternal Medicine Review](#)

Title: Differential effects of complement activation products c3a and c5a on cardiovascular function in hypertensive pregnant rats

Citation: The Journal of pharmacology and experimental therapeutics, November 2014, vol./is. 351/2(344-351), 1521-0103 (Nov 2014)

Author(s): Lillegard K.E., Loeks-Johnson A.C., Opacich J.W., Peterson J.M., Bauer A.J., Elmquist B.J., Regal R.R., Gilbert J.S., Regal J.F.

Language: English

Abstract: Early-onset pre-eclampsia is characterized by decreased placental perfusion, new-onset hypertension, angiogenic imbalance, and endothelial dysfunction associated with excessive activation of the innate immune complement system. Although our previous studies demonstrated that inhibition of complement activation attenuates placental ischemia-induced hypertension using the rat reduced uterine perfusion pressure (RUPP) model, the important product(s) of complement activation has yet to be identified. We hypothesized that antagonism of receptors for complement activation products C3a and C5a would improve vascular function and attenuate RUPP hypertension. On gestational day (GD) 14, rats underwent sham surgery or vascular clip

placement on ovarian arteries and abdominal aorta (RUPP). Rats were treated once daily with the C5a receptor antagonist (C5aRA), PMX51 (acetyl-F-[Orn-P-(D-Cha)-WR]), the C3a receptor antagonist (C3aRA), SB290157 (N(2)-[(2,2-diphenylethoxy)acetyl]-l-arginine), or vehicle from GD 14-18. Both the C3aRA and C5aRA attenuated placental ischemia-induced hypertension without affecting the decreased fetal weight or decreased concentration of free circulating vascular endothelial growth factor (VEGF) also present in this model. The C5aRA, but not the C3aRA, attenuated placental ischemia-induced increase in heart rate and impaired endothelial-dependent relaxation. The C3aRA abrogated the acute pressor response to C3a peptide injection, but it also unexpectedly attenuated the placental ischemia-induced increase in C3a, suggesting nonreceptor-mediated effects. Overall, these results indicate that both C3a and C5a are important products of complement activation that mediate the hypertension regardless of the reduction in free plasma VEGF. The mechanism by which C3a contributes to placental ischemia-induced hypertension appears to be distinct from that of C5a, and management of pregnancy-induced hypertension is likely to require a broad anti-inflammatory approach. Copyright © 2014 by The American Society for Pharmacology and Experimental Therapeutics.

Publication Type: Journal: Article

Source: EMBASE

Title: A review of 20 HELLP syndrome cases in thrombocytopenic patients-one year study

Citation: Indian Journal of Hematology and Blood Transfusion, November 2014, vol./is. 30/2 SUPPL. 1(459), 0971-4502 (November 2014)

Author(s): Afroze S., Sharada, Padmavathi M., Ezhilarasi N.

Language: English

Abstract: Summary: HELLP syndrome is a life threatening condition associated with pregnancy and pre-eclampsia early diagnosis helps in good prognosis. Introduction: Pre-eclampsia is a well known obstetric condition characterised by hypertension with proteinuria. HELLP syndrome unlike pre-eclampsia is a multisystemic condition usually seen in 3rd trimester and in postpartum period, usually in 48-72 h following delivery. This condition was first described by Pritchard JA in 1954 and later by Dr Louis Weinstein in 1982 as a distinct clinical entity as opposed to severe pre-eclampsia. Materials and Methods: 20 patients diagnosed with HELLP syndrome between May 2013 to June 2014 were retrospectively evaluated with regard to symptoms, platelet count and elevated liver enzymes and pre-eclampsia during their pregnancy. Results: Out of 200 patients of thrombocytopenia there were 20 patients showing elevated liver enzymes, clinical features correlating with HELLP SYNDROME. Conclusion/Diagnosis/ Impression: Earliest sign of HELLP SYNDROME in present study was a low platelet count. Clinical and diagnostic evaluation helps in early identification of HELLP syndrome for further management.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: RCOG National Trainees Conference, NTC 2014

Citation: BJOG: An International Journal of Obstetrics and Gynaecology, November 2014, vol./is. 121/, 1470-0328 (November 2014)

Language: English

Abstract: The proceedings contain 181 papers. The topics discussed include: concealed haematometra causing chronic upper abdominal pain; histiocytic intervillitis: a rare but important cause of miscarriage; metastatic adenocarcinoma of rectum presenting in labour; an audit of surgical management of ectopic pregnancy in a district general hospital; not all haematemesis in pregnancy is due to a benign cause; peripartum cardiomyopathy presenting initially as pre-eclampsia; an audit of oral combined hormonal contraceptive reviews in primary care; the West Midlands trainee research collaborative in obstetrics and gynaecology (WMROG); gestational trophoblastic disease in the emergency gynaecology unit at an inner city teaching hospital; an unusual

differential diagnosis of pelvic mass- a case report; and which risk of malignancy index (RMI) calculation is a better predictor of malignancy, and at what level should we refer to the cancer centre? a retrospective observational study conducted at East Lancashire hospitals NHS Trust.

Publication Type: Journal: Conference Review

Source: EMBASE

Title: Management of monochorionic diamniotic twin pregnancies in a district general hospital

Citation: BJOG: An International Journal of Obstetrics and Gynaecology, November 2014, vol./is. 121/(59), 1470-0328 (November 2014)

Author(s): Hadawi H., Dharmarajah K., Dutta R.

Language: English

Abstract: Introduction: Monochorionic diamniotic (MCDA) twin pregnancies are associated with an increased risk of complications to the mother and babies. NICE issued a multiple pregnancy guideline in 2011 with recommendations for these high risk patients. The aim of this study was to review the management and outcome of MCDA twin pregnancies in Hillingdon Hospital over 41 months using NICE guidelines as standards. Methods: Retrospective case notes review was undertaken to assess compliance with NICE guidelines for MCDA twin pregnancies from September 2010 to February 2014. Results: There were 51 sets of MCDA twins. 22 mothers were primiparous and 29 were multiparous. 48 were spontaneous and 3 were IVF pregnancies. 88.0% had chorionicity confirmed before 14 weeks gestation. There were 3 first trimester miscarriages. 93.8% had scans every 2 weeks from 16 weeks. 52.0% had some care in a tertiary centre. 5 babies had abnormalities at the Anomaly Scan which were ventriculomegaly, encaphalocoele, hemispheric cyst, heart block with pericardial effusion and coarctation of the aorta. Five sets of twins developed twin-twin transfusion syndrome (TTTS). 3 required intervention in the form of laser ablation for Grade 2-3 TTTS. One pregnancy was complicated by CMV infection which led to termination of the pregnancy at 27 weeks. There was a demise of one twin in 4 cases. This was at 13, 16, 22 and 27 weeks respectively. Maternal complications included 4 cases of Gestational Diabetes and 2 cases of Pre-Eclampsia. One set of MCDA twins were successfully delivered vaginally in our series. Conclusion: The management of MCDA twin pregnancies at Hillingdon Hospital are compliant with most NICE guidelines. The service led by a Consultant with a special interest in twin pregnancies, 2 specialist midwives and 4 senior sonographers produces good outcomes with less involvement of a tertiary centre as compared to other local district general hospitals.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Antenatal management of women over the age of 40 years

Citation: BJOG: An International Journal of Obstetrics and Gynaecology, November 2014, vol./is. 121/(55), 1470-0328 (November 2014)

Author(s): Salt R., Imtiaz R.

Language: English

Abstract: Introduction: The number of pregnancies in women aged 40 and above has trebled in recent years and looks to be increasing. With advancing age comes an increased risk of multiple maternal and neonatal complications. These women are considered high risk for IUGR, preterm delivery, pre-eclampsia and stillbirth. There is limited guidance available on how best to manage these women. The RCOG scientific impact paper recommends considering induction of labour at or before term to reduce the risk of stillbirth. The RCOG guidelines on monitoring for fetal growth restriction recommends serial growth scans and commencing Aspirin antenatally. At present in Worcester Acute Hospitals NHS trust (WAHNSHT) women over the age of 40 are referred for consultant led care, and antenatal management and gestation for delivery is based on other risk

factors like comorbidities, parity and race. Method: We performed a retrospective casenote analysis of 50 patients delivered across the WAHNSHST between January and September 2013. Performance against recommendations from national guidance and local consensus was measured along with the perinatal outcome. Results: 90% of women were delivered by 41 weeks. 78% of women received serial growth scans of which the frequency and timing differed. Only 14% of women received aspirin. Rates of IUGR and preterm delivery were slightly higher and other antenatal complications were similar to the general population. There were no stillbirths. Conclusion: We acknowledged that our sample was small and concluded that women above 40 should continue to be managed as high risk. Regular growth scans and aspirin use antenatally may improve outcomes. There is a requirement for clear guidance on the management of these women. This may form part of existing guidelines e.g. induction of labour, monitoring for fetal growth and pre-eclampsia. Resource implications will need to be considered while developing guidelines due to impact on increased demand on ultrasound scan service.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Audit on the management of obese women in pregnancy

Citation: BJOG: An International Journal of Obstetrics and Gynaecology, November 2014, vol./is. 121/(54), 1470-0328 (November 2014)

Author(s): Iftikhar N., Chaudry M.

Language: English

Abstract: Introduction: Obesity is a risk factor for many complications in pregnancy including gestational diabetes, pre-eclampsia, macrosomia dysfunctional labour, and interventional delivery. An audit was conducted to look into compliance rates with respect to the NICE guidelines on management of obesity in pregnancy. Methods: Design: Retrospective audit study. 105 patients with a BMI >35, who were managed in Pinderfields hospital. These patients were picked randomly and care was followed from antenatal through to postnatal care. Results: The median BMI of patients was 39.64% of patients were prescribed folic acid 5 mg. 46% patients were prescribed vitamin D. 21% patients were prescribed aspirin. 39% patients had documented counselling as to how BMI may affect their pregnancy. 37% patients were given exercise advice and only 29% patients were given advice about diet. Only 4% of patients had documented referral to Dietician. 100% of these patients delivered in a consultant led unit. 63% had standard vaginal delivery. 12% had instrumental delivery 25% had LSCS 100% patients had Active management of 3rd stage of labour. 85% had documented continuous CTG. 46% patients who had bmi greater than 40 were delivered by ST6 or above. 73% patients who had bmi greater than 50, had their consultant informed. 3% patients had shoulder dystocia, 14% patients had a PPH, 19% patients had a perineal tear. No patients had a VTE. 4% of babies born were referred to SCBU. The median birthweight was 3.550 kg. Conclusion: The results show that there is significant work required to comply with NICE BMI guidelines. Recommendations: Better documentation is required; counselling about the risks associated with high BMI should be done; there may be room for developing BMI clinics.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Simultaneous management of acute pancreatitis and pre-eclampsia in the third trimester of pregnancy

Citation: BJOG: An International Journal of Obstetrics and Gynaecology, November 2014, vol./is. 121/(48), 1470-0328 (November 2014)

Author(s): Rather H., Muglu J., Bell A., Sacco A., Hogg M.

Language: English

Abstract: Background: Pancreatitis during pregnancy is rare and affects approximately 1 in 10000 pregnancies with maternal mortality of less than 1%. Up to 50% of cases of acute pancreatitis (AP) is found in the third trimester, most (up to 70%) of these secondary to gallstone disease. The other important cause in pregnancy can be high levels of serum triglycerides. AP can lead to preterm labour, which is more common with non-gallstone pancreatitis. Case: A 21-year-old primiparous woman, at 37 weeks of gestation, presented with severe epigastric pain and vomiting. Amongst the investigations amylase levels was 1228 U/L with normal triglyceride levels and ultrasound of the biliary tract. She was managed conservatively by resting digestive tract and giving intravenous fluids, analgesia with regular fetal monitoring. During admission, she developed moderate pre-eclampsia with borderline hypertension and proteinuria. She went into spontaneous labour 48-hours after admission but had an emergency caesarean section due to failure to progress. Conclusion: AP is a rare but serious condition in pregnancy especially in labour and remains a challenging clinical problem to manage. The management of AP in pregnancy requires multidisciplinary approach depending on its severity but is generally supportive, including admission, nil orally, aggressive intravenous fluids, antibiotics and analgesia. However, this case represents an important question- how to manage acute pancreatitis, where aggressive fluid resuscitation is key to treatment while fluid restriction is vital in pre-eclampsia. Some studies suggest that the increased levels of inflammatory cytokines in AP stimulate the uterus, resulting in labour, which may have manifested in this case. Laboratory investigations, including serum amylase and liver enzymes aid in diagnosis; however elevation of serum amylase lasts only 72 hours after onset of AP which was seen in this case, with amylase levels reaching normal after 72 hours, representing a window for biochemical diagnosis of AP.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: FSGS and other renal disorders in pregnancy

Citation: BJOG: An International Journal of Obstetrics and Gynaecology, November 2014, vol./is. 121/(44), 1470-0328 (November 2014)

Author(s): Sacco A., Khan R.

Language: English

Abstract: Background: Pre-existing renal disease affects around 3% of pregnancies. Chronic kidney disease (CKD) may be recognised for the first time in pregnancy; in women developing early pre-eclampsia (<30 weeks gestation) with heavy proteinuria, around 20% will have undiagnosed CKD. There is agreement that women with CKD who plan to become pregnant or are pregnant should be managed in a specialist, multidisciplinary clinic. Pregnancy outcomes for such women depend upon pre-pregnancy renal function and activity or quiescence of the underlying disease. Case: We describe a case of a 23-year-old woman diagnosed with focal segmental glomerulosclerosis (FSGS). She was prescribed steroid treatment, diuretics, angiotensin-converting enzyme inhibitors (ACEi) and statins. The patient discontinued these medications and pursued a vegan diet, but continued to attend for follow-up. Three years later she spontaneously conceived a singleton pregnancy. Her pregnancy was complicated by heavy proteinuria and increasing peripheral oedema. Thromboprophylaxis and aspirin were recommended but not regularly taken and the patient continued to consume a vegan, low protein diet. Renal function and fetal growth were steady throughout the pregnancy. The patient was admitted at 33 weeks of gestation with increasing peripheral oedema and ascites. Her renal function remained stable and she was delivered at 34 weeks of gestation due to worsening maternal symptoms. Conclusion: FSGS is a chronic renal disorder that causes nephrotic syndrome and is diagnosed by renal biopsy. It may be primary, as in this case, or secondary to causes such as HIV or drugs. FSGS is a relatively rare cause of CKD and is especially rare in pregnancy. There is little specific guidance for management, and so general CKD recommendations are used during pregnancy. We review the management of this and other renal conditions in pregnancy and discuss the importance of multidisciplinary management and patient involvement.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Trust wide audit on the management of eclampsia

Citation: BJOG: An International Journal of Obstetrics and Gynaecology, November 2014, vol./is. 121/(43), 1470-0328 (November 2014)

Author(s): Peart R., Sher Z., Dieh A.

Language: English

Abstract: Introduction: Eclampsia remains among the leading causes of maternal death and is defined as the new onset of seizure activity and/or unexplained coma during pregnancy or postpartum in a woman with signs or symptoms of pre-eclampsia without a personal background of previous seizures. It has potentially lethal consequences for mother and child. Eclampsia is rare with an incidence of 1.6-10 per 10 000 deliveries in developed countries. Though rare, it is one of the few obstetric emergencies; therefore it is possible that clinicians called to manage such emergencies are not experienced in its management and documentation. For this reason we felt it important to review the way eclampsia is managed and how this management is documented to assess if and where improvements can be made in teaching and training to conferring benefit to eclamptic mothers. Furthermore, compliance with eclampsia management guidelines has not previously been audited in the trust, so it is important to do so to monitor and evaluate practices. This study aims to review all cases of eclampsia in the Pennine Acute Trust over a 5.5 year period and compare the management and documentation against trust guideline and CNST standards. Thus identifying areas in which the trust is achieving the standards and in doing so, identify areas of possible improvement. Methods: Retrospective identification of patients who had eclampsia between January 2009 and April 2014 in the trust were sought. The cases of eclampsia were identified using the trust maternity coding system (Euroking). Cases of severe preeclampsia and eclampsia were ascertained. Overall, 34 cases were identified of which only eight patients were found to have eclampsia. These eight cases were used to assess management and documentation against the standards identified in trust guidelines and CNST standards.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Audit of the management of multiple pregnancies at Liverpool women's hospital

Citation: BJOG: An International Journal of Obstetrics and Gynaecology, November 2014, vol./is. 121/(40), 1470-0328 (November 2014)

Author(s): Tomlinson L., Burgess H., Yap J.J.Y.

Language: English

Abstract: Introduction: Multiple pregnancy is a high risk situation for the mother and fetus and has a national incidence of 3% live births. Liverpool Women's Hospital has approximately 160 multiple pregnancy births per year and has produced care pathways based on the NICE guideline to optimise management. The aim of this study is to assess the antenatal and intrapartum care of multiple pregnancies at Liverpool Women's Hospital using the NICE clinical guideline for the management of multiple pregnancies, published in September 2011, as our standard. Methods: Retrospective data collection between August 2012 and August 2013. Fifty-five cases were audited, which included 45 cases of dichorionic diamniotic (DCDA) twins and 10 cases of monochorionic monoamniotic (MCDA) twins. Results: Pathways were complete in 37/55 cases. 34 week antenatal review and discussion regarding place, timing and mode of delivery were more frequently incomplete. All cases were under multidisciplinary team care. On dating ultrasound scan, chorionicity was incorrect in 2 cases. 19 cases were affected by maternal complications and 6 cases were affected by fetal complications. There is a caesarean section rate of 64% for DCDA twins and 70% for MCDA twins. No cases underwent an emergency caesarean section for the 2nd twin in our sample. Conclusion: Multiple pregnancies are well managed at Liverpool Women's Hospital; improvement is needed on completing the 'place timing and mode of delivery' pathway and ensuring 34 week antenatal reviews occur in the community. Complications and mode of delivery reflect the high risk group.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Hypertensive disorders of pregnancy-a quality improvement project to improve postnatal care

Citation: BJOG: An International Journal of Obstetrics and Gynaecology, November 2014, vol./is. 121/(34-35), 1470-0328 (November 2014)

Author(s): Mackenzie C., Sajjad N., Laverick B.

Language: English

Abstract: Introduction: Hypertension in pregnancy remains one of the leading causes of maternal death in the UK. In 50-85% women hypertension normalises within seven days of delivery, however, hypertension often peaks on days 3-6 postpartum as a result of intravascular shift of pregnancy associated extravascular volume. Our hospital serves a diverse and high-risk population. We initially conducted an audit to assess whether we are compliant with the National Institute of Care Excellence (NICE) hypertension in pregnancy quality standards. We completed a retrospective review of all women identified as having hypertension/pre-eclampsia over a 4-month period. For those patients with severe hypertension necessitating admission all standards of care were met, however, areas of improvement were identified in postnatal care. Only 50% women had an ongoing management plan documented and specific instructions to ask the GP to perform a postnatal hypertension review. No patients were invited to attend a postnatal clinic including those who had had severe pre-eclampsia necessitating preterm delivery and/or magnesium sulphate. Methods: To improve postnatal care a new consultant-led postnatal clinic has been implemented. A 'safe discharge checklist' sticker has also been developed to ensure the following information is clearly documented by midwives/doctors prior to discharge and improve communication with primary care providers: Blood pressure on discharge? Medication on discharge? Medication times/doses explained? Patient aware of symptoms of pre-eclampsia? Community midwife asked to check BP? GP to review in two weeks? Postnatal clinic appointment? Conclusion: We are confident that these simple interventions will improve postnatal care for women with hypertension. We will re-evaluate this pilot project in four months time.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: The use of antenatal magnesium sulphate prior to preterm birth for neuroprotection of the fetus, infant and child: An audit

Citation: BJOG: An International Journal of Obstetrics and Gynaecology, November 2014, vol./is. 121/(33-34), 1470-0328 (November 2014)

Author(s): Sajja A., Mackie F., Latthe P.

Language: English

Abstract: Introduction: Magnesium sulphate (MgSO₄) decreases the incidence of cerebral palsy in preterm births. Our hospital implemented new guidance for the use of MgSO₄ in deliveries between 24-30 weeks, on 01/09/2012. Methods: All deliveries at 24-30 weeks, between 01/09/2012-31/8/ 13, were assessed using our electronic maternity system. Paper notes were reviewed where applicable. Standards used were the hospital policy. Standards: 1. Indication: delivery between 24-30 weeks, planned or definitely expected within 24 hours. The only contraindication to administration of MgSO₄ was it should not delay delivery. 2. Timing of administration: bolus given >4 hours before birth, then maintenance dose until birth/for 24 hours, whichever comes sooner 3. Dose: 4 g loading dose over 30 min and maintenance: 1 g/ hour. 4. Place of administration: delivery suite room or HDU with one to one care. 5. Decision to be taken by: Senior Registrar/Consultant. Results: Seventy-nine women delivered between 24-30 weeks, of which 47 were eligible for MgSO₄ (59.49%). The other 32 women (40.50%) did not receive MgSO₄ due to a quick/urgent delivery. Out of the 47 women eligible for MgSO₄, 30 (63.83%) received MgSO₄. All women were given the 4 g bolus within 4 hours of preterm labour. Twenty-nine women (96.66%) received the maintenance dose (1 g/hour) until birth/for 24 hours. All women were monitored

during bolus/maintenance administration and cared for in delivery suite room or HDU with one to one care. All decisions to administer MgSO₄ were taken by either Senior Registrar or Consultant. Conclusion: 1. Increase awareness among medical and midwifery staff regarding use of MgSO₄ in preterm labour. 2. Consultants or Senior Registrars should be involved in the management of preterm labour. 3. Re-audit.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: The Baby and the mole

Citation: BJOG: An International Journal of Obstetrics and Gynaecology, November 2014, vol./is. 121/(22-23), 1470-0328 (November 2014)

Author(s): Knight L., Bombieri L., Montague I.

Language: English

Abstract: Background: Complete or partial hydatiform mole arises in approximately 1 in 1000 and 3 in 1000 pregnancies respectively. They are a premalignant condition. Twin pregnancies with an apparently healthy fetus and a hydatidiform mole are uncommon, arising in approximately 1 in 20 000-100 000 pregnancies. Survival beyond the neonatal period is documented at between 25% and 57% with no increased risk of malignant sequelae. Case: The authors present an interesting maternal medicine case of a 24-year-old multiparous woman who presented with recurrent early antepartum haemorrhage and the findings of a twin pregnancy, one being a complete hydatiform mole. This woman presents a number of obstetric risks and challenges. The pre-viability presentation of the molar pregnancy led to ethical discussions regarding continuing with the pregnancy given the threat to the patient's own health. The recurrent vaginal bleeding into the second trimester revealed low-lying molar tissue. This made threatened delivery an ongoing possibility with potential catastrophic bleeding. This patient developed thyrotoxicosis at 20 weeks of gestation secondary to high levels of beta-hCG hormone requiring admission to hospital. She finally gave birth at 26 weeks of gestation to a live male fetus. She is currently undergoing follow-up for persistent gestational trophoblastic disease via Charing Cross Hospital's referral centre. Conclusion: This case serves as an excellent reminder for trainees of all levels as to the obstetric management of what is a rare pregnancy condition. Lessons to be learnt include the differential diagnoses and management of early antepartum haemorrhage in a patient with a seemingly normal first trimester ultrasound scan. In addition we remind ourselves of the potential maternal sequelae of thyrotoxicosis and pre-eclampsia. Of particular interest will be a review of the follow-up protocols for this group of patients, for those trainees working outside of the Tertiary centre environment.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Management of a pregnant woman with Munchausen's syndrome

Citation: BJOG: An International Journal of Obstetrics and Gynaecology, November 2014, vol./is. 121/(20-21), 1470-0328 (November 2014)

Author(s): Tingi E., New F.

Language: English

Abstract: Background: Munchausen's syndrome is a psychiatric factitious disorder where patients feign illness to draw attention, sympathy or reassurance. There is little information on treatment of the disorder. Case: A 27-year-old primigravida with known Munchausen's syndrome attended a number of hospitals from 10 weeks of gestation with various complaints including abdominal pain, haematemesis, and leg pain. She underwent several negative investigations. She was admitted to a medical ward at 16 weeks of gestation with similar complaints. During admission numerous investigations for pain and vomiting were negative. Her pain was managed with pethidine up to five times a day. She became dependant on pethidine and was switched to buprenorphine to aid

withdrawal prior to delivery. She remained in hospital throughout her pregnancy. Scans revealed normal fetal growth. There was high level involvement of Safeguarding midwife, Children's social care, Consultant Psychiatrist and the local authority who liaised closely with Obstetric and Medical staff in numerous multidisciplinary meetings to discuss safeguarding issues for the unborn child. She was induced for postmaturity and had a grade 1 emergency caesarean section due to pathological CTG. The baby weighed 3.4 kg. The baby was admitted to NICU and developed signs of withdrawal from opiates on day 3 managed with morphine. The baby was discharged into foster care with a complex safeguarding plan. Conclusion: Pregnant women with Munchausen's syndrome are difficult to manage. This woman's pregnancy had a good outcome with the delivery of a well grown normal baby. It is difficult not to interfere in such pregnancies but important to let the pregnancy continue if all is progressing normally. A multidisciplinary team, including obstetricians, physicians, paediatricians, mental health team, specialist midwives and social workers, can play a significant role in achieving the best outcome for the pregnant woman as well for the safety of her baby.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: With the knowledge and experience in pre-eclampsia, are we good in diagnosing and managing women with it?

Citation: BJOG: An International Journal of Obstetrics and Gynaecology, November 2014, vol./is. 121/(14), 1470-0328 (November 2014)

Author(s): Sivalingam S., Reddy R.

Language: English

Abstract: Introduction: We aim to assess management of women with severe pre-eclampsia and adherence to trust guideline. Method: Total cases identified from clinical coding coded were 40 during the period of August 2012-July 2013. The first case of each month was selected n = 12. We audited the management of blood pressure control, fluid management, anti-convulsant therapy, fetal assessment and plan for delivery. Results: In these women with severe PET, HDU care was commenced in 92% (11/12 cases), oral labetalol was first line in all and in 2 cases additional nifedipine therapy was used. Blood pressure was controlled <150/90 mm of Hg in 67% (8/12 cases). 50% (6/12 cases) of these women required IV antihypertensive, hydralazine was used in 5/6 cases and labetalol in one. 67% (4/6 cases) had regular invasive B.P measurement through A-line and only 50% (6/12) had TED stockings applied. In 92% (11/12 cases) fluid restriction at 80 ml/hour with hourly balance was maintained and documented, hourly saturation and urine output were measured. 8% (1/12 cases) saturation was <94% but pulmonary oedema was not suspected. 17% (2/12 cases) had CVP line monitoring. IV Magnesium sulphate was used in 75% (9/12 cases), in 33% (3/9 cases) the loading dose and its duration of administration was not documented. Of these women 100% (12/12 cases) had 1 g/hr maintenance dose, 30 min respiratory rate and consciousness scoring. However 56% (5/9 cases) hourly reflexes were not done. In 100% (12/12 cases) we had performed electronic fetal monitoring, given steroids and informed neonatal team. In 92% (11/12 cases) abdominal palpation was carried out and 83% (10/12) had plan for delivery was made. Conclusion: Mostly good management and care given. However there is poor recording of maintenance dose of MgSO₄, a pre-printed drug chart for HDU care has been introduced to improve this and to reduce any errors.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Eclampsia, a comparison within the international network of obstetric survey systems

Citation: BJOG: An International Journal of Obstetrics and Gynaecology, November 2014, vol./is. 121/12(1521-1528), 1470-0328;1471-0528 (01 Nov 2014)

Author(s): Schaap T.P., Knight M., Zwart J.J., Kurinczuk J.J., Brocklehurst P., Van Roosmalen J., Bloemenkamp K.W.M.

Language: English

Abstract: Objective: To compare incidences, characteristics, management and outcome of eclampsia in the Netherlands and the UK. Design: A comparative analysis of two population-based prospective cohort studies. Setting: All hospitals with consultant-led maternity units. Population: Women with eclampsia in the Netherlands (226) and the UK (264). Methods: Comparison of individual level data from national studies in the Netherlands and the UK (LEMMoN 2004-06; UKOSS 2005/06). Main: outcome measures Incidence, maternal complications and differences in management strategies. Results: Incidences of eclampsia differed significantly between both countries: the Netherlands 5.4/10 000 deliveries versus UK 2.7/10 000 (relative risk [RR] 1.94, 95% confidence intervals [95% CI] 1.6-2.4). The proportion of women with a preceding diagnosis of pre-eclampsia was comparable between both countries (the Netherlands 42%; UK 43%), as was the proportion who received magnesium sulphate prophylaxis. Women in the Netherlands had a significantly higher maximum diastolic blood pressure (111 mmHg versus 95 mmHg, $P < 0.001$); significantly fewer received anti-hypertensive medication (16% versus 71%; RR 0.2, 95% CI 0.1-0.3) and were treated less often with magnesium sulphate after their first fit (95% versus 99%; RR 0.96, 95% CI 0.92-0.99). Maternal death occurred in three cases in the Netherlands compared with zero in the UK. Conclusions: The incidence of eclampsia in the Netherlands was twice as high compared with the UK when using uniform definitions. Women with eclampsia in the Netherlands were not managed according to guidelines, particularly with respect to blood pressure management. Changes in management practice may reduce both incidence and poor outcomes.

Publication Type: Journal: Article

Source: EMBASE

Title: Maternal hypertensive pregnancy disorders and cognitive functioning of the offspring: A systematic review

Citation: Journal of the American Society of Hypertension, November 2014, vol./is. 8/11(832-847), 1933-1711;1878-7436 (01 Nov 2014)

Author(s): Tuovinen S., Eriksson J.G., Kajantie E., Raikkonen K.

Language: English

Abstract: Hypertensive pregnancy disorders may affect the fetal developmental milieu and thus hint at mechanisms that link prenatal conditions with later developmental outcomes of the offspring. Here, we systematically review studies that have tested whether maternal pre-eclampsia, gestational hypertension, and hypertensive pregnancy disorders as a single diagnostic entity are associated with cognitive functioning of the offspring. Twenty-six studies were eligible for this review. Of them, 19 provided detailed methodological information deemed necessary to be included for a more detailed review. An overall conclusion is that, in the general population, maternal hypertensive disorders may be associated with lower cognitive ability of the offspring. Studies that extend to adulthood show the most consistent pattern of findings. It is possible that the associations arise during the lifetime or that the findings reflect improvements in management of these disorders. Evidence is, however, insufficient to conclude whether these associations are dissimilar in the offspring exposed to maternal pre-eclampsia and gestational hypertension, due to the varied criteria used across the different studies to distinguish between these conditions. The existing studies also vary in the definition of control groups, and very few have taken into account important confounding factors, including maternal pre-pregnancy obesity and lifestyle behaviors. Given the mixed pattern of findings and limitations related to internal and external validity, further studies are clearly warranted to clarify the associations.

Publication Type: Journal: Review

Source: EMBASE

Title: Internet-based stress management for women with preterm labour-a case-based experience report

Citation: Archives of Women's Mental Health, November 2014, vol./is. 17/6(593-600), 1434-1816;1435-1102 (20 Nov 2014)

Author(s): Scherer S., Urech C., Hosli I., Tschudin S., Gaab J., Berger T., Alder J.

Language: English

Abstract: Pregnant women with preterm labour (PTL) in pregnancy often experience increased distress and anxieties regarding both the pregnancy and the child's health. The pathogenesis of PTL is, among other causes, related to the stress-associated activation of the maternal-foetal stress system. In spite of these psychobiological associations, only a few research studies have investigated the potential of psychological stress-reducing interventions. The following paper will present an online anxiety and stress management self-help program for pregnant women with PTL. Structure and content of the program will be illustrated by a case-based experience report. L.B., 32 years (G3, P1), was recruited at gestational week 27 while hospitalized for PTL for 3 weeks. She worked independently through the program for 6 weeks and had regular written contact with a therapist. Processing the program had a positive impact on L.B.'s anxiety and stress levels, as well as on her experienced depressive symptoms and bonding to the foetus. As PTL and the risk of PTB are associated with distress, psychological stress-reducing interventions might be beneficial. This study examines the applicability of an online intervention for pregnant women with PTL. The case report illustrates how adequate low-threshold psychological support could be provided to these women.

Publication Type: Journal: Article

Source: EMBASE

Title: Eclampsia, a comparison within the International Network of Obstetric Survey Systems

Citation: BJOG : an international journal of obstetrics and gynaecology, November 2014, vol./is. 121/12(1521-1528), 1471-0528 (01 Nov 2014)

Author(s): Schaap T.P., Knight M., Zwart J.J., Kurinczuk J.J., Brocklehurst P., van Roosmalen J., Bloemenkamp K.W.

Language: English

Abstract: OBJECTIVE: To compare incidences, characteristics, management and outcome of eclampsia in the Netherlands and the UK. DESIGN: A comparative analysis of two population-based prospective cohort studies. SETTING: All hospitals with consultant-led maternity units. POPULATION: Women with eclampsia in the Netherlands (226) and the UK (264). METHODS: Comparison of individual level data from national studies in the Netherlands and the UK (LEMMoN 2004-06; UKOSS 2005/06). MAIN OUTCOME MEASURES: Incidence, maternal complications and differences in management strategies. RESULTS: Incidences of eclampsia differed significantly between both countries: the Netherlands 5.4/10,000 deliveries versus UK 2.7/10,000 (relative risk [RR] 1.94, 95% confidence intervals [95% CI] 1.6-2.4). The proportion of women with a preceding diagnosis of pre-eclampsia was comparable between both countries (the Netherlands 42%; UK 43%), as was the proportion who received magnesium sulphate prophylaxis. Women in the Netherlands had a significantly higher maximum diastolic blood pressure (111 mmHg versus 95 mmHg, $P < 0.001$); significantly fewer received anti-hypertensive medication (16% versus 71%; RR 0.2, 95% CI 0.1-0.3) and were treated less often with magnesium sulphate after their first fit (95% versus 99%; RR 0.96, 95% CI 0.92-0.99). Maternal death occurred in three cases in the Netherlands compared with zero in the UK. CONCLUSIONS: The incidence of eclampsia in the Netherlands was twice as high compared with the UK when using uniform definitions. Women with eclampsia in the Netherlands were not managed according to guidelines, particularly with respect to blood pressure management. Changes in management practice may reduce both incidence and poor outcomes.

Publication Type: Journal: Article

Source: EMBASE

Title: Differential effects of complement activation products C3a and C5a on cardiovascular function in hypertensive pregnant rats

Citation: Journal of Pharmacology and Experimental Therapeutics, November 2014, vol./is. 351/2(344-351), 0022-3565;1521-0103 (01 Nov 2014)

Author(s): Lillegard K.E., Loeks-Johnson A.C., Opacich J.W., Peterson J.M., Bauer A.J., Elmquist B.J., Regal R.R., Gilbert J.S., Regal J.F.

Language: English

Abstract: Early-onset pre-eclampsia is characterized by decreased placental perfusion, new-onset hypertension, angiogenic imbalance, and endothelial dysfunction associated with excessive activation of the innate immune complement system. Although our previous studies demonstrated that inhibition of complement activation attenuates placental ischemia-induced hypertension using the rat reduced uterine perfusion pressure (RUPP) model, the important product(s) of complement activation has yet to be identified. We hypothesized that antagonism of receptors for complement activation products C3a and C5a would improve vascular function and attenuate RUPP hypertension. On gestational day (GD) 14, rats underwent sham surgery or vascular clip placement on ovarian arteries and abdominal aorta (RUPP). Rats were treated once daily with the C5a receptor antagonist (C5aRA), PMX51 (acetyl-F-[Orn-P-(D-Cha)-WR]), the C3a receptor antagonist (C3aRA), SB290157 (N²-(2,2-diphenylethoxy) acetyl]-L-arginine), or vehicle from GD 14-18. Both the C3aRA and C5aRA attenuated placental ischemia-induced hypertension without affecting the decreased fetal weight or decreased concentration of free circulating vascular endothelial growth factor (VEGF) also present in this model. The C5aRA, but not the C3aRA, attenuated placental ischemia-induced increase in heart rate and impaired endothelial-dependent relaxation. The C3aRA abrogated the acute pressor response to C3a peptide injection, but it also unexpectedly attenuated the placental ischemia-induced increase in C3a, suggesting nonreceptor-mediated effects. Overall, these results indicate that both C3a and C5a are important products of complement activation that mediate the hypertension regardless of the reduction in free plasma VEGF. The mechanism by which C3a contributes to placental ischemia-induced hypertension appears to be distinct from that of C5a, and management of pregnancy-induced hypertension is likely to require a broad anti-inflammatory approach.

Publication Type: Journal: Article

Source: EMBASE

Title: Effectiveness of GnRH antagonist in the management of subfertile couples undergoing controlled ovarian stimulation and intrauterine insemination: A meta-analysis

Citation: PLoS ONE, October 2014, vol./is. 9/10, 1932-6203 (09 Oct 2014)

Author(s): Luo S., Li S., Jin S., Li Y., Zhang Y.

Language: English

Abstract: Background: Recent studies have indicated the use of gonadotropin-releasing hormone antagonists (GnRH-ant) as an adjuvant treatment to prevent premature luteinization (PL) and improve the clinical outcomes in patients undergoing controlled ovarian stimulation (COS) with intrauterine insemination (IUI). However, the results of these studies are conflicting. Methods: We conducted a systematic review and meta-analysis of randomized trials aiming to compare the clinical efficacy of GnRH-ant in COS/IUI cycles. Twelve studies were identified that met inclusion criteria and comprised 2,577 cycles assigned to COS/IUI combined GnRH-ant or COS/IUI alone. Results: Meta-analysis results suggested that GnRH-ant can significantly increase the clinical pregnancy rate (CPR) (OR = 1.42; 95% CI, 1.13-1.78) and decrease the PL rate (OR = 0.22, 95% CI, 0.16-0.30) in COS/IUI cycles. Subgroup analysis results suggested statistically significant improvement in the CPR in non-PCOS patients (OR = 1.54; 95% CI, 1.03-2.31) but not in the PCOS population (OR = 1.65; 95% CI, 0.93-2.94) and multiple mature follicle cycles (OR = 1.87; 95% CI, 0.27-12.66). There were no difference in the miscarriage and multiple pregnancy rates between the groups. Conclusion: This meta-analysis suggested that GnRH-ant can reduce the incidence of PL and increase the CPR when used in COS/IUI cycles, and it was especially useful for non-PCOS patients. However, evidence to support its use in PCOS patients is still insufficient.

Publication Type: Journal: Article

Source: EMBASE

Full Text:

Available from *National Library of Medicine* in [PLoS ONE](#)

Available from *ProQuest* in [PLoS One](#)

Title: Pregnancy in women with a history of Kawasaki disease: management and outcomes

Citation: BJOG : an international journal of obstetrics and gynaecology, October 2014, vol./is. 121/11(1431-1438), 1471-0528 (01 Oct 2014)

Author(s): Gordon C.T., Jimenez-Fernandez S., Daniels L.B., Kahn A.M., Tarsa M., Matsubara T., Shimizu C., Burns J.C., Gordon J.B.

Language: English

Abstract: OBJECTIVE: To characterise the obstetrical management and outcomes in a series of women with a history of Kawasaki disease (KD) in childhood. DESIGN: Retrospective case series. SETTING: Tertiary healthcare setting in the USA. POPULATION: Women with a history of KD in childhood. METHODS: Women completed a detailed health questionnaire and participated in research imaging studies as part of the San Diego Adult KD Collaborative Study. MAIN OUTCOME MEASURES: Obstetrical management, complications during pregnancy and delivery, and infant outcomes. RESULTS: Ten women with a history of KD in childhood carried a total of 21 pregnancies to term. There were no cardiovascular complications during labour and delivery despite important cardiovascular abnormalities in four of the ten subjects. Pregnancy was complicated by pre-eclampsia and the post-partum course was complicated by haemorrhage in one subject each. Two of the 21 progeny subsequently developed KD. CONCLUSIONS: Women with important cardiovascular sequelae from KD in childhood should be managed by a team that includes both a maternal-fetal medicine specialist and a cardiologist. Pre-pregnancy counselling should include delineation of the woman's current functional and structural cardiovascular status and appropriate adjustment of medications, but excellent outcomes are possible with appropriate care. Review of the English and Japanese literature on KD and pregnancy revealed the occurrence of myocardial infarction during pregnancy in women with missed KD and aneurysms that were not diagnosed until their acute event. Our study highlights the need for counselling with regard to the increased genetic risk of KD in offspring born to these mothers.

Publication Type: Journal: Article

Source: EMBASE

Title: A review of stroke and pregnancy: Incidence, management and prevention

Citation: European Journal of Obstetrics Gynecology and Reproductive Biology, October 2014, vol./is. 181/(20-27), 0301-2115;1872-7654 (01 Oct 2014)

Author(s): Moatti Z., Gupta M., Yadava R., Thamban S.

Language: English

Abstract: Stroke, defined as a focal or global disturbance of cerebral function lasting over 24 h resulting from disruption of its blood supply, is a devastating event for a pregnant woman. This can result in long-term disability or death, and impact on her family and unborn child. In addition to pre-existing patient risk factors, the hypercoagulable state and pre-eclampsia need to be taken into account. The patterns and types of stroke affect pregnant women differ from the non-pregnant female population of child-bearing age. Like other thrombo-embolic diseases in pregnancy, stroke is essentially a disease of the puerperium. Population studies have estimated the risk of stroke at between 21.2 and 46.2 per 100,000. The US Nationwide Inpatient Sample, identified 2850 pregnancies complicated by stroke in the United States in 2000-2001, for a rate of 34.2 per 100,000 deliveries. There were 117 deaths, a mortality rate of 1.4 per 100,000. Both the mortality and disability rates were higher than previously reported, with 10-13% of women dying. With the increasing prevalence of obesity, hypertension and cardiac disease amongst women of child-bearing age, so is the incidence of stroke

during pregnancy and the puerperium. In the United States, an alarming trend toward higher numbers of stroke hospitalizations during the last decade was demonstrated in studies from 1995 to 1996 and 2006 to 2007. The rate of all types of stroke increased by 47% among antenatal hospitalizations, and by 83% among post-partum hospitalizations. Hypertensive disorders, obesity and heart disease complicated 32% of antenatal admissions and 53% of post-partum admissions. In addition to pre-existing patient risk factors, the hypercoagulable state and pre-eclampsia need to be taken into account. The patterns and types of stroke affect pregnant women differ from the non-pregnant female population of child-bearing age. Like other thrombo-embolic diseases in pregnancy, stroke is essentially a disease of the puerperium.

Publication Type: Journal: Review

Source: EMBASE

Title: A plea for hellp: Hellp-like syndrome presenting in the second trimester

Citation: American Journal of Gastroenterology, October 2014, vol./is. 109/(S383), 0002-9270 (October 2014)

Author(s): Colella D., Israr F., Kalaveshi L., Narula R., Saline L., Sobrado J., Valladares M.

Language: English

Abstract: Introduction: HELLP (hemolysis, elevated liver enzymes, low platelet count) syndrome is a disorder seen in pregnancy, and typically has a poor prognosis. It occurs in less than 1% of all pregnancies and is a complication of severe pre-eclampsia. The diagnosis is based on the following findings: hemolysis (schistocytes on peripheral smear, total bilirubin >1.2, and LDH > 600), elevated liver enzymes (AST >70), and low platelets (platelet count <100,000). Common symptoms include right upper quadrant pain, hypertension, and edema. Delivery is the primary treatment and is recommended if the pregnancy is beyond 34 weeks. HELLP syndrome frequently resolves quickly after delivery. Case Report: A 30-year-old G1P0 female patient at 19 weeks gestation presented with the acute onset of severe right upper quadrant and epigastric abdominal pain. Physical examination was remarkable for right upper quadrant tenderness. Laboratory data was positive for a white blood cell count of 10.4 and decreased platelet count of 118,000. The patient was treated with ampicillin/sulbactam and pain medication. Over the next 36 hours, her liver enzymes increased: total bilirubin 2.3, ALT 1326, AST 1654, LDH 1429, and platelet count decreased to 27,000. Peripheral smear was negative for hemolysis. Since a viral syndrome could not be ruled out, she also received acyclovir. Three days after admission, the patient's pain and laboratory values greatly improved. She was discharged home, only to return at 30 weeks gestation with severe epigastric pain and nausea. At this time, ALT and AST levels were elevated to 392 and 427, and the platelet count was 126,000. A few days later, AST rose to 1,800 and the platelets dropped to 15,000. The patient received platelet transfusions, which resulted in improvement of her abdominal pain. The patient started to develop headaches and had elevated blood pressure. A 24-hour urine protein revealed mild proteinuria at 756 mg, which is elevated, but does not qualify for severe pre-eclampsia. Upon discussion with the patient, the decision was made to deliver the baby. After an uncomplicated cesarean section, the patient's laboratory values and blood pressure stabilized. Discussion: This case is unique because our patient presented with signs and symptoms of HELLP syndrome in the second trimester. HELLP syndrome frequently occurs during the third trimester of pregnancy, associated with severe pre-eclampsia. Since this condition was identified early in the pregnancy for our patient, a favorable outcome for the mother and the baby was achieved with medical management. With early intervention and prenatal care, it may be possible to identify and treat HELLP syndrome successfully with conservative measures.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Search History:

1. EMBASE; ("Intrapartum care" OR pre-eclampsia OR "preterm labour" OR "multiple pregnancy" OR "maternal medicine" OR "fetal abnormal*" OR "fetal growth").ti,ab; 28940 results.
2. EMBASE; 1 [Limit to: English Language and Publication Year Current-2015]; 0 results.
3. EMBASE; 1 [Limit to: English Language and Publication Year 2014-2015]; 2190 results.
4. EMBASE; (manage OR management).ti,ab; 979462 results.
5. EMBASE; 3 AND 4 [Limit to: English Language and Publication Year 2014-2015]; 271 results.

Title: Spontaneous renal subcapsular hemorrhage as a possible complication of external radiotherapy

Citation: Journal of General Internal Medicine, April 2014, vol./is. 29/(S437), 0884-8734 (April 2014)

Author(s): Jain T., Raheja S.

Language: English

Abstract: LEARNING OBJECTIVE 1: Recognize the common and uncommon causes of spontaneous renal subcapsular hemorrhage. CASE: Spontaneous subcapsular renal hemorrhage is a severe condition that leads to the abrupt removal of a kidney in two-thirds of cases. The primary causes described in the literature include renal tumors, vascular disease, and infections. We present a rare case of spontaneous subcapsular renal hemorrhage in the absence of these common causes, and as an apparent complication of radiation therapy used for the treatment of prostate cancer. We present an 84 year old male with past medical history of prostate cancer T2bN0M0 treated definitively with hormones and external radiation therapy 10 years ago. He presents with a 2 day history of sudden onset left sided lower abdominal pain. The patient denied hematuria, dysuria, lower urinary tract symptoms, hematuria, history of nephrolithiasis or history of UTIs. As part of his workup, abdominal computed tomography (CT) was performed, which demonstrated left hydronephrosis with obstruction at the left ureteropelvic junction. The left kidney was also noted to have very thin parenchyma. Urology was consulted and noted that the obstruction may be a result of his previous radiation therapy, but because his PSA was stable there was no immediate urologic surgical intervention. He was discharged with analgesics and arranged for outpatient Urology follow-up. The patient, however, returned 1 week after this initial presentation, with complaints of persistent pain not alleviated by analgesics. Review of systems on this second presentation was negative for fever, nausea, vomiting, dysuria, frequency, urgency or hematuria. On physical exam, there was suprapubic fullness along with left lower quadrant and suprapubic tenderness. The patient's creatinine was elevated to 3.5 mg/dl from a baseline of 1.5 mg/dl, but he had no elevation in his leukocyte count and his hemoglobin was not significantly decreased from his previous presentation. Repeat abdomen-pelvis CT scanning now demonstrated a new spontaneous hemorrhage in the subcapsular space of the left kidney, extending into the dilated intra-renal collecting system, along with worsening hydronephrosis. Urology initially debated between ureteral stent with nephrostomy versus nephrectomy, but it was ultimately decided to manage the patient conservatively. DISCUSSION: A meta-analysis of subcapsular and perirenal hemorrhages reported tumors as the etiology in over 61 % of cases. Vascular diseases, including polyarteritis nodosa, aneurysms and arterio-venous malformations, were a collective 17 % of cases. Infectious etiologies of abscess and pyelonephritis totaled 2.4 % of cases. No cause was identified or reported in approximately 7 % of cases, with the remaining 13 % being attributed to miscellaneous causes. These included uncontrolled hypertension, cyst rupture, nephrosclerosis and pre-eclampsia. Except for the exposure to radiation therapy, no particular cause for spontaneous hemorrhage could be identified in this patient. Physicians routinely encounter renal tumors, vascular diseases and infections of the renal system. Related to these common findings, this case renews the awareness of sub-capsular or peri-renal hemorrhage, and the need to assess these patients knowing the frequency of abrupt nephrectomy as a treatment outcome. In addition, physicians should be able to integrate the less commonly encountered causes that have been highlighted. Our case suggests radiation therapy as an additional risk factor for this hemorrhagic event.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Full Text:

Available from *Springer NHS Pilot 2014 (NESLi2)* in [Journal of General Internal Medicine](#); Note: ; Collection notes: Only available on NHS networked computers. Not available with Athens username/password.

Title: Pre-eclampsia and hellp syndrome as an initial presentation of primary anti-phospholipid syndrome

Citation: Journal of General Internal Medicine, April 2014, vol./is. 29/(S412), 0884-8734 (April 2014)

Author(s): Loden A.

Language: English

Abstract: LEARNING OBJECTIVE 1: Recognize the internists role in the treatment of medical complications arising during pregnancy LEARNING OBJECTIVE 2: Diagnose and confidently treat ante-partum complications and manage post-partum health of women based on obstetric diagnoses CASE: A 28 year old G1P0101 was referred by her obstetrician to an internist for persistent hypertension following preterm delivery at 29 and 6/7 weeks secondary to pre-eclampsia and HELLP Syndrome (hemolysis, elevated liver transaminases and low platelets). She had no prior medical or surgical history, and no known allergies. She was taking amlodipine 5 mg daily and hydrochlorthiazide 25 mg daily which were started by her obstetrician when hypertension failed to resolve immediately postpartum. She had no toxic habits. Her father has hypertension. She had normal vital signs with a blood pressure of 125/75 and fundoscopic, cardiovascular, neurologic, musculoskeletal and dermatologic examinations were unremarkable. She was advised to stop anti-hypertensive therapy and subsequent ambulatory blood pressure monitoring was normal. Initial studies were notable for positive ANA with a titer of 1:80. Subsequent evaluation showed no anti-dsDNA antibodies, normal ENA panel and 24 h urine, but was notable for positive anti-beta2 glycoprotein IgG antibody at 17.8 units/mL (normal level is <10 units/mL). Repeat testing 12 weeks later again revealed IgG antibodies against the beta2 glycoprotein at 22.4 units/mL. Anti-cardiolipin and anti-lupus anticoagulant antibodies were never positive. She was diagnosed with primary antiphospholipid syndrome. Treatment was initiated with daily aspirin. She was advised of her increased future risk for hypertension and both cardiovascular and cerebrovascular disease given her history of pre-eclampsia and will follow-up annually with her internist. The patient's obstetrician and internist agreed with the pre-conception treatment plan and to initiate heparin upon discovery of pregnancy. DISCUSSION: Patients with a history of pre-eclampsia should be followed postpartum for monitoring and preventative care for cardiovascular and cerebrovascular disease.[1,5] Internists should be aware that women meeting certain obstetric criteria (more than three miscarriages prior to 10 weeks gestation, fetal death after 10 weeks gestation, or preterm delivery from eclampsia or pre-eclampsia) need immunologic evaluation for APS.[2,3] If anti-cardiolipin, anti-beta2 Glycoprotein, or anti-lupus anticoagulant antibodies are detected, a repeat assessment should be performed no sooner than 12 weeks. [2,3] Patients with APS should take daily low dose aspirin and should not use contraceptives or hormone replacement therapy containing estrogen. [2,4] Upon discovery of pregnancy, internists should be comfortable maintaining a low dose aspirin regimen and initiating heparin for patients with APS.[2,4] Because these patients have a high risk of early miscarriage, failure to follow these guidelines, even to wait until the patient's first obstetric visit (commonly between 8 and 10 weeks), significantly increases the chance of pregnancy loss.[2,4] Multi-specialty collaboration is essential for early diagnosis for women at risk for ante- and postpartum medical complications. Internists do not frequently consider obstetric complications as they may relate to a patient's current or future medical problems and obstetricians may not adequately stress to patients the future risks indicated by ante-partum medical complications. As illustrated by this case, the referral by the patient's obstetrician for persistent post-partum hypertension was appropriate for multiple reasons. First, ensuring that the obstetric diagnoses of preterm delivery secondary to pre-eclampsia and HELLP Syndrome are communicated to the patient's internist inform aggressive monitoring and preventative care for cardiovascular and cerebrovascular disease in the post-partum setting and allow for new diagnoses to be discovered. Second, the treatment protocol for APS to be instituted upon discovery of pregnancy will reduce the risk of early pregnancy loss regardless of whether the patient's obstetrician or internist discover the pregnancy. Finally, the communication between the patient's obstetrician and internist revealed the patient's need for preconception counseling for future pregnancies based on a new diagnosis. 1. Cardiovascular disease risk in women with pre-eclampsia: systematic review and meta-analysis. Brown MC, et al. Eur J Epidemiol. Jan 2013. 2. Antiphospholipid syndrome in obstetrics. Danza A, et al. Best Pract Res Clin Obstet Gynaecol. 2012 Feb. 3. Practice Bulletin No. 132: Antiphospholipid syndrome. Committee on Practice Bulletins-Obstetrics, American College of Obstetricians and Gynecologists. Obstet Gynecol. Dec 2012. 4. Obstetric antiphospholipid syndrome. Galarza-Maldonado C, et al. Autoimmun Rev. Feb 2012. 5. Etiology and management of postpartum hypertension-preeclampsia. Sibai BM. Am J Obstet Gynecol. June 2012.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Full Text:

Available from *Springer NHS Pilot 2014 (NESLi2)* in [Journal of General Internal Medicine](#); Note: ; Collection notes: Only available on NHS networked computers. Not available with Athens username/password.

Title: Abstracts from the Annual Scientific Meeting of the British Society for Gynaecological Imaging 2014

Citation: BJOG: An International Journal of Obstetrics and Gynaecology, April 2014, vol./is. 121/, 1470-0328 (April 2014)

Language: English

Abstract: The proceedings contain 15 papers. The topics discussed include: audit on outpatient medical management of miscarriage; imaging in molar pregnancy - a multi-modal approach; BSGI trainees' survey 2014 - results of a nationwide study of ultrasound training; comparison of fetal growth in early pregnancy between spontaneous and IVF pregnancies: a prospective study; validation of structured scoring sheet of recorded videos for assessing trainees' competency in ultrasound; vesico-ovarian fistula as a result of tubo-ovarian abscess; a radiological and clinical diagnostic challenge; a rare cause of recurrent haemothorax; thoracic endometriosis; management of cervical fibroid during the reproductive period background; ultrasound diagnosis extrauterine pregnancy; audit of management and prognosis of isolated mild ventriculomegaly in Aneurin Bevan University Health Board (ABUHB) from 2003 to 2012; and antenatal visualisation of cleft lip and palate in South Wales: can offline 3D assessment and dataset analysis improve detection? a comparison of 2D and 3D examinations.

Publication Type: Journal: Conference Review

Source: EMBASE

Title: Maternal asthma: A common co-morbidity of pregnancy that requires a cost-effective approach in management

Citation: Journal of Paediatrics and Child Health, April 2014, vol./is. 50/(77), 1034-4810 (April 2014)

Author(s): Clifton V.L.

Language: English

Abstract: Asthma is the most prevalent complication to affect human pregnancy in Australia, affecting an estimated 12% of pregnant women, or 36,000 pregnancies each year. The significance of asthma in pregnancy is highlighted in a recent meta-analysis, demonstrating clear associations between asthma in pregnancy and adverse perinatal outcomes, including increased risk of low birth weight (RR 1.46; 1.22-1.75), small-for-gestational age (RR 1.22; 1.14-1.31), preterm delivery (RR 1.41; 1.22-1.61) and pre-eclampsia (RR 1.54; 1.32-1.81). The adverse effects of asthma in pregnancy are related to asthma severity and the intensity of treatment. Studies of women with well controlled asthma, which involves the regular use of inhaled corticosteroids (ICS) to inhibit inflammatory mechanisms at a systemic level, seldom demonstrate adverse effects on fetal outcome. In contrast, regular use of oral corticosteroids (OCS), used in the management of acute asthma exacerbations and poorly controlled asthma during pregnancy, has been associated with an increased incidence of low birthweight babies and preterm delivery. A number of studies have examined the effects of maternal asthma during pregnancy, in the presence and absence of ICS treatment, on placental function and fetal development. These studies have demonstrated that use of ICS for the treatment of asthma did not affect fetal growth and that maternal asthma without treatment had a greater impact on the fetus and placenta. Furthermore, acute asthma exacerbations were identified as the most significant event to affect fetal morbidity and mortality in pregnancies complicated by asthma. That is, poor asthma control is a greater risk factor for an adverse outcome during pregnancy than ICS use. In contrast, evidence demonstrates little or no increased risk of adverse maternal or fetal complications in situations where asthma is well controlled throughout pregnancy. These findings point to the fact that optimization of asthma management and asthma control is key to improving perinatal outcomes. As such, pregnancy represents a significant indication to optimize therapy and maximize lung function in order to reduce the risk of acute exacerbation and resultant adverse health outcomes. Despite awareness of the substantial adverse effects associated with asthma during pregnancy, little has been done to improve its management and reduce associated perinatal morbidity and mortality. Further research and new approaches for the management of asthma during pregnancy should be a focus of obstetric research in Australia.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Recent advances in pre-eclampsia management: An anesthesiologist's perspective!

Citation: Anaesthesia, Pain and Intensive Care, April 2014, vol./is. 18/2(209-214), 1607-8322 (01 Apr 2014)

Author(s): Singh J., Kaur M., Kulshrestha A., Bajwa S.J.S.

Language: English

Abstract: Pre-eclampsia is an important cause of mortality and morbidity in parturients with varied presentations and controversial pathophysiology. The central pathology is a profound vasoconstriction in the vasculature leading to volume contraction and placental hypoperfusion. The management mainly involves a multi-disciplinary approach with the anesthesiologist playing a significant role for a positive outcome. Anesthesia for such parturients remains a challenge and starts with provision of labor analgesia which should be offered to all preeclamptic parturients. The neuraxial techniques of analgesia are most favourable for adequate pain relief and if contraindicated, intravenous PCA technique with the use of opioids should be used. Recent studies show favourable maternal and fetal outcomes with the use of patient controlled epidural analgesia technique with the combination of lower concentrations of local anesthetics with opioids. Regional anesthesia should be preferred in these parturients for cesarean section if not contraindicated. If general anesthesia is indicated, the techniques should be modified to prevent any stress response. A careful and prompt use of oxytocics should be done in all cases as the incidence of postpartum hemorrhage is high in these parturients.

Publication Type: Journal: Review

Source: EMBASE

Title: Amnioinfusion in preterm premature rupture of membranes (AMIPROM): A randomised controlled trial of amnioinfusion versus expectant management in very early preterm premature rupture of membranes - A pilot study

Citation: Health Technology Assessment, April 2014, vol./is. 18/21(1-135), 1366-5278;2046-4924 (April 2014)

Author(s): Roberts D., Vause S., Martin W., Green P., Walkinshaw S., Bricker L., Beardsmore C., Shaw B.N.J., McKay A., Skotny G., Williamson P., Alfirevic Z.

Language: English

Abstract: Background: Fetal survival is severely compromised when the amniotic membrane ruptures between 16 and 24 weeks of pregnancy. Reduced amniotic fluid levels are associated with poor lung development, whereas adequate levels lead to better perinatal outcomes. Restoring amniotic fluid by means of ultrasound-guided amnioinfusion (AI) may be of benefit in improving perinatal and long-term outcomes in children of pregnancies with this condition. Objective: The AI in preterm premature rupture of membranes (AMIPROM) pilot study was conducted to assess the feasibility of recruitment, the methods for conduct and the retention through to long-term follow-up of participants with very early rupture of amniotic membranes (between 16 and 24 weeks of pregnancy). It was also performed to assess outcomes and collect data to inform a larger, more definitive, clinical trial. Design: A prospective, non-blinded randomised controlled trial. A computer-generated random sequence using a 1: 1 ratio was used. Randomisation was stratified for pregnancies in which the amniotic membrane ruptured between 16⁺⁰ and 19⁺⁶ weeks' gestation and 20⁺⁰ and 24+0 weeks' gestation. The randomisation sequence was generated in blocks of four. Telephone randomisation and intention-to-treat analysis were used. Setting: Four UK hospital-based fetal medicine units - Liverpool Women's NHS Trust, St. Mary's Hospital, Manchester, Birmingham Women's NHS Foundation Trust and Wirral University Hospitals Trust. Participants: Women with confirmed preterm prelabour rupture of membranes between 16⁺⁰ and 24⁺⁰ weeks' gestation. Women with multiple pregnancies, resultant fetal abnormalities or obstetric indication for immediate delivery were excluded. Interventions: Participants were randomly allocated to either serial weekly transabdominal AI or expectant management (Exp) until 37 weeks of pregnancy, if the deepest pool of amniotic fluid was < 2 cm. Main outcome measure: Short-term maternal, pregnancy and neonatal outcomes and long-term outcomes for the child were studied. Long-term respiratory morbidity was assessed using validated respiratory questionnaires at 6, 12 and 18 months of age and infant lung function was assessed at approximately 12 months of age. Neurodevelopment was assessed using Bayley's Scale of Infant Development II at a corrected age of 2 years. Results: Fifty-eight women were randomised and two were excluded from the analysis owing to termination of pregnancy for lethal anomaly, leaving 56 participants (28 serial AI, 28 Exp) recruited between 2002 and 2009,

with annual recruitment rates varying between 2 and 14. Recruitment to the study improved significantly from 2007 with National Institute for Health Research (NIHR) funding. There was no significant difference in perinatal mortality [19/28 vs. 19/28; relative risk (RR) 1.0; 95% confidence interval (CI) 0.70 to 1.43], maternal morbidity or neonatal morbidity. The overall chance of surviving without long-term respiratory or neurodevelopmental disability is 4/56 (7.1%): 4/28 (14.3%) in the AI arm and 0/28 in the expectant arm (0%) (RR 9.0; 95% CI 0.51 to 159.70). Conclusions: This pilot study found no major differences in maternal, perinatal or pregnancy outcomes. The study was not designed to show a difference between the arms and the number of survivors was too small to draw any conclusions about long-term outcomes. It does signal, however, that a larger, definitive, study to evaluate AI for improvement in healthy survival is indicated. The results suggest that, with appropriate funding, such a study is feasible. A larger, definitive, study with full health economic analysis and patient perspective assessment is required to show whether AI can improve the healthy survivor rate. Trial registration: Current Controlled Trials ISRCTN 8192589. Funding: This project was funded by the NIHR Health Technology Assessment programme and will be published in full in Health Technology Assessment; Vol. 18, No. 21. See the NIHR Journals Library website for further project information. © Queen's Printer and Controller of HMSO 2014.

Publication Type: Journal: Article

Source: EMBASE

Title: Emergency management of a congenital teratoma of the oral cavity at birth and three-year follow-up

Citation: International journal of oral and maxillofacial surgery, April 2014, vol./is. 43/4(433-436), 1399-0020 (01 Apr 2014)

Author(s): Devauchelle B.

Language: English

Abstract: Teratomas are congenital malformations that are rarely located in the head and neck region. We report a case of congenital teratoma of the oral cavity, which was causing an airway obstruction and was treated at the time of birth. This teratoma was discovered at 27 gestational weeks by ultrasonography. A multidisciplinary team was consulted for antenatal diagnosis; the options of therapeutic abortion or management of the birth with the prevention of respiratory distress were debated. However, preterm labour at 32 gestational weeks accelerated the parental and the medical decisions. The parents agreed to the birth. The various disciplines coordinated their work, and the predefined treatment plan for clearing the airway obstruction was applied to manage the birth. The reestablishment of patency of the airway was performed during delivery and removal of the tumour was performed immediately afterwards. The follow-up of this case over 3 years is also presented.

Publication Type: Journal: Article

Source: EMBASE

Title: Emergency management of a congenital teratoma of the oral cavity at birth and three-year follow-up

Citation: International Journal of Oral and Maxillofacial Surgery, April 2014, vol./is. 43/4(433-436), 0901-5027;1399-0020 (April 2014)

Author(s): Dakpe S., Demeer B., Cordonnier C., Devauchelle B.

Language: English

Abstract: Teratomas are congenital malformations that are rarely located in the head and neck region. We report a case of congenital teratoma of the oral cavity, which was causing an airway obstruction and was treated at the time of birth. This teratoma was discovered at 27 gestational weeks by ultrasonography. A multidisciplinary team was consulted for antenatal diagnosis; the options of therapeutic abortion or management of the birth with the prevention of respiratory distress were debated. However, preterm labour at 32 gestational

weeks accelerated the parental and the medical decisions. The parents agreed to the birth. The various disciplines coordinated their work, and the predefined treatment plan for clearing the airway obstruction was applied to manage the birth. The reestablishment of patency of the airway was performed during delivery and removal of the tumour was performed immediately afterwards. The follow-up of this case over 3 years is also presented. © 2014 International Association of Oral and Maxillofacial Surgeons.

Publication Type: Journal: Article

Source: EMBASE

Title: Fetal echocardiography assists in determining optimal delivery site

Citation: Journal of obstetrics and gynaecology Canada : JOGC = Journal d'obstetrique et gynecologie du Canada : JOGC, March 2014, vol./is. 36/3(210-215), 1701-2163 (Mar 2014)

Author(s): Berndl A., Pearce K., Mondal T.

Language: English

Abstract: Congenital heart disease is one of the most common types of structural fetal abnormalities and a major cause of perinatal morbidity and mortality. Fetal echocardiography aids in the diagnosis of congenital heart disease, which allows management planning for parents and physicians, including continuation or termination of the pregnancy and triaging for location of delivery. This is a key component of planning, as transport of neonates entails risks, costs, and parental stress. In this study, we examined the outcomes of pregnancies with fetal cardiac anomalies diagnosed at a single tertiary care centre. We aimed to assess whether the system of directing affected pregnancies to either a tertiary and quaternary care centre is effective. We identified pregnancies with fetal cardiac anomalies diagnosed on fetal echocardiography between 2005 and 2009. Information about diagnosis, pregnancy outcome, delivery location, and surgical management was collected. This information was analyzed retrospectively. Anomalies were demonstrated in 120 fetal echocardiography studies. Four of the babies (3.3%) were stillborn, and 27 (22.5%) pregnancies were terminated. There were 89 live born babies, and 74 of these (61.7%) survived the neonatal period. Fifteen babies (12.5%) died as neonates. Thirty-two pregnant women were triaged to deliver at the quaternary centre with pediatric cardiac surgery services, and 20 of these babies underwent surgery. Two of the 89 live born babies (2.2%) required emergency transfer. Fetal echocardiography is an important contributor to efficient use of pediatric cardiac services and minimizes need for neonatal transfer. Contemporary use of fetal echocardiography is associated with optimized delivery location.

Publication Type: Journal: Article

Source: EMBASE

Title: Nutrient intake of pregnant women with Type 1 diabetes in the DAPIT trial: Relationships with anthropometry and glycaemic control

Citation: Diabetic Medicine, March 2014, vol./is. 31/(148), 0742-3071 (March 2014)

Author(s): Hill A.J., Patterson C., Holmes V.A., Young I.S., McCance D.R.

Language: English

Abstract: Aims: To examine the nutritional composition of diets of pregnant UK women with Type 1 diabetes in the second trimester in relation to body mass index(BMI) and glycaemia. Methods: Women were participants in a randomised controlled trial of antioxidant supplementation to prevent pre-eclampsia (DAPIT [1]). Diet was assessed using a validated semi-quantitative food frequency questionnaire at 26 weeks' gestation. Mean daily nutrient intakes were analysed using Q Builder nutritional software (Tinuviel Software, UK) and SPSS version 20. Results: Data were available for 597 women (78% of cohort), mean age 30 (SD 5.4) years, with 14.5 (SD 8.0) years' diabetes duration and mean HbA1c at booking 7.8% (SD 1.4) (IFCC 61.7mmol/mol). Mean BMI at booking was significantly higher than that of the background pregnant population 27 (4.5)kg/m² vs

24.2 (4.5)kg/m² (p < 0.01) with 63% of women overweight or obese, which is significantly higher than the background population [2-4]. Overall women reported adhering to diets high in carbohydrate and fibre, average in glycaemic index and glycaemic load, but low in fat and energy (mean 7,009 (2,161) kJ). No relationship was observed between carbohydrate intake and measures of glycaemia. While women with higher BMI (>30kg/m²) reported consuming less energy they required more insulin at 28 weeks compared with normal weight women (p < 0.01). Conclusion: Obese women reported consuming lower energy intake but were more likely to under-report. Obese women gained more weight than recommended by IOM [4] but required more insulin. Weight management in pregnancy may therefore have more impact on glycaemic control than adjusting dietary intake.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Maternal complications and perinatal mortality: findings of the World Health Organization Multicountry Survey on Maternal and Newborn Health

Citation: BJOG : an international journal of obstetrics and gynaecology, March 2014, vol./is. 121 Suppl 1/(76-88), 1471-0528 (Mar 2014)

Author(s): Vogel J.P., Souza J.P., Mori R., Morisaki N., Lumbiganon P., Laopaiboon M., Ortiz-Panoso E., Hernandez B., Perez-Cuevas R., Roy M., Mittal S., Cecatti J.G., Tuncalp O., Gulmezoglu A.M., WHO Multicountry Survey on Maternal and Newborn Health Research Network

Language: English

Abstract: We aimed to determine the prevalence and risks of late fetal deaths (LFDs) and early neonatal deaths (ENDs) in women with medical and obstetric complications. Secondary analysis of the WHO Multicountry Survey on Maternal and Newborn Health (WHOMCS). A total of 359 participating facilities in 29 countries. A total of 308 392 singleton deliveries. We reported on perinatal indicators and determined risks of perinatal death in the presence of severe maternal complications (haemorrhagic, infectious, and hypertensive disorders, and other medical conditions). Fresh and macerated LFDs (defined as stillbirths > 1000 g and/or >28 weeks of gestation) and ENDs. The LFD rate was 17.7 per 1000 births; 64.8% were fresh stillbirths. The END rate was 8.4 per 1000 liveborns; 67.1% occurred by day 3 of life. Maternal complications were present in 85.6, 86.5, and 88.6% of macerated LFDs, fresh LFDs, and ENDs, respectively. The risks of all three perinatal mortality outcomes were significantly increased with placental abruption, ruptured uterus, systemic infections/sepsis, pre-eclampsia, eclampsia, and severe anaemia. Preventing intrapartum-related perinatal deaths requires a comprehensive approach to quality intrapartum care, beyond the provision of caesarean section. Early identification and management of women with complications could improve maternal and perinatal outcomes. © 2014 RCOG The World Health Organization retains copyright and all other rights in the manuscript of this article as submitted for publication.

Publication Type: Journal: Article

Source: EMBASE

Title: Peripartum cardiomyopathy - Case series

Citation: Indian Heart Journal, March 2014, vol./is. 66/2(223-226), 0019-4832 (March-April 2014)

Author(s): Prasad G.S., Bhupali A., Prasad S., Patil A.N., Deka Y.

Language: English

Abstract: Objectives To study the pattern of presentation, course of disease and outcome of pregnancy in Peripartum Cardiomyopathy. Methods A prospective study of sixteen cases of PPCM was conducted at Apple Saraswati Multispecialty Hospital and Dr. D.Y. Patil Medical College and Hospital, Kolhapur, Maharashtra, India from January 2006 to December 2012. Data included age distribution, parity, gestational age, symptoms

and risk factors. Medical management and pregnancy outcome were documented. Serial echocardiography data was compiled for a period of one year. Results In our study 9/16 (56%) were primigravidae, 4/16 (25%) had pre-eclampsia and 6/16 (35%) had co-existing hypertension. The difference in Echocardiography parameters observed between recovered and non-recovered patients was significant: Left Ventricular End diastolic dimension (5.6 cm vs 6.06 cm), Left Ventricular Ejection Fraction (28.7% vs 22.4%) and Left Ventricular fractional shortening (17.5% vs 13.4%). Thirteen out of sixteen patients were followed up for a period of one year out of which 61% (8/13) patients recovered completely. There was one mortality. Conclusion PPCM is a diagnosis of exclusion. Majority were young primigravidae presenting postnatally. Pre-eclampsia and hypertension were risk factors. ECHO parameters were reliable predictors of recovery. Future pregnancies are better avoided. © 2014, Cardiological Society of India. All rights reserved.

Publication Type: Journal: Article

Source: EMBASE

Title: Caesarean section in a case of systemic lupus erythematosus

Citation: Indian Journal of Anaesthesia, March 2014, vol./is. 58/2(193-195), 0019-5049 (March-April 2014)

Author(s): Vyas V., Shukla D., Patil S., Mohite S.

Language: English

Abstract: Systemic lupus erythematosus (SLE) is an autoimmune disease most frequently found in women of child bearing age and may co-exist with pregnancy. Disease exacerbation, increased foetal loss, neonatal lupus and an increased incidence of pre-eclampsia are the major challenges. Its multisystem involvement and therapeutic interventions like anticoagulants, steroids and immunosuppressive agents pose a high risk for both surgery and anaesthesia. We describe successful management of an antinuclear antibody (ANA) positive parturient with bad obstetric history who underwent elective caesarean section under spinal anaesthesia.

Publication Type: Journal: Article

Source: EMBASE

Full Text:

Available from *National Library of Medicine* in [Indian Journal of Anaesthesia](#)

Available from *ProQuest* in [Indian Journal of Anaesthesia](#)

Title: Amnioinfusion before 26 weeks' gestation for severe fetal growth restriction with oligohydramnios: Preliminary pilot study

Citation: Journal of Obstetrics and Gynaecology Research, March 2014, vol./is. 40/3(677-685), 1341-8076;1447-0756 (March 2014)

Author(s): Takahashi Y., Iwagaki S., Chiaki R., Iwasa T., Takenaka M., Kawabata I., Itoh M.

Language: English

Abstract: Aim: The prognosis for severe fetal growth restriction (FGR) with severe oligohydramnios before 26 weeks' gestation (WG) is currently poor; furthermore, its management is controversial. We report the innovative new management of FGR, such as therapeutic amnioinfusion and tocolysis. Material and Methods: For FGR and severe oligohydramnios before 26 WG complicated with absent or reversed umbilical artery end-diastolic flow velocity and/or deceleration by ultrasonography, we performed transabdominal amnioinfusion with tocolysis. Cases with multiple anomalies were excluded. Survival rate and long-term prognosis were analyzed. Results: Among 570 FGR cases, 18 were included in the study. Mean diagnosis and delivery were at 22.6 +/- 2.0 and 28.7 +/- 3.3 WG. Median birthweight was 625 g (4.2 standard deviation). Final survival rate was 11/13 (85%). There were five fetal deaths. In seven cases, oligohydramnios improved. Growth was detected in 10/18 fetuses. Furthermore, 8/8 decelerations, 4/12 cases of reversed umbilical artery end-diastolic flow velocity, 7/14 cases of brain-sparing effect, and 6/13 venous Doppler abnormalities were improved. When we detected umbilical cord

compression, 8/10 cases were rescued. Eleven infants were followed up for an average of 5 years; one case of cerebral palsy with normal development and 10 cases with intact motor functions without major neurological handicap were confirmed. Conclusions: In cases of extremely severe FGR before 26 WG with oligohydramnios and circulatory failure, amnioinfusion might be a promising, innovative tool. © 2013 Japan Society of Obstetrics and Gynecology.

Publication Type: Journal: Article

Source: EMBASE

Title: The impact of maternal chronic hepatitis B infection in obstetric outcomes

Citation: Hepatology International, March 2014, vol./is. 8/1 SUPPL. 1(S147-S148), 1936-0533 (March 2014)

Author(s): Cheng E.H., Witharana S., Haque M.

Language: English

Abstract: Introduction: Antenatal care of an expectant woman who has chronic hepatitis B (CHB) infection are currently focused on vertical transmission risk management. Recent studies have linked maternal CHB status with adverse obstetric outcomes such as antepartum haemorrhage, gestational diabetes and threatened preterm labour [1, 2]. Understanding the association between maternal CHB carrier status and adverse obstetric outcomes may lead to better antenatal care and improved outcomes. Aims: To examine the association of maternal CHB infection in obstetric outcomes of singleton pregnancies including antepartum haemorrhage, gestational diabetes, intrauterine growth restriction, caesarean section rates, preterm deliveries and postpartum haemorrhage compared to singleton pregnancies of non-CHB infected mothers. Methods: This was a hospital based retrospective study that included 23,430 singleton pregnancies at the Mater Public Hospital from Jan 2008 to Dec 2012. Differences based on CHB status were calculated using chisquared test and non-parametric test used when parametric assumptions could not be made with a type I error rate of 5 %. Further multivariate logistic regression analysis was performed adjusting for covariates including maternal age, parity, socioeconomic, smoking, and alcohol intake status and significant medical conditions. Mothers with pre-existing diabetes were excluded prior to analysis for gestational diabetes. Ethics approval was obtained from the Mater Human Research Ethics Committee. Results: A total of 300 women were hepatitis B surface antigen (HBsAg) positive, giving an HBsAg seroprevalence rate of 1.28 %. After excluding mothers with pre-existing diabetes, there were 33/298 (11.1 %) of CHB infected mothers who developed gestational diabetes compared to 1291/22848 (5.7 %) of non-CHB infected mothers ($p < 0.0001$). After adjusting for covariates the results were significant (adjusted odds ratio 1.67; 95 % CI 1.15-2.43). There were 114/300 (38 %) of CHB infected mothers who had significant postpartum haemorrhage compared to non-CHB infected mothers 6654/23130 (28 %), $p < 0.0001$. This was also statistically significant after adjusting for covariates (adjusted odds ratio 1.50; CI 1.19-1.90). There was no association between maternal CHB status and antepartum haemorrhage (adjusted odds ratio 1.07; CI 0.55-2.10), intrauterine growth restriction (adjusted odds ratio 0.43; CI 0.06-3.07), caesarean section rates (adjusted odds ratio 0.92; CI 0.71- 1.19) and preterm deliveries (adjusted odds ratio 0.76; CI 0.48-1.19). Conclusions: Our study revealed further evidence of an association between CHB infected mothers and adverse obstetric outcomes. More emphasis should be placed on antenatal care of CHB infected mothers to improve outcomes. Further prospective studies should be performed to validate these findings.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Full Text:

Available from *ProQuest* in [Hepatology International](#)

Available from *Springer NHS Pilot 2014 (NESLi2)* in [Hepatology International](#); Note: ; Collection notes: Only available on NHS networked computers. Not available with Athens username/password.

Title: Epilepsy: Current perspective

Citation: International Journal of Pharmaceutical Sciences Review and Research, March 2014, vol./is. 25/1(23-35), 0976-044X (March - April 2014)

Author(s): Mendhi S.M., Suralkar A.A., Chitlange S.S., Mane P.B., Gairola N., Sharma A.N.

Language: English

Abstract: Epilepsy is caused by the disease is both physical and psychosocial, bringing a huge burden to people with epilepsy, their families and society at large. Nearly 90% of the people with epilepsy are found in developing regions. Epilepsy is almost always treated using antiepileptic drugs. Recent name for a group of chronic neurological disorder characterized by recurrent epileptic seizures. It is responsible for an enormous amount of suffering, affecting some 50 million people of all ages, especially in childhood, adolescence and the ageing population. The suffering in both developed and developing countries have shown that up to 70% of epilepsy cases can be successfully treated, yet about three fourths of affected people in developing countries do not get the proper treatment what they need. People with epilepsy and their families can suffer from stigma and discrimination in many parts of the world. Epilepsy increases a person's risk of premature death by about two to three times compared to the general population. So there is need to treat or cure this disorder & important to study about epilepsy. The present review summarizes information about epilepsy and the brief Summary of antiepileptic drugs with producing their side effects which is helpful for researchers. Also described the pharmacological management of eclampsia and pre-eclampsia.

Publication Type: Journal: Review

Source: EMBASE

Full Text:

Available from *ProQuest* in [International Journal of Pharmaceutical Sciences Review and Research](#)

Title: Fetuses with normal birth weight but evidence of declined fetal growth curve at term and risk of adverse perinatal outcome

Citation: Reproductive Sciences, March 2014, vol./is. 21/3 SUPPL. 1(389A-390A), 1933-7191 (March 2014)

Author(s): Vannuccini S., Bocchi C., Torricelli M., Voltolini C., Severi F.M., Petraglia F.

Language: English

Abstract: INTRODUCTION: To verify whether fetuses classified as adequate for gestational age (AGA) at birth and who showing a declined intrauterine growth curve, have an increased risk of adverse perinatal outcome. METHODS: A group of singleton pregnancies (n=509) were prospectively evaluated: 1st trimester dating, excluding small for gestational age (SGA) and large for gestational age (LGA) fetuses, fetuses affected by intrauterine growth retardation, fetal malformations and preterm birth. Fetal growth parameters were evaluated by US routinary biometry in the mid trimester (22-24 weeks) and in the imminence of delivery (37-41 weeks). Each parameter of abdominal circumference (AC) was converted to Multiples of Median (MoM) according to the Local Reference Curve and a coefficient of variation was calculated between the two measurements (Delta MoM), to identify fetuses who showed a decreased intrauterine growth trend (Delta MoM < 0 - cases) and fetuses who maintain or improve their intrauterine growth trend (Delta MoM > 0 - controls). Neonatal outcome measures were: birth weight, Apgar score at birth, days of neonatal hospitalization and need of admission in NICU. Unpaired t-test, Mann-Whitney U test, Fisher's exact test and Kruskal-Wallis test were used for statistical analysis. RESULTS: The study sample consisted of 455 pregnancies who met the inclusion criteria: 160 AGA newborn with declined intrauterine growth (cases) and 295 AGA who maintain or improve growth trend as controls. No difference was noted with respect to maternal age, pregravidic and gravidic maternal BMI, parity, gestational age at delivery, neonatal gender, birth weight and Apgar Score. A higher incidence of delivery by caesarean section (p=0.0280), a higher number of days of neonatal hospitalization (p=0.005) and a greater need of admission in NICU (p=0.0161) were observed between cases and controls. CONCLUSIONS: The past data showed that US fetal growth monitoring may have a value in fetuses classified as adequate for gestational age if they have shown a decline in fetal growth trend from mid trimester to the term of pregnancy. Independently of neonatal birth weight, even this group of fetuses, who failed to reach their growth potential, represents a high risk category. An accurate identification allows to an adequate prenatal management near term and a prompt neonatal intervention.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: The effect of low dose aspirin on pregnancy outcomes in women with recurrent preeclampsia

Citation: Reproductive Sciences, March 2014, vol./is. 21/3 SUPPL. 1(353A), 1933-7191 (March 2014)

Author(s): Stern C., Karoline M.-P., Vassiliki K.-K., Ioana L., Daniela U., Bence C., Uwe L., Mila C.-Z.

Language: English

Abstract: INTRODUCTION: Preeclampsia is one of the major causes of maternal and fetal morbidity and mortality worldwide. It complicates up to 8% of pregnancies and is a multisystem disease with an extremely variable appearance, from mild to catastrophic courses. The pathogenesis still is not fully understood, however, early placental development is supposed to have a major role in its etiology. Antiplatelet agents, such as acetylsalicylic acid (aspirin), have a positive effect on the balance of vasoactive agents, resulting in an enhanced placental invasion. Because of conflicting, though promising, data from meta-analyses, recommendations for clinical management seem not to be convincing enough yet to be introduced into routine obstetric care. The aim of the study was to evaluate the effect of prophylactic use of acetylsalicylic acid on pregnancy outcomes in women with a history of preeclampsia in their previous pregnancy. METHODS: The retrospective analysis of pregnancy outcomes included 108 women with a history of severe preeclampsia or HELLP-syndrome in the previous pregnancy. The administration of acetylsalicylic acid (75-100 mg daily) was started in 55 pregnancies in the 1st trimester and continued until week 34 of gestation (prophylaxis - group, +p). The control group of 53 patients did not get oral prophylaxis (non - prophylaxis-group, -p). The current pregnancies were analyzed with regard to onset of preeclampsia, mode of delivery, preterm delivery, fetal growth restriction (FGR), asphyxia and intrauterine fetal death. Continuous variables between study groups were compared using the independent sample t-test and categorical variables by chi-square test. Two- tailed p-values set by 0.05 were considered statistically significant. RESULTS: Patients receiving aspirin showed significant less preeclampsia in their following pregnancy than those without oral prophylaxis (p=0.05). Comparison between groups regarding severity of disease showed less occurrence of the mild as well as less occurrence of the severe form (+p 3.6%, -p 15.1% and +p 27.3% and -p 34%, respectively). There was no difference in mode of delivery and fetal outcome between the groups. CONCLUSIONS: The data show a protective effect of low dose aspirin on the prevention of recurrent preeclampsia in women with a history of severe preeclampsia.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Oxytocin receptor antagonist, atosiban, drives proinflammatory effects in human amnion via gai signaling

Citation: Reproductive Sciences, March 2014, vol./is. 21/3 SUPPL. 1(111A), 1933-7191 (March 2014)

Author(s): Kim S.H., Blanks A., Thornton S., Bennett P.R., Terzidou V.

Language: English

Abstract: INTRODUCTION: Inflammation is recognized as one of the key characteristics of both preterm and term labour. There is accumulating evidence suggesting that NF-kappaB, a transcription factor associated with inflammation, plays a significant role in the physiology and pathophysiology of human labour. NF-kappaB has been shown to increase in human amnion in association with labour. In term pre-labour amnion epithelial cells, OT couples with Gai, but not Gaq, to induce sequential activation of MAPKs and NF-kappaB to increase expression of downstream pro-labour genes including PG synthetic enzymes and inflammatory cytokines/chemokines. We have previously reported that the OTR antagonist, atosiban, does not inhibit, but stimulates both MAPKs and NF-kappaB in amnion to the same extent as OT. Here, we investigate the downstream effects of NF-kappaB activation by atosiban and the relevant G protein coupling involved. METHODS: Term, pre-labour amnion epithelial cells were stimulated with atosiban (10µM), with or without pre-treatment with pertussis toxin (PTX; 500ng/ml). Total RNA was extracted for qPCR analysis and whole cell lysates were used for Western blots. Collected culture media were subjected to further analysis via ELISA. All

data sets were presented with S.E.M and $p < 0.05$ was considered to be statistically significant. **RESULTS:** Following activation of MAPKs and NF-kappaB with atosiban stimulation, there were significant increases in mRNA expressions of NF-kappaB-regulated genes; IL-6, CCL5, and COX-2, and increases in the release of IL-6 and CCL5 after 2 h and 6 h, respectively ($p < 0.05$, ANOVA). In addition, upregulation of COX-2 and activation of cPLA2 were observed at protein level, as well as the subsequent increase in PGE2 production ($p < 0.05$, ANOVA). Pre-treatment with PTX reduced the effect of atosiban on NF-kappaB, ERK and p38 activation, and inhibited COX-2 and p-cPLA2 expression, indicating that these effects are mediated through Gai ($p < 0.05$, ANOVA). **CONCLUSIONS:** We conclude that similar to OT, atosiban induces activation of NF-kappaB and increases expression of downstream pro-labour genes via OTR- Gai coupling. Therefore, therapeutic modulation of the OT/OTR system for clinical management of term/preterm labour should consider potential inflammatory activation in amnion by ligand-directed signaling.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Metabolic profiling identifies biomarkers of FGR in maternal hair

Citation: Reproductive Sciences, March 2014, vol./is. 21/3 SUPPL. 1(86A), 1933-7191 (March 2014)

Author(s): Sulek K., Han T.L., Villas-Boas S.G., Kwek K., Chong Y.S., Wishart D.S.S., Kenny L.C., Baker P.N.

Language: English

Abstract: **INTRODUCTION:** Fetal Growth Restriction (FGR) complicates 4-7% of pregnancies. FGR is associated with increased perinatal mortality and survivors are at increased risk of chronic diseases in adult life. Enhanced diagnosis/identification of FGR could significantly improve management of these pregnancies through increased surveillance and optimal timing of delivery. Maternal health complications and exposure to environmental factors play a major role in FGR. We previously reported that metabolomic biomarkers for FGR can be found in the maternal specimens [Horgan et al, 2011]. However, in many clinical situations, for example in resourcepoor countries, acquisition of blood samples suitable for metabolomic analysis is challenging. We therefore applied metabolomics to maternal hair samples in search for biomarkers of FGR. **METHODS:** 3-5 hair strand samples were collected from pregnant women at 26 weeks' gestation (GUSTO [Soh SE et al, 2013]). Pregnancies complicated by FGR (defined using the surrogate of small-for gestational age < 10th percentile) were matched with healthy controls by maternal ethnicity, age, and infant sex. Methanol/water washed hairs (1.5-5.5mg) were hydrolysed by alkaline solution and compounds extracted with 70% methanol solution. Derivatized metabolites were analysed via gas chromatography - mass spectrometry [Smart KF et al, 2012]. Metabolites were identified using inhouse MS library and Metab R package. **RESULTS:** Initial analysis of ion fragments with a difference $p < 0.01$ showed a distinctive separation of the two groups. We were able to identify 69 metabolites, from which 32 showed to be significantly different between the cases and controls ($p < 0.01$). Most discriminatory metabolites for FGR were either amino acids and their derivatives (decreased levels in FGR) or fatty acids (increased levels in FGR). Highest controls:cases ratio (13; $p < 0.01$) was observed for NADP(H) and lowest for lysine (0.7; $p < 0.01$). **CONCLUSIONS:** Due to their chemical stability, hairs are able to preserve information of metabolic changes and environmental exposures during pregnancy. Maternal hair samples have potential to aid diagnosis and inform regarding environmental triggers.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Comparison of placental pathology in preterm, late-preterm, near-term, and term births

Citation: American Journal of Obstetrics and Gynecology, March 2014, vol./is. 210/3(234.e1-234.e4), 0002-9378;1097-6868 (March 2014)

Author(s): Stanek J.

Language: English

Abstract: Objective The purpose of this study was to determine whether placental pathologic condition supports the recent suggestion of subcategorizing preterm and term births into smaller gestational age subgroups with different perinatal mortality and morbidity rates. Study Design Twenty-seven clinical and 43 placental phenotypes were retrospectively compared in 4617 third-trimester births: 1332 preterm pregnancies (28-33 weeks' gestation), 1066 late preterm pregnancies (34-36 weeks' gestation), 940 near-term pregnancies (37-38 weeks' gestation), and 1279 term pregnancies (>39 weeks' gestation). Results Acute inflammatory pattern of placental injury was seen mostly at both gestational sides of the third trimester; the clinical conditions linked to in utero hypoxia (preeclampsia, diabetes mellitus, fetal growth restriction) and their placental associations (atherosis, membrane chorionic microcysts, chorangiomas, intervillous thrombi) were associated statistically significantly with mid third trimester. Acute fetal distress (abnormal fetal heart tracing and clinical and histologic meconium) were increasing with gestational age and were statistically significantly most common in full-term pregnancies. Conclusion Differences in placental pathologic condition among the 4 subgroups of third-trimester pregnancy not only challenge the use of an arbitrary cutoff point of 37 weeks' gestation that separates the preterm birth and term birth but also further support separation of late preterm births from preterm births and term births from near-term births. Based on placental pathologic condition, chronic uteroplacental malperfusion is the dominating etiopathogenetic factor in the mid third trimester (late preterm and near-term births), and acute fetal distress is the factor in full-term births. This obscures relative frequencies of perinatal death and management modalities in the third trimester.

Publication Type: Journal: Conference Paper

Source: EMBASE

Title: Triggers of spontaneous preterm delivery - Why today?

Citation: Paediatric and Perinatal Epidemiology, March 2014, vol./is. 28/2(79-87), 0269-5022;1365-3016 (March 2014)

Author(s): Hernandez-Diaz S., Boeke C.E., Romans A.T., Young B., Margulis A.V., McElrath T.F., Ecker J.L., Bateman B.T.

Language: English

Abstract: Background Our goal is to study the triggers of spontaneous preterm delivery using a case-crossover design. Methods In a pilot study, we enrolled 50 women with spontaneous preterm labour (PTL) and 50 with preterm premature rupture of membranes (PPROM) between 2011 and 2012. To assess non-transient risk factors, we also enrolled a control group of 158 pregnant women at their regular prenatal care visits matched to cases by gestational age and calendar time. The index time was defined as the onset of PTL/PPROM (for cases) or interview (for controls). Detailed data were collected through structured interviews regarding factors of interest during the 72 h that preceded the index time. Within case subjects, we compared the frequency of transient factors from 0 to 24 h before index time with that from 48 to 72 h before index time, and estimated matched odds ratios (OR) and 95% confidence intervals (CI). Results Previously hypothesised chronic risk factors for spontaneous preterm delivery, including mood disorders and stressful events, were more common among cases than among controls. Within cases, skipped meals [OR 4.3, 95% CI 1.2, 15.2], disturbed sleep [OR 4.5, 95% CI 1.5, 13.3], sexual activity [OR 6.0, 95% CI 0.7, 69.8], and intake of spicy foods [OR 7.0, 95% CI 1.6, 30.8] were associated with an increased risk for PTL/PPROM within the subsequent 24 h. For physical exertion and other potential risk factors evaluated, the OR was close to the null. Conclusion Skipping meals and disturbed sleep may be associated with imminent PTL/PPROM; sexual activity and spicy food may trigger PTL/PPROM in susceptible women. Larger case-crossover studies will be able to evaluate the impact of modifiable risk factors and acute predictors of PTL/PPROM, and might help guide obstetrical management. © 2014 John Wiley & Sons Ltd.

Publication Type: Journal: Article

Source: EMBASE

Title: Provision and practice of specialist preterm labour clinics: A UK survey of practice

Citation: BJOG: An International Journal of Obstetrics and Gynaecology, March 2014, vol./is. 121/4(417-421), 1470-0328;1471-0528 (March 2014)

Author(s): Sharp A.N., Alfirevic Z.

Language: English

Abstract: Objective: To identify the current status of specialist preterm labour (PTL) clinic provision and management within the UK. Design: Postal survey of clinical practice. Setting: UK Population: All consultant-led obstetric units within the UK. Methods: A questionnaire was sent by post to all 210 NHS consultant-led obstetric units within the UK. Units that had a specialist PTL clinic were asked to complete a further 20 questions defining their protocol for risk stratification and management. Main outcome measures: Current practice in specialist preterm labour clinics. Results: We have identified 23 specialist clinics; the most common indications for attendance were previous PTL (100%), preterm prelabour rupture of membranes (95%), two large loop excisions of the transformation zone (95%) or cone biopsy (95%). There was significant heterogeneity in the indications for and method of primary treatment for short cervix, with cervical cerclage used in 45% of units, progesterone in 18% of units and Arabin cervical pessary in 5%. A further 23% used multiple treatment modalities in combination. Conclusions: A significant heterogeneity in all topics surveyed suggests an urgent need for networking, more evidence-based guidelines and prospective comparative audits to ascertain the real impact of specialist PTL clinics on the reduction in preterm birth and its sequelae. © 2013 Royal College of Obstetricians and Gynaecologists.

Publication Type: Journal: Article

Source: EMBASE

Title: Management of term pregnant patient with paroxysmal hypertension due to incidental pheochromocytoma

Citation: Indian Journal of Critical Care Medicine, February 2014, vol./is. 18/(S47), 0972-5229 (February 2014)

Author(s): Sahu S., Lata I.

Language: English

Abstract: The incidence of pheochromocytoma in pregnancy is rare, <0.2/10,000 pregnancies. The classic triad of pheochromocytoma is headaches, palpitations, and excessive sweating, but it is not so common in the pregnant state. Uncontrolled catecholamine release in patients can result in malignant hypertension, cerebrovascular accidents, and myocardial infarctions. A 25-year-old, full-term pregnant woman diagnosed with pre-eclampsia was referred to our tertiary care hospital with severe resistant hypertension. Her blood pressure (BP) remained labile despite the usual medications, which led to the suspicion of an underlying endocrinological problem. Further biochemical and radiological investigations confirmed the diagnosis of pheochromocytoma. The patient was invasively monitored and treated with alpha blockade, beta blocker, and vasodilators in intensive care unit (ICU). On the 5th day, she went into spontaneous labor with confirmed rupture of the membranes. The labor was augmented with intravenous (IV) oxytocin 2 U in 500 ml solution of Ringer's lactate. A nitroglycerin basal infusion was started and titrated to control BP during labor to keep the BP below 160/90 mmHg. An injection of Phentolamine drip and beta blocker esmolol was kept ready, to control the wide fluctuation of BP. She delivered a live, healthy, male infant weighing 2.5 Kg. She was kept in the ICU for 72 h with epidural patient-controlled analgesia. The patient was not keen for a resection of the adrenal tumor immediately after delivery. She was discharged with medical management, with a further plan for surgery in due course. With a multidisciplinary team approach (gynecologist, anesthesiologist, Intensivist, endocrinologist, and surgeon), proper planning, and adequate preoperative medical management; pheochromocytoma in pregnancy can be managed successfully.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Full Text:

Available from *ProQuest* in [Indian Journal of Critical Care Medicine](#)

Available from *National Library of Medicine* in [Indian Journal of Critical Care Medicine : Peer-reviewed, Official Publication of Indian Society of Critical Care Medicine](#)

Title: Post-operative posterior reversible encephalopathy syndrome in a case of emergency caesarean section

Citation: Indian Journal of Critical Care Medicine, February 2014, vol./is. 18/(S17), 0972-5229 (February 2014)

Author(s): Potnis A., Parate B., Shukla D., Bhalerao Y.

Language: English

Abstract: Objective: Early recognition and treatment of posterior reversible encephalopathy syndrome (PRES), to prevent permanent neurological sequelae. PRES is a clinical neuroradiological entity characterized by headache, vomiting, altered mental status and seizures. Magnetic resonance imaging shows white grey matter edema in the posterior region of the central nervous system. Treatment includes management or withdrawal of triggering factor. Case Report: A 22-year-old primigravida with nonprogressive labor, posted for emergency lower (uterine) segment cesarean section presents with a history of lower respiratory tract infection with fever on tablet paracetamol SOS with inadequate NBM. She had a past history of febrile convulsions until 6 years of age. Examination showed submandibular lymphadenopathy, bilateral pitting pedal edema and red patch on left posterolumbar area. Investigations revealed Hb 10.8 g/dl and platelets 76,000. 5 units of platelets were transfused. Spinal anesthesia was planned, but procedure abandoned due to bloody taps on multiple pricks. General anesthesia with rapid sequence induction given. Healthy female baby delivered. Intra-operatively blood pressure (BP) was consistently high (>140/100 mmHg), managed with propofol. Surgery was uneventful. Expected blood loss 1100 ml. Before extubation, oral suctioning and laryngoscopy reveal blood clots, anterior pillar tear and airway edema. Throat was packed, bleeding stopped. Post-extubation, patient had difficulty in breathing with a drop in SpO₂ so reintubated and shifted to intensive care unit (ICU) for further management. BP reading was 170/110 mmHg and urine albumin 2+. Injection labetalol was started. 4 h post-operatively, patient had an episode of seizures, managed with phenytoin. An urgent computed tomography (CT) scan revealed PRES. Result: Patient maintained on antihypertensives + anticonvulsants. Extubation was carried out on day 4 with intact reflexes and no neurological deficits. CT scan findings normal. Conclusion: PRES is associated with multiple conditions, most commonly pre-eclampsia, as seen here. Increased incidence of comorbidities in pregnancy warrants introduction of exclusive obstetric ICUs.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Full Text:

Available from *ProQuest* in [Indian Journal of Critical Care Medicine](#)

Available from *National Library of Medicine* in [Indian Journal of Critical Care Medicine : Peer-reviewed, Official Publication of Indian Society of Critical Care Medicine](#)

Title: Partially thrombosed umbilical vein varix with associated tetralogy of fallot

Citation: Journal of Investigative Medicine, February 2014, vol./is. 62/2(494-495), 1081-5589 (February 2014)

Author(s): Patrick-Esteve J., Eggie D., Buis M.

Language: English

Abstract: Case Report: Thrombosis of an umbilical vein varix (UVV) is a rare finding with unclear clinical consequences. Various outcomes depending on associated anomalies have been reported. One recent case series, of infants with UVV, found a higher incidence of associated fetal abnormalities including fetal anemia, chromosomal abnormalities and intrauterine death. We present a case of a partially thrombosed UVV with associated Tetralogy of Fallot. Our infant, twin A, was born at 33 WGA via cesarean section secondary to oligohydramnios, non-reassuring fetal status, and breech positioning. He was born to a 32 year old, G3 P1 mom

who conceived dichorionic diamniotic twin boys after a round of clomid injections. Maternal history was complicated by chronic hypertension, anti-phospholipid antibody syndrome, hypothyroidism, and a history of HSV. Maternal medications included Procardia, Lovenox, Aspirin, progesterone injections and Armour thyroid. Prenatal ultrasound showed concern for umbilical artery aneurysm. The infant was delivered at 1425 grams and immediately required resuscitation and intubation. Apgar scores at 1 and 5 minutes were 3 and 7, respectively. The infant was soon transferred to a tertiary care facility where an Echocardiogram confirmed the finding of TOF, and an abdominal ultrasound revealed a partially thrombosed UVV, without involvement of the portal vein. The UVV was initially monitored with weekly abdominal ultrasounds, followed by less frequent monitoring as the thrombosed varix remained stable. There is still no overall consensus on management of prenatally diagnosed UVV, although, regular NST and ultrasound for monitoring has been recommended. Our infant presents with several findings known to increase the risk of morbidity and mortality associated with UVV, including abnormal NST, IUGR, TOF and oligohydramnios. Furthermore, he presents with a partially thrombosed UVV, a condition which has been associated with intrauterine fetal demise. Emergent delivery of our infant due to non-reassuring NST may have prevented a potential intra-uterine demise secondary to a partially thrombosed UVV. With close monitoring of his UVV no intervention was necessary, and the patient is doing well at home with outpatient management of his congenital heart disease.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Severity of post-partum hemorrhage after vaginal delivery is not predictable from clinical variables available at the time post-partum hemorrhage is diagnosed

Citation: Journal of Obstetrics and Gynaecology Research, February 2014, vol./is. 41/2(199-206), 1341-8076;1447-0756 (01 Feb 2015)

Author(s): Cortet M., Maucourt-Boulch D., Deneux-Tharoux C., Dupont C., Rudigoz R.-C., Roy P., Huissoud C.

Language: English

Abstract: Aim Identify women at risk of severe post-partum hemorrhage (PPH) by building a prediction model based on clinical variables available at PPH diagnosis. Methods We analyzed data on a cohort of 7236 women with PPH after vaginal delivery from 106 maternity units. Severe PPH was defined as the loss of more than 2000 mL of blood, peripartum drop in hemoglobin of 4 g/dL or more, transfusion of at least four packed red blood cells, embolization, hemostasis surgery, transfer to an intensive care unit or death. The Akaike criterion helped selecting the covariates of a multivariate logistic regression model. The performance of the model was studied through building a receiver-operator curve (ROC). The relative utility of the final model was used to determine the importance of the model in decision-making. Results Among all PPH, the prevalence of severe cases was 18.5%. Several clinical variables were significantly associated with severe PPH (e.g. parity, multiple pregnancy, labor induction, instrumental delivery). The multivariate prediction model was built. The area under the ROC for prediction of severe cases was 0.63 (95% confidence interval, 0.62-0.65). Nevertheless, the sensitivity and specificity of the prediction model were 0.49 and 0.70, respectively, for a threshold at 0.20 (near prevalence). The relative utility was 0.19 for a threshold near prevalence (20%). Conclusion Because of important misclassifications, even the best model we could build with the available clinical data cannot be reasonably recommended for routine use. Every patient with PPH should receive most optimal management. Other types of information, possibly laboratory data, are probably needed.

Publication Type: Journal: Article

Source: EMBASE

Title: Rare fetal complications associated with placental mesenchymal dysplasia: A report of two cases

Citation: Journal of Obstetrics and Gynaecology Research, February 2014, vol./is. 41/2(304-308), 1341-8076;1447-0756 (01 Feb 2015)

Author(s): Jimbo T., Fujita Y., Yumoto Y., Fukushima K., Kato K.

Language: English

Abstract: Placental mesenchymal dysplasia (PMD) is a rare disease that may be difficult to distinguish from molar pregnancy. The disease is associated with major fetal complications, including Beckwith-Wiedemann syndrome, fetal growth restriction and intrauterine fetal death. Rarely, fetal hematological disorders and liver tumors also may occur. Two patients were referred to our hospital during their second trimesters because of suspected molar pregnancies. Fetal karyotyping and maternal serum human chorionic gonadotropin level determinations led to the PMD diagnoses. In one case, the maternal clinical course was normal, but the neonate suffered from disseminated intravascular coagulation and needed a platelet transfusion. In the second case, the PMD decreased during pregnancy, but a gradually increasing fetal liver tumor appeared. The tumor was diagnosed as mesenchymal hamartoma, based on ultrasound and magnetic resonance imaging studies. The neonate was delivered without cardiovascular compromise. Due to the difficulty of immediate surgical treatment, expectant management, with close follow-up, was chosen.

Publication Type: Journal: Article

Source: EMBASE

Title: Successful pregnancy in a patient with autosomal dominant polycystic kidney disease on long-term hemodialysis

Citation: Journal of Korean medical science, February 2014, vol./is. 29/2(301-304), 1598-6357 (Feb 2014)

Author(s): Jung J.H., Kim M.J., Lim H.J., Sung S.A., Lee S.Y., Kim D.W., Lee K.B., Hwang Y.H.

Language: English

Abstract: Recent advances in dialysis and a multidisciplinary approach to pregnant patients with advanced chronic kidney disease provide a better outcome. A 38-yr-old female with autosomal dominant polycystic kidney disease (ADPKD) became pregnant. She was undergoing hemodialysis (HD) and her kidneys were massively enlarged, posing a risk of intrauterine fetal growth restriction. By means of intensive HD and optimal management of anemia, pregnancy was successfully maintained until vaginal delivery at 34.5 weeks of gestation. We discuss the special considerations involved in managing our patient with regard to the underlying ADPKD and its influence on pregnancy.

Publication Type: Journal: Article

Source: EMBASE

Full Text:

Available from *National Library of Medicine* in [Journal of Korean Medical Science](#)

Title: Ultrasound-guided compared to conventional treatment in gestational diabetes leads to improved birthweight but more insulin treatment: Systematic review and meta-analysis

Citation: Acta Obstetrica et Gynecologica Scandinavica, February 2014, vol./is. 93/2(144-151), 0001-6349;1600-0412 (February 2014)

Author(s): Balsells M., Garcia-Patterson A., Gich I., Corcoy R.

Language: English

Abstract: Objective To perform a systematic review and meta-analysis of randomized controlled trials assessing ultrasound-guided versus conventional management in women with a broad severity-spectrum of gestational diabetes mellitus. Design Systematic review and meta-analysis of trials published until August 2012. Setting PubMed and Web of Science databases. Study selection and methods Eighteen studies were reviewed in full text. Eligibility criteria were (i) randomized controlled trials comparing metabolic management in women with gestational diabetes mellitus and ultrasound-based vs. the conventional management to assess fetal growth,

(ii) representative of the whole spectrum of hyperglycemia and fetal growth, (iii) data on perinatal outcomes. Review Manager 5.0 was used to summarize the results. Results Two studies fulfilled inclusion criteria. The ultrasound-guided group had a lower rate of large-for-gestational age newborns (relative risk 0.58, 95% confidence interval 0.34-0.99), macrosomia (relative risk 0.32, 95% confidence interval 0.11-0.95) and abnormal birthweight (small/large-for-gestational age, relative risk 0.64, 95% confidence interval 0.45-0.93) and a higher rate of insulin treatment (relative risk 1.58, 95% confidence interval 1.14-2.20). The number of women with gestational diabetes with a need to treat to prevent an additional newborn with abnormal birthweight was 10. Conclusions In women with a broad severity-spectrum of gestational diabetes mellitus, ultrasound-guided management improves birthweight distribution, but increases the need for insulin treatment. More research is needed in this area because results are derived from a limited number of patients. © 2013 Nordic Federation of Societies of Obstetrics and Gynecology.

Publication Type: Journal: Review

Source: EMBASE

Title: Multifaceted intervention to implement indicators of quality of care for severe pre-eclampsia/eclampsia

Citation: International Journal of Gynecology and Obstetrics, February 2014, vol./is. 124/2(106-111), 0020-7292;1879-3479 (February 2014)

Author(s): Talungchit P., Liabsuetrakul T., Lindmark G.

Language: English

Abstract: Objective To assess the acceptability of implementing indicators of quality of care for severe pre-eclampsia/eclampsia to health providers, and to evaluate the effect of a multifaceted intervention on adherence to these indicators. Methods A multifaceted approach was used to implement indicators of quality of care for severe pre-eclampsia/eclampsia that were relevant to both district and referral hospitals. Healthcare providers at 9 hospitals in Southern Thailand rated the acceptability and priority of each indicator. In addition, medical records were reviewed before and after the intervention. Results More than 90% of the indicators were considered to be acceptable by the 145 health providers who participated in the study. After the intervention, adherence to most indicators was significantly increased. However, adherence after the intervention was lower than 80% for one-third of the indicators at district hospitals, compared with less than 10% of the indicators at referral hospitals. Common barriers to indicator implementation were lack of resources and skills, difficulty in making early and accurate diagnoses, and management. Conclusion The indicators for the quality of care for severe pre-eclampsia/eclampsia were acceptable. Adherence to the indicators increased through a multifaceted intervention; however, the adherence varied considerably depending on the hospital referral level. © 2013 International Federation of Gynecology and Obstetrics.

Publication Type: Journal: Article

Source: EMBASE

Title: The vertebral artery Doppler might be an alternative to the middle cerebral artery Doppler in the follow-up of the early onset growth-restricted fetus

Citation: Prenatal Diagnosis, February 2014, vol./is. 34/2(109-114), 0197-3851;1097-0223 (February 2014)

Author(s): Morales Rosello J., Hervas Marin D., Perales Marin A.

Language: English

Abstract: Objective: The objective of this article is to show the clinical utility of the vertebral artery Doppler as an alternative to the middle cerebral artery Doppler in the follow-up of fetuses affected with early-onset growth restriction [fetal growth restriction (FGR)]. Methods: We present a group of fetuses with early-onset FGR in which the vertebral artery resistance index (VA RI) and pulsatility index (VA PI) were measured and plotted along with their references earlier calculated using 1980 Doppler examinations. In addition, the VA and middle

cerebral artery (MCA) performance was compared using values converted into multiples of the median. Results: Similar to that of the MCA, VA RI and VA PI percentiles showed curve shapes with higher values at the beginning of the third trimester. The majority of growth-restricted fetuses showed a notorious decrease in the VA impedance, which was not statistically different to that of the MCA. Conclusion: Vertebral artery Doppler values can be obtained throughout the second half of pregnancy. Preliminary data suggest a clinical application in the management of early-onset FGR. © 2013 John Wiley & Sons, Ltd.

Publication Type: Journal: Article

Source: EMBASE

Title: Anaesthesia for parturients with severe cystic fibrosis: A case series

Citation: International Journal of Obstetric Anesthesia, February 2014, vol./is. 23/1(75-79), 0959-289X;1532-3374 (February 2014)

Author(s): Deighan M., Ash S., McMorrow R.

Language: English

Abstract: Cystic fibrosis affects 1 in 1600-2500 live births and is inherited in an autosomal recessive manner. It primarily involves the respiratory, gastrointestinal and reproductive tracts, with impaired clearance of, and obstruction by, increasingly viscous secretions. Severe respiratory disease, diabetes and gastro-oesophageal reflux may result. Improvements in medical management and survival of cystic fibrosis patients means more are committing to pregnancies. Although guidance for anaesthesia in this patient group is available, management and outcome data associated with more severe cases are sparse. Patients with severe cystic fibrosis require multidisciplinary input and should be managed in a tertiary referral centre. Close monitoring of respiratory function and preoperative optimisation during pregnancy are mandatory. The risk of preterm labour and delivery is increased. Pregnancy and delivery can be managed successfully, even in patients with FEV1 <40% predicted. Neuraxial anaesthesia and analgesia should be the technique of choice for delivery. Postoperative care should be carried out in a critical care setting with the provision of postoperative ventilation if necessary. © 2013 Elsevier Ltd. All rights reserved.

Publication Type: Journal: Article

Source: EMBASE

Title: Future therapies for pre-eclampsia: Beyond treading water

Citation: Australian and New Zealand Journal of Obstetrics and Gynaecology, February 2014, vol./is. 54/1(3-8), 0004-8666;1479-828X (February 2014)

Author(s): Fenton C., Hobson S.R., Wallace E.M., Lim R.

Language: English

Abstract: Pre-eclampsia remains a major burden of disease, accounting for approximately 50,000-70,000 maternal deaths each year worldwide. Frustratingly, the management of pre-eclampsia has remained essentially unchanged for much of the last century and focussed primarily on maternal blood pressure control to allow fetal maturation. Recent advances in the understanding of the pathogenesis of pre-eclampsia and the elucidation of distinct underlying mechanisms offer the genuine prospect of new and effective therapies that may transform outcomes for millions of women and their babies. © 2013 The Royal Australian and New Zealand College of Obstetricians and Gynaecologists.

Publication Type: Journal: Review

Source: EMBASE

Title: Investigation on the suitability of the International Association of Diabetes and Pregnancy Study Group diagnostic criteria for gestational diabetes mellitus in China

Citation: Journal of Obstetrics and Gynaecology, February 2014, vol./is. 34/2(141-145), 0144-3615;1364-6893 (February 2014)

Author(s): Shang M., Lin L., Ma L., Yin L.

Language: English

Abstract: The aim of this study was to compare pregnancy outcomes of Chinese women diagnosed with gestational hyperglycaemia by the well-established American Diabetes Association (ADA) criteria, with those women meeting the newer criteria established by International Association of Diabetes and Pregnancy Study Groups (IADPSG). The study subjects consisted of 6,201 pregnant Chinese women with a singleton pregnancy who had received prenatal care and delivered between December 2008 and December 2011. Women who were screened positive with 1 h glucose load of > 7.8 mmol/l underwent a diagnostic 3 h oral glucose tolerance test. Gestational hyperglycaemia was diagnosed using the ADA criteria and re-diagnosed according to the IADPSG criteria. The correlation between the incidences of adverse pregnant outcomes with gestational hyperglycaemia was analysed. In total, 570 patients (9.19% of 6,201) met the ADA criteria and 676 (10.90% of 6,201) met the IADPSG criteria. The 518 patients who met both standards showed a reduced caesarean section rate, as compared with 158 patients who only met the IADPSG standard and received no intervention (71.2% vs 79.7%, $p < 0.05$). The IADPSG-only group also had a higher rate of macrosomia and pre-eclampsia than the control group. The IADPSG criteria identified a group of women previously classified as normal according to the ADA criteria, but revealing poor pregnancy outcomes and requiring management. Therefore, we conclude that the IADPSG criteria are more suitable for the diagnosis of gestational hyperglycaemia in China. © 2014 Informa UK, Ltd.

Publication Type: Journal: Article

Source: EMBASE

Title: Selective reduction in multiple gestations

Citation: Best Practice and Research: Clinical Obstetrics and Gynaecology, February 2014, vol./is. 28/2(239-247), 1521-6934;1532-1932 (February 2014)

Author(s): Bebbington M.

Language: English

Abstract: The frequency of multiple gestations has increased dramatically. Twins and higher order multiple gestations have pregnancies with increased risks for almost every complication of pregnancy, especially preterm labour, preterm delivery, and congenital anomalies. Monochorionic twins, by virtue of the unique placental angioarchitecture, are at risk for additional complications, such as severe discordant malformations, twin reversed arterial perfusion sequence, twin-to-twin transfusion syndrome or severe selective intrauterine growth restriction. These complications create unique challenges to those who manage multiple pregnancies. Reduction of higher order multiple pregnancies is an option to reduce pregnancy related risks and improve overall outcomes. Selective termination in complex monochorionic pregnancies can be lifesaving for the co-twin by preventing intrauterine demise or extreme prematurity. It is critical, however, to determine chorionicity before considering any approach to selective reduction. Techniques applied to dichorionic twins cannot be directly translated to cases involving monochorionic twins. © 2014 Elsevier Ltd. All rights reserved.

Publication Type: Journal: Article

Source: EMBASE

Title: Diagnosis of twin-to-twin transfusion syndrome, selective fetal growth restriction, twin anaemia-polycythaemia sequence, and twin reversed arterial perfusion sequence

Citation: Best Practice and Research: Clinical Obstetrics and Gynaecology, February 2014, vol./is. 28/2(215-226), 1521-6934;1532-1932 (February 2014)

Author(s): Sueters M., Oepkes D.

Language: English

Abstract: Monochorionic twin pregnancies are well known to be at risk for a variety of severe complications, a true challenge for the maternal-fetal medicine specialist. With current standards of care, monochorionicity should be established in the first trimester. Subsequently, frequent monitoring using the appropriate diagnostic tools, and in-depth knowledge about the pathophysiology of all possible clinical presentations of monochorionic twin abnormalities, should lead to timely recognition, and appropriate management. Virtually all unique diseases found in monochorionic twins are directly related to placental angio-architecture. This, however, cannot be established reliably before birth. The clinician needs to be aware of the definitions and symptoms of twin-to-twin transfusion syndrome, selective fetal growth restriction, twin anaemia-polycythaemia sequence, and twin reversed arterial perfusion sequence, to be able to recognise each disease and take the required action. In this chapter, we address current standards on correct and timely diagnoses of severe complications of monochorionic twin pregnancies. © 2014 Elsevier Ltd. All rights reserved.

Publication Type: Journal: Article

Source: EMBASE

Title: Prenatal diagnosis of umbilical artery thrombosis

Citation: Fetal Diagnosis and Therapy, February 2014, vol./is. 35/2(148-150), 1015-3837;1421-9964 (February 2014)

Author(s): Tanaka K., Tanigaki S., Matsushima M., Miyazaki N., Hashimoto R., Izawa T., Sakai K., Yazawa T., Iwashita M.

Language: English

Abstract: Umbilical artery thrombosis (UAT) is rare and few prenatally diagnosed cases have been reported. We describe 2 cases of fetal growth restriction prenatally diagnosed as UAT by ultrasound examination. In each case the cross section of the umbilical cord showed one normal artery and a small echogenic area which was suspected as an occluded thrombotic artery and they were surrounded by a highly curving 'C-shaped' vein. UAT was confirmed by histological examinations after deliveries in both cases. The characteristic ultrasound finding of the umbilical vessel, which is the so-called 'orange grabbed sign', enables the prenatal diagnosis of UAT and it is valuable with respect to perinatal fetal management because UAT is associated with increased perinatal morbidity and mortality. © 2013 S. Karger AG, Basel.

Publication Type: Journal: Article

Source: EMBASE

Full Text:

Available from *ProQuest* in [Fetal Diagnosis and Therapy](#)

Title: Pregnancy outcomes in maple syrup urine disease

Citation: Journal of Investigative Medicine, January 2014, vol./is. 62/1(199), 1081-5589 (January 2014)

Author(s): Sparks T., Lee C., Li B., Packman D.

Language: English

Abstract: Case Report: Maple Syrup Urine Disease (MSUD) is a disorder of branched-chain amino acids (BCAA). Literature search yielded reports of only four pregnancies in the setting of MSUD, with outcomes ranging from no complications to lethargy and elevated leucine levels at 7-9 days postpartum. None of the infants were reported to have any complications postnatally. We describe the case of a woman with MSUD, who previously developed Hemolysis Elevated Liver Enzymes and Low Platelet (HELLP) syndrome, delivered a child with multiple medical issues, and is now pregnant again. She is a 30-year-old G2P0101 at 32 weeks gestation. She was diagnosed with MSUD at an early age due to lethargy and seizures. She had two decompensations in childhood, but thereafter had well-controlled disease on a protein-restricted diet. During her first pregnancy, she had overall normal levels of BCAA. This pregnancy was complicated by preterm premature rupture of membranes at 31 weeks, and expectant management was pursued. She developed blood pressure elevations, however, and liver function tests trended upward. She was diagnosed with HELLP syndrome, and required urgent cesarean delivery. She received anti-hypertensives postpartum, and had an eight-day hospitalization. Her son required a two-week admission due to prematurity, and later required surgical correction of arterio-venous fistulas. He was not found to have MSUD, but is undergoing a work-up for developmental delay. Following this pregnancy, our patient returned to her baseline and has now become pregnant again. She is at approximately 32 weeks gestation with normal serial plasma BCAA levels. She is on carnitine supplementation due to low free carnitine level for her gestational age (13 $\mu\text{mol/liter}$), and daily baby Aspirin for risk-reduction of preeclampsia. Fetal growth has been near the 50th percentile. Her delivery plan is a repeat cesarean at 39 weeks. This is the first reported case of HELLP syndrome in a pregnant woman with MSUD, as well as of fetal outcomes including arterio-venous fistulas and developmental delay in this setting. The contribution of metabolic dysfunction in MSUD to complications in pregnancy and effect on fetal outcomes deserves further exploration, as it is possible that metabolic alterations or management may contribute to their pathogenesis.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Maternal floor infarction: Management of an underrecognized pathology

Citation: Journal of Obstetrics and Gynaecology Research, January 2014, vol./is. 40/1(293-296), 1341-8076;1447-0756 (January 2014)

Author(s): Al-Sahan N., Grynspan D., Von Dadelszen P., Gruslin A.

Language: English

Abstract: Maternal floor infarction is a relatively rare condition characterized clinically by severe early onset fetal growth restriction with features of uteroplacental insufficiency. It has a very high recurrence rate and carries a significant risk of fetal demise. Pathological characteristics include massive and diffuse fibrin deposition along the decidua basalis and the perivillous space of the basal plate. We present a case of recurrent maternal floor infarction and propose diagnostic clues as well as potential therapeutic options. © 2013 Japan Society of Obstetrics and Gynecology.

Publication Type: Journal: Article

Source: EMBASE

Title: Pregnancy outcomes after assisted human reproduction

Citation: Journal of obstetrics and gynaecology Canada : JOGC = Journal d'obstetrique et gynecologie du Canada : JOGC, January 2014, vol./is. 36/1(64-83), 1701-2163 (Jan 2014)

Author(s): Society of Obstetricians and Gynaecologists of Canada, Okun N., Sierra S.

Language: English

Abstract: To review the effect of assisted human reproduction (AHR) on perinatal outcomes, to identify areas requiring further research with regard to birth outcomes and AHR, and to provide guidelines to optimize obstetrical management and counselling of prospective Canadian parents. This document compares perinatal outcomes of different types of AHR (II-2) 2. The relative risk for an imprinting phenotype such as Silver-Russell syndrome, Beckwith-Wiedemann syndrome, or Angelman heterogeneous and requires more research. (II-2) Recommendations 1. All assessment for chromosomal abnormalities, and Y-chromosome microdeletion testing prior to in vitro fertilization with intracytoplasmic sperm injection. (II-2A) 2. All men with unexplained obstructive azoospermia should be offered genetic/clinical counselling and genetic testing for cystic fibrosis prior to in vitro fertilization with intracytoplasmic sperm injection. (II-2A) 3. Multiple pregnancy is the most powerful predictive factor for adverse maternal, obstetrical, and perinatal outcomes. Couples should be thoroughly counselled about the significant risks of multiple pregnancies associated with all assisted human reproductive treatments. (II-2A) 4. The benefits and cumulative pregnancy rates of elective single embryo transfer support a policy of using this protocol in couples with good prognosis for success, and elective single embryo transfer should be strongly encouraged in this population. (II-2A) 5. To reduce the incidence of multiple pregnancy, health care policies that support public funding for assisted human reproduction, with regulations promoting best practice regarding elective single embryo transfer, should be strongly encouraged. (II-2A) 6. Among singleton pregnancies, assisted reproductive technology is associated with increased risks of preterm birth and low birth weight infants, and ovulation induction is associated with an increased risk of low birth weight infants. Until sufficient research has clarified the independent roles of infertility and treatment for infertility, couples should be counselled about the risks associated with treatment. (II-2B) There is a role for closer obstetric surveillance of women who conceive with assisted human reproduction. (III-L) 7. There is growing evidence that pregnancy outcomes are better for cryopreserved embryos fertilized in vitro than for fresh embryo transfers. This finding supports a policy of elective single embryo transfer for women with a good prognosis (with subsequent use of cryopreserved embryos as necessary), and may reassure women who are considering in vitro fertilization. (II-2A) 8. Women and couples considering assisted human reproduction and concerned about perinatal outcomes in singleton pregnancies should be advised that (1) intracytoplasmic sperm injection does not appear to confer increased adverse perinatal or maternal risk over standard in vitro fertilization, and (2) the use of donor oocytes increases successful pregnancy rates in selected women, but even when accounting for maternal age, can increase the risks of low birth weight and preeclampsia. (II-2B) 9. Any assisted reproductive technology procedure should be prefaced by a discussion of fetal outcomes and the slight increase in the risk of congenital structural abnormalities, with emphasis on known confounding factors such as infertility and body mass index. (II-2B) 10. In pregnancies achieved by artificial reproductive technology, routine anatomic ultrasound for congenital structural abnormalities is recommended between 18 and 22 weeks. (II-2A) 11. Pregnancies conceived by intracytoplasmic sperm injection may be at increased risk of chromosomal aberrations, including sex chromosome abnormalities. Diagnostic testing should be offered after appropriate counselling. (II-2A) 12. The possible increased risk for late onset cancer due to gene dysregulation for tumour suppression requires more long-term follow-up before the true risk can be determined. (III-A) 13. The clinical application of preimplantation genetic testing in fertile couples must balance the benefits of avoiding disease transmission with the medical risks and financial burden of in vitro fertilization. (III-B) 14. Preimplantation screening for aneuploidy is associated with inconsistent findings for improving pregnancy outcomes. Any discussion of preimplantation genetic screening with patients should clarify that there is no adequate information on the long-term effect of embryo single cell biopsy. (I-C).

Publication Type: : Article

Source: EMBASE

Title: Pregnancy management in Behcet's disease treated with uninterrupted infliximab. Report of a case with fetal growth restriction and mini-review of the literature

Citation: Clinical and Experimental Obstetrics and Gynecology, 2014, vol./is. 41/2(205-207), 0390-6663 (2014)

Author(s): Mainini G., Di Donna M.C., Esposito E., Ercolano S., Correa R., Stradella L., Della Gala A., De Franciscis P.

Language: English

Abstract: Background: The mutual impact of Behcet's disease (BD) and pregnancy is variable and still unclear. Among the safe drugs administered, the newer infliximab (IFX) was rarely experienced in pregnancy, particularly in the third trimester. Case: The authors report a pregnancy with fetal growth restriction at 36 weeks in a 31-year-old primigravida with symptomatic BD, treated with uninterrupted monthly IFX and daily enoxaparin. The patient was induced at 38 weeks and had an uneventful vaginal delivery of a healthy baby. The postpartum period and following six months were uneventful for mother in terms of BD exacerbation, and newborn in terms of potential risks of neonatal BD and/or infections due to late immunosuppressive IFX administration. Conclusion: Because of the inconstant mutual impact, BD pregnancies should be precautionary considered at "potential high-risk" and need a careful and close monitoring by a multidisciplinary team with specific expertise.

Publication Type: Journal: Article

Source: EMBASE

Title: Maternal morbidity and perinatal outcome in preterm premature rupture of membranes before 37 weeks gestation

Citation: Pakistan Journal of Medical Sciences, 2014, vol./is. 30/3, 1682-024X (2014)

Author(s): Dars S., Malik S., Samreen I., Kazi R.A.

Language: English

Abstract: Objective: To assess the maternal morbidity and perinatal outcome in pre-term premature rupture of membranes between 24 to 37 weeks gestation. Methods: This observational study was carried out in Gynaecology & Obstetrics Unit - I, at University Hospital Hyderabad, from October 2010 to October 2011. It included one hundred patients admitted through the outpatient department, as well as from casualty department of University Hospital Hyderabad. Detailed Clinical examination of the patient was done. Systemic review was also done to see any co-morbidity. All patients had laboratory investigations. Inclusion criteria were all patients gestational age between 24 to 37 weeks with preterm premature rupture of membrane (PPROM) confirmed by ultrasound and clinical examination regardless of their age. Exclusion criteria were patients with congenital anomalies, multiple pregnancy, pre-eclampsia & eclampsia, diabetes mellitus, polyhydramnios, intrauterine growth restriction and placenta abruption. Data was collected using a proforma. Detailed workup including history, general physical examination, abdomen and pelvic examination and relevant specific investigations were noted. Results: Out of 100 patients included in this study Primigravida were 17% and multigravida 83%. There was wide variation of age ranging from a minimum of 20 to > 40 years. The mean age was 30+ 3.1 years. Mostly patients belonged to the poor class in 72% cases followed by middle class in 21% and upper class 7%. Analysis shows that out of 100 mothers 26% had PROM of < 24 hrs duration and 74% had > 24 hrs of duration. Maternal outcome in 16 cases of Preterm Premature Rupture of Membrane findings revealed septicemia in 12% cases and Chorioamnionitis in 12% cases. Fetal outcome in 27 cases of preterm premature rupture of membrane revealed prematurity in 5% cases, fetal distress in 4% cases, cord compression in 5% cases, necrotizing enterocolitis in 2% cases, hypoxia in 9% cases and pulmonary hypoplasia in 2% cases. Conclusion: Low socioeconomic status is associated with increased neonatal morbidity due to fetal distress, cord compression, necrotizing enterocolitis, hypoxia and pulmonary hypoplasia at the time of delivery. An appropriate and accurate diagnosis of PROM is critical to optimize pregnancy outcome. It is suggested that the timely diagnosis and management of preterm PROM will allow obstetric care providers to optimize perinatal outcome and minimize neonatal morbidity.

Publication Type: Journal: Article

Source: EMBASE

Full Text:

Available from *ProQuest* in [Pakistan Journal of Medical Sciences Quarterly](#)

Title: Optimization of competency in obstetrical emergencies: A role for simulation training

Citation: Archives of Gynecology and Obstetrics, 2014, vol./is. 289/4(733-738), 0932-0067;1432-0711 (2014)

Author(s): Monod C., Voekt C.A., Gisin M., Gisin S., Hoesli I.M.

Language: English

Abstract: Purpose: In obstetrical emergency situations, optimal management requires the immediate coordinated actions of a multi-disciplinary and multi-professional team. This study investigated the influence of simulation training on four specific skills: self-confidence, handling of emergency situation, knowledge of algorithms and team communication. Methods: Clinical algorithms were first presented to the participants. Training for six emergency situations (shoulder dystocia, postpartum haemorrhage, pre-eclampsia, maternal basic life support, neonatal resuscitation and operative vaginal birth) was performed using high- and low-fidelity simulation mannequins. General impression of the simulation training and the four above-mentioned skills were evaluated anonymously through a self-assessment questionnaire with a five-point Likert scale immediately after the training and 3 months later. Results: From November 2010 to March 2012, 168 participants, distributed over six one-day courses, took part in the training. 156 participants returned the questionnaire directly after the course (92.9 %). The questionnaire return rate after 3 months was 36.3 %. The participants gave higher Likert scale answers for the questions on the four specific skills after 3 months compared to immediately after the course. The improvement was statistically significant ($p < 0.05$) except for the question regarding team communication. Conclusion: Implementation of simulation training strengthens the professional competency. © 2013 The Author(s).

Publication Type: Journal: Article

Source: EMBASE

Full Text:

Available from *Springer NHS Pilot 2014 (NESLi2)* in [Archives of Gynecology and Obstetrics](#); Note: ; Collection notes: Only available on NHS networked computers. Not available with Athens username/password.

Title: Prenatal screening for mendelian disorders in antenatal care

Citation: *Molecular Cytogenetics*, January 2014, vol./is. 7/, 1755-8166 (21 Jan 2014)

Author(s): Verma A.

Language: English

Abstract: Antenatal screening for fetal abnormality should be offered to all women, if available: In all cases of antenatal screening, the woman must be fully informed and understand the implications of the test, be promptly advised of their test result and be referred for further management and definitive diagnosis if their screening test is positive or suggestive of high risk. A positive prenatal diagnosis poses many ethical issues and challenging decisions for parents and clinicians. In those at increased risk of having a baby with a genetic condition, the risk should be identified and discussed fully before pregnancy and options for prenatal diagnosis discussed. Genetic counseling should be provided. At the present time around 5000 known disorders are inherited in a monogenetic mendelian fashion. Foremost among them are autosomal dominant, autosomal recessive and X-linked disorders, which carry a higher risk of illness than that conveyed by age-related risk. An autosomal dominant condition carries an a priori 50% inheritance risk where one parent is affected. An autosomal recessive disease carries a 25% inheritance risk for children of a healthy carrier couple. An X-linked recessive disorder carries a 50% risk for the son of a carrier mother. Specific, albeit non-screening genetic tests are currently available for more than 1000 of these diseases. Unlike cytogenetic, prenatal diagnosis based on maternal age, prenatal gene testing is not a screening test. Given the individuality of each case, prior planning is essential. Two differing strategies are possible: indirect and direct genetic testing. The following subsections cover the antenatal screening tests that are routinely offered like screening for potential for neonatal infection Haemolytic disease of new born, Sickle cell disease and Thalassemia Down's syndrome, Fetal anomaly, Measurement of fundal height etc. The different types of tests like Biochemical, Cytogenetic and Molecular genetic tests can be carried out by Chorionic villus sampling, Amniocentesis Cordocentesis / percutaneous umbilical blood sampling Fetoscopy, Fetal radiology, Ultrasound-guided percutaneous skin and organ biopsy, Maternal blood tests, Ultrasound-guided percutaneous skin and organ biopsy and Preimplantation prenatal diagnosis. At present, in most cases, accurate prenatal diagnosis requires invasive testing. There is current research into noninvasive prenatal diagnosis using PCR and molecular genetic techniques to examine fetal DNA obtained from maternal blood.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Full Text:

Available from *Springer NHS Pilot 2014 (NESLi2)* in [Molecular Cytogenetics](#); Note: ; Collection notes: Only available on NHS networked computers. Not available with Athens username/password.

Available from *National Library of Medicine* in [Molecular Cytogenetics](#)

Available from *BioMedCentral* in [Molecular Cytogenetics](#)

Available from *ProQuest* in [Molecular Cytogenetics](#)

Title: Chronic hypertension and pregnancy outcomes: systematic review and meta-analysis

Citation: BMJ (Clinical research ed.), 2014, vol./is. 348/, 1756-1833 (2014)

Author(s): Bramham K., Parnell B., Nelson-Piercy C., Seed P.T., Poston L., Chappell L.C.

Language: English

Abstract: To provide an accurate assessment of complications of pregnancy in women with chronic hypertension, including comparison with population pregnancy data (US) to inform pre-pregnancy and antenatal management strategies. Systematic review and meta-analysis. Embase, Medline, and Web of Science were searched without language restrictions, from first publication until June 2013; the bibliographies of relevant articles and reviews were hand searched for additional reports. Studies involving pregnant women with chronic hypertension, including retrospective and prospective cohorts, population studies, and appropriate arms of randomised controlled trials, were included. Pooled incidence for each pregnancy outcome was reported and, for US studies, compared with US general population incidence from the National Vital Statistics Report (2006). 55 eligible studies were identified, encompassing 795,221 pregnancies. Women with chronic hypertension had high pooled incidences of superimposed pre-eclampsia (25.9%, 95% confidence interval 21.0% to 31.5 %), caesarean section (41.4%, 35.5% to 47.7%), preterm delivery <37 weeks' gestation (28.1% (22.6 to 34.4%), birth weight <2500 g (16.9%, 13.1% to 21.5%), neonatal unit admission (20.5%, 15.7% to 26.4%), and perinatal death (4.0%, 2.9% to 5.4%). However, considerable heterogeneity existed in the reported incidence of all outcomes ((2)=0.286-0.766), with a substantial range of incidences in individual studies around these averages; additional meta-regression did not identify any influential demographic factors. The incidences (the meta-analysis average from US studies) of adverse outcomes in women with chronic hypertension were compared with women from the US national population dataset and showed higher risks in those with chronic hypertension: relative risks were 7.7 (95% confidence interval 5.7 to 10.1) for superimposed pre-eclampsia compared with pre-eclampsia, 1.3 (1.1 to 1.5) for caesarean section, 2.7 (1.9 to 3.6) for preterm delivery <37 weeks' gestation, 2.7 (1.9 to 3.8) for birth weight <2500 g, 3.2 (2.2 to 4.4) for neonatal unit admission, and 4.2 (2.7 to 6.5) for perinatal death. This systematic review, reporting meta-analysed data from studies of pregnant women with chronic hypertension, shows that adverse outcomes of pregnancy are common and emphasises a need for heightened antenatal surveillance. A consistent strategy to study women with chronic hypertension is needed, as previous study designs have been diverse. These findings should inform counselling and contribute to optimisation of maternal health, drug treatment, and pre-pregnancy management in women affected by chronic hypertension.

Publication Type: Journal: Review

Source: EMBASE

Full Text:

Available from *Highwire Press* in [The BMJ](#)

Title: Adherence compounds in embryo transfer media for assisted reproductive technologies

Citation: The Cochrane database of systematic reviews, 2014, vol./is. 2/(CD007421), 1469-493X (2014)

Author(s): Bontekoe S., Heineman M.J., Johnson N., Blake D.

Language: English

Abstract: This is an update of a Cochrane review first published in The Cochrane Library (2010, Issue 7). To increase the success rate of assisted reproductive technologies (ART), adherence compounds such as hyaluronic acid (HA) and fibrin sealant have been introduced into subfertility management. Adherence compounds are added to the embryo transfer medium to increase the likelihood of embryo implantation, with the potential for higher clinical pregnancy and live birth rates. To determine whether embryo transfer media containing adherence compounds improved live birth and pregnancy rates in ART cycles. The Menstrual Disorders and Subfertility Group Trials Register, the Cochrane Central Register of Controlled Trials (CENTRAL) and MEDLINE, EMBASE and PsycINFO electronic databases were searched (up to 13 November 2013) to look for publications that described randomised controlled trials on the addition of adherence compounds to embryo transfer media. Furthermore, reference lists of all obtained studies were checked, and conference abstracts were handsearched. Only truly randomised controlled trials comparing embryo transfer media containing functional (e.g. 0.5 mg/ml HA) concentrations of adherence compounds versus transfer media containing low or no concentrations of adherence compounds were included. The adherence compounds that were identified for evaluation were HA and fibrin sealant. Two review authors selected trials for inclusion according to the above criteria, after which two review authors independently extracted the data for subsequent analysis. Statistical analysis was performed in accordance with the guidelines developed by The Cochrane Collaboration. Seventeen studies with a total of 3898 participants were analysed. One studied fibrin sealant, and the other 16 studied HA. No evidence was found of a treatment effect of fibrin sealant as an adherence compound. For HA, evidence of a positive treatment effect was identified in the six trials that reported live birth rates (odds ratio (OR) 1.41, 95% confidence interval (CI) 1.17 to 1.69; six RCTs, N = 1950, I(2) = 0%, moderate-quality evidence). Furthermore, the 14 trials reporting clinical pregnancy rates showed evidence of treatment benefit when embryos were transferred in media containing functional concentrations of HA (OR 1.39, 95% CI 1.21 to 1.60; 14 RCTs, N = 3452, I(2) = 46%, moderate-quality evidence) as compared with low or no use of HA. The multiple pregnancy rate (OR 1.86, 95% CI 1.49 to 2.31; five RCTs, N = 1951, I(2) = 0%, moderate-quality evidence) was significantly increased in the high HA group, but no significant differences in adverse event rates were found (OR 0.74, 95% CI 0.49 to 1.12; four RCTs, N = 1525, I(2) = 0%, moderate-quality evidence). Evidence suggests improved clinical pregnancy and live birth rates with the use of functional concentrations of HA as an adherence compound in ART cycles. However, the evidence obtained is of moderate quality. The increase in multiple pregnancy rate may be the result of use of a combination of an adherence compound and a policy of transferring more than one embryo. Further studies of adherence compounds with single embryo transfer need to be undertaken.

Publication Type: Journal: Review

Source: EMBASE

Full Text:

Available from *Wiley* in [Cochrane Library](#), [The](#)

Title: Assessment of facility readiness and provider preparedness for dealing with postpartum haemorrhage and pre-eclampsia/eclampsia in public and private health facilities of northern Karnataka, India: A cross-sectional study

Citation: BMC Pregnancy and Childbirth, 2014, vol./is. 14/1, 1471-2393 (2014)

Author(s): Jayanna K., Mony P., Ramesh B.M., Thomas A., Gaikwad A., Mohan H.L., Blanchard J.F., Moses S., Avery L.

Language: English

Abstract: Background: The maternal mortality ratio in India has been declining over the past decade, but remains unacceptably high at 212 per 100,000 live births. Postpartum haemorrhage (PPH) and pre-eclampsia/eclampsia contribute to 40% of all maternal deaths. We assessed facility readiness and provider preparedness to deal with these two maternal complications in public and private health facilities of northern Karnataka state, south India. Methods: We undertook a cross-sectional study of 131 primary health centres (PHCs) and 148 higher referral facilities (74 public and 74 private) in eight districts of the region. Facility infrastructure and providers' knowledge related to screening and management of complications were assessed using facility checklists and test cases, respectively. We also attempted an audit of case sheets to assess provider practice in the management of complications. Chi square tests were used for comparing proportions. Results:

84.5% and 62.9% of all facilities had at least one doctor and three nurses, respectively; only 13% of higher facilities had specialists. Magnesium sulphate, the drug of choice to control convulsions in eclampsia was available in 18% of PHCs, 48% of higher public facilities and 70% of private facilities. In response to the test case on eclampsia, 54.1% and 65.1% of providers would administer anti-hypertensives and magnesium sulphate, respectively; 24% would administer oxygen and only 18% would monitor for magnesium sulphate toxicity. For the test case on PPH, only 37.7% of the providers would assess for uterine tone, and 40% correctly defined early PPH. Specialists were better informed than the other cadres, and the differences were statistically significant. We experienced generally poor response rates for audits due to non-availability and non-maintenance of case sheets. Conclusions: Addressing gaps in facility readiness and provider competencies for emergency obstetric care, alongside improving coverage of institutional deliveries, is critical to improve maternal outcomes. It is necessary to strengthen providers' clinical and problem solving skills through capacity building initiatives beyond pre-service training, such as through onsite mentoring and supportive supervision programs. This should be backed by a health systems response to streamline staffing and supply chains in order to improve the quality of emergency obstetric care.

Publication Type: Journal: Article

Source: EMBASE

Full Text:

Available from *BioMedCentral* in [BMC Pregnancy and Childbirth](#)

Available from *National Library of Medicine* in [BMC Pregnancy and Childbirth](#)

Available from *Springer NHS Pilot 2014 (NESLi2)* in [BMC Pregnancy and Childbirth](#); Note: ; Collection notes: Only available on NHS networked computers. Not available with Athens username/password.

Available from *ProQuest* in [BMC Pregnancy and Childbirth](#)

Title: Diagnosis and management of subclinical hypothyroidism in pregnancy

Citation: BMJ (Clinical research ed.), 2014, vol./is. 349/(g4929), 1756-1833 (2014)

Author(s): Stagnaro-Green A.

Language: English

Abstract: In prospective studies, the prevalence of undiagnosed subclinical hypothyroidism in pregnant women ranges from 3% to 15%. Subclinical hypothyroidism is associated with multiple adverse outcomes in the mother and fetus, including spontaneous abortion, pre-eclampsia, gestational hypertension, gestational diabetes, preterm delivery, and decreased IQ in the offspring. Only two prospective studies have evaluated the impact of levothyroxine therapy in pregnant women with subclinical hypothyroidism, and the results were mixed. Subclinical hypothyroidism is defined as raised thyrotropin combined with a normal serum free thyroxine level. The normal range of thyrotropin varies according to geographic region and ethnic background. In the absence of local normative data, the recommended upper limit of thyrotropin in the first trimester of pregnancy is 2.5 mIU/L, and 3.0 mIU/L in the second and third trimester. The thyroid gland needs to produce 50% more thyroid hormone during pregnancy to maintain a euthyroid state. Consequently, most women on levothyroxine therapy before pregnancy require an increase in dose when pregnant to maintain euthyroidism. Ongoing prospective trials that are evaluating the impact of levothyroxine therapy on adverse outcomes in the mother and fetus in women with subclinical hypothyroidism will provide crucial data on the role of thyroid hormone replacement in pregnancy.

Publication Type: Journal: Review

Source: EMBASE

Full Text:

Available from *Highwire Press* in [The BMJ](#)

Title: Clinical impact of women with gestational diabetes mellitus by the new consensus criteria: Two year experience in a single institution in Japan

Citation: Endocrine Journal, 2014, vol./is. 61/4(353-358), 0918-8959;1348-4540 (2014)

Author(s): Ikenoue S., Miyakoshi K., Saisho Y., Sakai K., Kasuga Y., Fukutake M., Izumi Y., Matsumoto T., Minegishi K., Yoshimura Y.

Language: English

Abstract: There is a paucity of information on perinatal data regarding gestational diabetes mellitus (GDM) by the new criteria from a real experience because the number of health care associations implementing the new criteria is still limited. The aim of this study is to investigate perinatal features of the new criteria-defined GDM. We reviewed a total of 995 women with singleton pregnancy that underwent GDM screening followed by a diagnostic oral glucose tolerance test (OGTT). All women found to have GDM underwent self-monitoring of blood glucose measurements as well as dietary management. Insulin treatment was initiated when dietary treatment did not achieve the glycemic goal. Of the 995 women, 141 had GDM (14.2%): 104 with one, 27 with two, and 10 with three abnormal OGTT values. Women with two or three abnormal OGTT values (2/3-AV) needed insulin treatment more frequently than those with one abnormal OGTT value (1-AV) (70.3% vs 23.1%, $P < 0.0001$). After adjustment for age, pregravid overweight, gestational weeks at diagnosis, a first-degree family history of diabetes was correlated with the implementation of insulin treatment in women with 1-AV (adjusted odds ratio 3.9; 95% Confidence Interval 1.7-9.2; $P = 0.001$). When compared perinatal outcomes between women with normal glucose tolerance and GDM, fetal growth and the occurrence of pregnancy-induced hypertension were comparable between the two groups. Our data suggest that the IADPSG-defined GDM with 1-AV show less severe glucose intolerance, but might be at risk of insulin requirement when a first-degree family history of diabetes exists. © The Japan Endocrine Society.

Publication Type: Journal: Article

Source: EMBASE

Title: Cerebrovascular Complications of Pregnancy and the Postpartum Period

Citation: Current Cardiology Reports, 2014, vol./is. 16/10, 1523-3782;1534-3170 (2014)

Author(s): Razmara A., Bakhadirov K., Batra A., Feske S.K.

Language: English

Abstract: Cerebrovascular complications of pregnancy, though uncommon, threaten women with severe morbidity or death, and they are the main causes of major long-term disability associated with pregnancy. In this review, we discuss the epidemiology, pathophysiology, presentation and diagnosis, and management and outcomes of ischemic and hemorrhagic stroke and cerebral venous thrombosis. We also discuss the posterior reversible encephalopathy syndrome, the reversible cerebral vasoconstriction syndrome including postpartum cerebral angiopathy, and their relationship as overlapping manifestations of pre-eclampsia-eclampsia.

Publication Type: Journal: Review

Source: EMBASE

Title: Prognostic value of obstetric Doppler ultrasound in fetuses with fetal growth restriction: An observational study in a tertiary care hospital

Citation: Journal of Maternal-Fetal and Neonatal Medicine, January 2014, vol./is. 28/1(12-15), 1476-7058;1476-4954 (01 Jan 2015)

Author(s): Isalm Z.S., Dileep D., Munim S.

Language: English

Abstract: Objective: To determine the prognostic value of umbilical artery Doppler (UAD) with fetal growth restriction (FGR) and their perinatal outcomes. Methods: This was a retrospective cohort study of fetuses with

growth<5th centile from 2001 to 2012. Pregnancy outcomes were compared according to UAD findings for 253 cases. Doppler findings were categorized as; Normal End Diastolic Flow (NEDF), Reduced End Diastolic Flow (REDF) and Absent/Reverse End Diastolic Flow (AREDF). Mean and proportion were calculated and odds of perinatal complications were compared by using logistic regression for REDF and AREDF with NEDF at 5% level of significance. Results: The perinatal mortality rate was 3.2%. Neonates with abnormal Doppler were at increased risk of cesarean delivery, low birth weights and low Apgar scores. Among the perinatal morbidity, neonatal intensive care unit (NICU) admission was 4.2 and 15.3 times in neonates with REDF and AREDF and similarly the perinatal mortality of AREDF was 12.5 times higher as compared to NEDF. Other morbidities were also much higher in abnormal Doppler groups. Conclusion: There is a prognostic value of UAD in predicting the outcomes for FGR fetuses and therefore recommend its use in the conservative management of such pregnancies to reduce perinatal mortality and morbidity.

Publication Type: Journal: Article

Source: EMBASE

Title: Gestational diabetes

Citation: Medicine (United Kingdom), January 2014, vol./is. 43/1(44-47), 1357-3039;1365-4357 (01 Jan 2015)

Author(s): Stewart Z.A., Murphy H.R.

Language: English

Abstract: Maternal hyperglycaemia is associated with increased risk of adverse perinatal outcome, in particular, infant birth weight that is large for gestational age, increased infant fat mass, pre-eclampsia and preterm delivery, and an increased need for caesarean section. However, there is controversy regarding the diagnosis and treatment of specific levels of hyperglycaemia during pregnancy. This article summarizes the latest evidence-based recommendations for the diagnosis and classification of gestational diabetes mellitus (GDM). It considers the International Association of Diabetes and Pregnancy Study Groups (IADPSG) recommendations and epidemiological evidence from the landmark Hyperglycaemia and Adverse Pregnancy Outcome (HAPO) study. It reviews the evidence in support of intensive treatment of hyperglycaemia in pregnancy and provides suggestions for post-partum management to delay and/or prevent progression to type 2 diabetes.

Publication Type: Journal: Article

Source: EMBASE

Title: Pre-eclampsia and gestational hypertension are less common in HIV infected women

Citation: Pregnancy Hypertension, January 2014, vol./is. 4/1(91-96), 2210-7789 (January 2014)

Author(s): Hall D., Gebhardt S., Theron G., Grove D.

Language: English

Abstract: Objective To determine whether pre-eclampsia and gestational hypertension are less common in HIV infected women. Methods This prospective cohort study was performed in the Western Cape province of South Africa. HIV negative and positive pregnant women without chronic renal or chronic hypertensive disease were continuously recruited. During the study period HIV positive patients received either mono- or triple (HAART) antiretroviral therapy for prevention of vertical transmission or maternal care. Only routine clinical management was performed. The development of hypertensive disease during pregnancy was recorded. Results 1093 HIV positive and 1173 HIV negative cases were identified during pregnancy and evaluated again after delivery. Significantly fewer cases of pre-eclampsia $n = 35$ (3.2%) were recorded in the HIV positive group than in the HIV negative group, $n = 57$ (4.9%) ($p = 0.045$; OR 0.65 95% CI 0.42-0.99). There were also significantly fewer cases of gestational hypertension recorded in the HIV positive group compared to the HIV negative group ($p = 0.026$; OR 0.53 95% CI 0.30-0.94). Multiple logistic regression analysis confirmed the reductive effect of HIV on pre-eclampsia and gestational hypertension. Conclusion Pre-eclampsia and gestational hypertension are less

common in HIV infected women being managed with mono- or triple anti-retroviral therapy . © 2013 International Society for the Study of Hypertension in Pregnancy Published by Elsevier B.V. All rights reserved.

Publication Type: Journal: Article

Source: EMBASE

Title: Expectant management of severe preeclampsia with severe fetal growth restriction in the second trimester

Citation: Pregnancy Hypertension, January 2014, vol./is. 4/1(81-86), 2210-7789 (January 2014)

Author(s): Aoki S., Toma R., Kurasawa K., Okuda M., Takahashi T., Hirahara F.

Language: English

Abstract: Objective We investigated whether women with severe fetal growth restriction (FGR <5th percentile) associated with severe preeclampsia (PE) occurring in the second trimester are candidates for expectant management. Study design This is a retrospective study involving 33 women who developed severe PE or superimposed PE in the second trimester and were expectantly managed at a tertiary center. They were divided into groups with and without severe FGR on admission (severe FGR (+) group: 17 women; severe FGR (-) group: 16 women) for comparison of the duration of pregnancy prolongation, major maternal complications, and perinatal outcomes. The data are presented as medians (range) or frequencies (percentage). Results The duration of pregnancy prolongation was 10 days in both groups. Major maternal complications occurred in 5 of 17 women (29.4%) in the severe FGR (+) and 5 of 16 (31.3%) in the severe FGR (-) group, showing very similar incidence rates in the 2 groups. The perinatal survival rates were favorable at 82.4% (14/17) in the severe FGR (+) and 100% (16/16) in the severe FGR (-) group. Conclusion Regarding expectant management of severe preeclampsia occurring in the second trimester, there was no difference in the duration of pregnancy prolongation between the groups with and without severe FGR on admission. Because favorable perinatal outcomes can be expected without compromising maternal safety by prolonging pregnancy as expectant management for severe FGR, it was suggested that women with severe FGR are suitable candidates for expectant management . © 2013 International Society for the Study of Hypertension in Pregnancy Published by Elsevier B.V. All rights reserved.

Publication Type: Journal: Article

Source: EMBASE

Title: Risk factors, management, and outcomes of hemolysis, elevated liver enzymes, and low platelets syndrome and elevated liver enzymes, low platelets syndrome

Citation: Obstetrics and Gynecology, 2014, vol./is. 123/3(618-627), 0029-7844;1873-233X (2014)

Author(s): Fitzpatrick K.E., Hinshaw K., Kurinczuk J.J., Knight M.

Language: English

Abstract: OBJECTIVE:: To describe the risk factors, management and outcomes of hemolysis, elevated liver enzymes, and low platelets (HELLP) and elevated liver enzymes, low platelets (ELLP) syndrome in the United Kingdom. METHODS:: A case-control study was conducted using the U.K. Obstetric Surveillance System between June 2011 and May 2012, including 129 women diagnosed with HELLP, 81 diagnosed with ELLP, and 476 control women. RESULTS:: Women with HELLP were more likely than those in the control group to be 35+ years old (33% compared with 22%, adjusted odds ratio [OR] 1.85, 95% confidence interval [CI] 1.12-3.06), nulliparous (67% compared with 43%, adjusted OR 4.16, 95% CI 2.48-6.98), have had a previous gestational hypertensive disorder (9% compared with 7%, adjusted OR 3.47, 95% CI 1.49-8.09), and have a multiple pregnancy (7% compared with 2%, adjusted OR 4.51, 95% CI 1.45-14.06). Women with ELLP were more likely than those in the control group to be nulliparous (79% compared with 43%, adjusted OR 8.35, 95% CI 3.88-17.95), and have had a previous gestational hypertensive disorder (7% compared with 7%, adjusted OR 4.66, 95% CI 1.37-15.89). Of the women diagnosed antenatally with HELLP or ELLP, 51% (71/138) had

planned management of immediate delivery, 43% (60/138) had delivery planned within 48 hours, and 5% (7/138) had planned expectant (conservative) management. No differences were found between women who had delivery planned within 48 hours and those who had planned immediate delivery in terms of the proportion who received blood products (37% compared with 33%, $P=.681$); were admitted to the intensive care unit (57% compared with 61%, $P=.652$); experienced severe morbidity (10% compared with 4%, $P=.300$); or had a neonate with major complications (6% compared with 11%, $P=.342$). CONCLUSION:: A short delay in the delivery of women diagnosed antenatally with HELLP or ELLP syndrome may be considered. However, the rarity of the condition limits study power. LEVEL OF EVIDENCE:: II © American College of Obstetricians and Gynecologists.

Publication Type: Journal: Article

Source: EMBASE

Full Text:

Available from *Ovid* in [Obstetrics and Gynecology](#)

Title: Inter-pregnancy weight change impacts placental weight and is associated with the risk of adverse pregnancy outcomes in the second pregnancy

Citation: BMC Pregnancy and Childbirth, January 2014, vol./is. 14/1, 1471-2393 (22 Jan 2014)

Author(s): Wallace J.M., Bhattacharya S., Campbell D.M., Horgan G.W.

Language: English

Abstract: Background: The inter-pregnancy period is considered a teachable moment when women are receptive to weight- management guidance aimed at optimising pregnancy outcome in subsequent pregnancies. In population based studies inter-pregnancy weight change is associated with several adverse pregnancy outcomes but the impact on placental size is unknown.Methods: The association between inter-pregnancy weight change and the primary risk of adverse pregnancy outcomes in the second pregnancy was investigated in 12,740 women with first two consecutive deliveries at a single hospital using logistic regression.Results: Compared with women who were weight stable, weight loss (>1BMI unit) between pregnancies was associated with an increased risk of spontaneous preterm delivery, low placental weight and small for gestational age (SGA) birth, while weight gain (>3BMI units) increased the risk of pre-eclampsia, gestational hypertension, emergency caesarean section, placental oversize and large for gestational age (LGA) birth at the second pregnancy. The relationship between weight gain and pre-eclampsia risk was evident in women who were overweight at first pregnancy only (BMI >25 units), while that between weight loss and preterm delivery was confined to women with a healthy weight at first pregnancy (BMI <25 units). In contrast, the association between weight loss and SGA was independent of first pregnancy BMI. A higher percentage of women who were obese at first pregnancy were likely to experience a large weight gain ($P < 0.01$) or weight loss ($P < 0.001$) between consecutive pregnancies compared with the normal BMI reference group.Conclusion: Inter-pregnancy weight change in either direction increases the risk of a number of contrasting pregnancy complications, including extremes of placental weight. The placenta may lie on the causal pathway between BMI change and the risk of LGA or SGA birth. © 2014 Wallace et al.; licensee BioMed Central Ltd.

Publication Type: Journal: Article

Source: EMBASE

Full Text:

Available from *BioMedCentral* in [BMC Pregnancy and Childbirth](#)

Available from *National Library of Medicine* in [BMC Pregnancy and Childbirth](#)

Available from *Springer NHS Pilot 2014 (NESLi2)* in [BMC Pregnancy and Childbirth](#); Note: ; Collection notes: Only available on NHS networked computers. Not available with Athens username/password.

Available from *ProQuest* in [BMC Pregnancy and Childbirth](#)

Title: Preparing for blood transfusion in the peripartum period: Usefulness of admission risk factors

Citation: American Journal of Obstetrics and Gynecology, January 2014, vol./is. 210/1 SUPPL. 1(S296), 0002-9378 (January 2014)

Author(s): Williams O., Fisher N., Bayya J., Zafra K., DAlexis R., Dibner-Garcia L., Homel P., McCalla S.

Language: English

Abstract: OBJECTIVE: Anticipation of Obstetrical Hemorrhage (ObH) is key to effective and timely management. In our busy 8000 deliveries a year unit, the cost of processing a type and screen on every patient has been raised. Blood Bank proposed the alternative of selective type and screen. We sought to identify the admission and labor risk factors for hemorrhage present among women who received transfusion peri-partum and to assess their relative contribution. We compared them to a control group. STUDY DESIGN: Retrospective Case-control by electronic chart review. 198 women (cases), transfused in 2011 and 2012 were compared to 450 women not transfused (controls) admitted within 12 hours of cases. Admission and intrapartum risk factors were identified using established risks for ObH. Matched case comparisons were established. Significant univariate predictors for transfusion were placed in a multivariate model. RESULTS: 6 admission risk factors were found to be significant: African American ethnicity, decreasing gestational age, current multiple pregnancy, placental abnormalities, severe hypertension and coagulation abnormalities. Prolonged 2nd stage, Chorioamnionitis, Vacuum deliveries were significant intrapartum risk factors. In Multivariate model controlling for admission risk factors, intrapartum risk factors remained significant. Only 34% of transfused patients had significant admission risk factors for ObH. Grand multiparity was not significant while low gestational age and hypertensive disease remained strong predictors of ObH requiring transfusion. CONCLUSION: The majority of ObH severe enough to require blood transfusion occurs in the absence of admission risk factors. Premature delivery, hypertensive disease predispose to ObH in our population. Relying on traditional admission risk factors alone for ordering a type and screen would delay the availability of cross matched blood products during ObH.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Determinants of the competing outcomes of intrauterine infection, abruption or spontaneous preterm birth after preterm premature rupture of membranes

Citation: American Journal of Obstetrics and Gynecology, January 2014, vol./is. 210/1 SUPPL. 1(S246-S247), 0002-9378 (January 2014)

Author(s): Hackney D., Kuo K., Lappen J.

Language: English

Abstract: OBJECTIVE: A patient with PPROM undergoing conservative management is at risk for a variety of outcomes, including clinical chorioamnionitis or intrauterine infection (CA), placental abruption (PA) or preterm delivery without CA or PA (SPTB). Alternatively they could be delivered for indications not directly associated with PPROM or be induced when sufficiently advanced or mature. Competing risk regression can analyze a cohort's risk of an individual outcome over time while accounting for ongoing deliveries secondary to competing events. STUDY DESIGN: This was a secondary analysis of the MFMU BEAM trial subjects with PPROM and conservative management after exclusion of pre-randomization CA or previa. Subjects were "censored" at 34 weeks or if delivered due to lung maturity or gestational age (GA) alone. Otherwise deliveries were categorized as: PA, CA, SPTB, or "indicated" (pre-eclampsia, IUGR etc). The association between the outcomes of PA, CA or SPTB and the clinical predictors of twins, race, parity, GA at ROM, bleeding prior to ROM, obesity and prior genitourinary infections were evaluated via competing risk regression. Overall latency prior to delivery by any indication was also evaluation by Cox regression. RESULTS: 1,970 subjects were included. The significance and directionality of several predictors varied according to specific outcomes. Twins had a shorter latency (HR=1.51) and higher SPTB hazard (1.85) despite significant reductions in CA- (0.66) or PA-specific (0.56) hazards. The decrease in overall latency associated with African-American ethnicity (HR=1.29) was almost entirely due to an increased CA hazard (1.44) without a significant association with SPTB. Bleeding was associated with a significant increase in PA hazard though negative or neutral associations

with other outcomes. **CONCLUSION:** For patients with PPRM, the hazards associated with different clinical predictors vary according to exact outcomes.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Outcome of induction of labour in women with gestational diabetes and comparison with general obstetric population

Citation: American Journal of Obstetrics and Gynecology, January 2014, vol./is. 210/1 SUPPL. 1(S187), 0002-9378 (January 2014)

Author(s): Crippa I., Callegari C., Mariani E., Cameroni I., Plevani C., Mussi S., Roncaglia N.

Language: English

Abstract: **OBJECTIVE:** There is controversy regarding the optimal management of delivery in women with gestational diabetes mellitus (GDM) to minimize the risks for the fetus. The induction of labour reduces the rate of stillbirth and of complications related to excessive fetal growth (shoulder dystocia and birth trauma), but increases the risk of caesarean section (CS). The aim of this study is to compare elective induction versus spontaneous onset of labour in pregnancy affected by GDM. **STUDY DESIGN:** This is a retrospective study of women with GDM who delivered in our Department between 01/2009 to 12/2012. Induction of labour, according to our clinical management, was proposed at 38 weeks in GDM women with one or more of the following conditions: poor glycemic control, fetal growth +/- 90degree centile, polyhydramnios, insulin or oral hypoglycemic therapy. Data on antenatal risk factors, labour and delivery characteristics and neonatal outcome were collected. **RESULTS:** Among the 763 patients with GDM 82 patients had an elective CS (11%) and were excluded from the analysis. Of the remaining 681 women 52% had induction of labour. At univariate analysis, as shown in the table, there was a significant difference in pre-gestational BMI, obesity and pharmacological therapy, but similar incidence of macrosomia and perinatal outcome. The rate of CS was double in the induction group vs spontaneous labour: 12% vs 6% (p=0.01). Compared with general obstetric population delivered in the same period, total CS rate and CS in labour in GDM group was similar to general population: 19.2 % vs 19.5%; (p=NS) for total CS and 9.5% vs 9.4% (p=NS) for CS in labour. **CONCLUSION:** Frequency of induction is very high in GDM patients, but total CS rate is similar in GDM and general obstetric population. Induction of labour is associated with an increased rate of CS, but no differences in adverse perinatal outcome.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Influence of maternal risk factors on perinatal outcomes in IUGR: Analysis of the national multicenter prospective PORTO study

Citation: American Journal of Obstetrics and Gynecology, January 2014, vol./is. 210/1 SUPPL. 1(S93), 0002-9378 (January 2014)

Author(s): Burke N., Unterscheider J., Daly S., Geary M., Kennelly M., McAuliffe F., O'Donoghue K., Hunter A., Morrison J., Burke G., Dicker P., Tully E., Malone F.

Language: English

Abstract: **OBJECTIVE:** The aim of the Prospective Observational Trial to Optimize Pediatric Health in IUGR (PORTO) Study was to evaluate the optimal management of fetuses with EFW<10th centile. The objective of this analysis was to describe the maternal risk factors for IUGR and to determine which of these factors are associated with abnormal umbilical artery (UA) Doppler or adverse perinatal outcome. **STUDY DESIGN:** Consecutive, singleton pregnancies with EFW <10th centile were recruited between January 2010 and June 2012 in seven centers and assessed serially with UA Doppler ultrasound. Abnormal UA Doppler was defined as a PI >95th centile or absent/reversed end diastolic flow. Adverse perinatal outcome was defined as a composite

of IVH, PVL, HIE, NEC, BPD, sepsis and death. A number of maternal risk factors were recorded, listed in table 1. Stepwise logistic regression was used to determine the most influential maternal factors in predicting an abnormal UA Doppler or adverse perinatal outcome. **RESULTS:** A total of 1,116 pregnancies were recruited with an EFW < 10th centile. Maternal risk factors that significantly increased the risk of abnormal UA Doppler and adverse outcome were maternal age >40, hypertension, pre-eclampsia and a prior history of preeclampsia. This analysis was also repeated for an EFW less than the 3rd centile, shown in table 1. In those with EFW<10th centile the stepwise regression analysis provided an optimal combined set of predictors, which were: maternal age >40 and pre-eclampsia with a combined odds ratio of 5.4 ($p<0.0001$) for abnormal UA and maternal age >35 and pre-eclampsia with a combined odds ratio of 3.38 ($p<0.001$) for adverse outcome. **CONCLUSION:** This analysis highlights that advanced maternal age and hypertension are the best maternal indicators of an adverse outcome in the IUGR fetus. This information may be helpful in designing fetal surveillance algorithms for IUGR pregnancies with increased monitoring warranted with advanced maternal age and hypertension. (Table presented).

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Evaluation of a surveillance protocol for the management of fetal growth restriction

Citation: American Journal of Obstetrics and Gynecology, January 2014, vol./is. 210/1 SUPPL. 1(S74), 0002-9378 (January 2014)

Author(s): Mendez-Figueroa H., Dahlke J., Maggio L., Albright C., Ayala N., Lopes V., Chauhan S., Wenstrom K.

Language: English

Abstract: **OBJECTIVE:** A standardized surveillance protocol to minimize variation in the management of fetal growth restriction (FGR; estimated fetal weight < 10% for gestational age [GA]) was developed and instituted. The objective of this pre- and post-intervention study was to evaluate the impact of our protocol on maternal and neonatal outcomes. **STUDY DESIGN:** We performed an IRB approved retrospective analysis of all singleton, non-anomalous pregnancies with FGR at our institution from January 2008 to July 2012. After March 2010, a protocol consisting of standardized fetal surveillance and delivery indications was initiated for the management all suspected FGR (Figure 1). We hypothesized that the GA at delivery would increase with a corresponding decrease in neonatal ICU admissions after protocol initiation. We estimated 194 patients in each group would detect a mean difference in GA of 4 days ($SD = 2$ weeks) between pre- and post-intervention groups. **RESULTS:** 230 pre- and 306 post- intervention pregnancies met inclusion criteria. Maternal characteristics including age, GA at diagnosis, BMI, nulliparity, and maternal co-morbidities were similar between groups. There was a significant increase in mean GA at delivery ($p=.003$), and total number of Doppler ultrasounds ($p=.01$) in the post-intervention cohort. There were no differences in induction rates, mode of delivery, or composite neonatal morbidity with a significant decrease in delivery <37 weeks ($p=0.002$) and a non-statistically significant trend in number of NICU admissions ($p=0.06$). **CONCLUSION:** A protocol for surveillance of FGR prolonged the GA at delivery and decreased preterm births with no change in composite neonatal morbidity. (Figure presented).

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Clinical factors informing decision to deliver the IUGR fetusexperience from the PORTO study

Citation: American Journal of Obstetrics and Gynecology, January 2014, vol./is. 210/1 SUPPL. 1(S65-S66), 0002-9378 (January 2014)

Author(s): Unterscheider J., Daly S., Geary M., Kennelly M., McAuliffe F., O'Donoghue K., Hunter A., Morrison J., Burke G., Dicker P., Tully E., Malone F.

Language: English

Abstract: **OBJECTIVE:** The aim of the Prospective Observational Trial to Optimize Pediatric Health in IUGR (PORTO) Study was to evaluate the optimal management of fetuses with EFW<10th centile. The objective of this secondary analysis was to investigate which clinical and sonographic factors influenced obstetricians to deliver fetuses affected by IUGR. **STUDY DESIGN:** Over 1,100 consecutive ultrasound-dated singleton pregnancies with EFW<10th centile were subjected to sonographic surveillance at least every two weeks with biometry and multi-vessel Doppler assessment at each visit. Delivery and perinatal outcomes were recorded for each pregnancy. There were no pre-specified delivery criteria prescribed by the study protocol and the final decision to deliver was at the discretion of the managing clinician. Antepartum stillbirths (n=4) and pregnancies with spontaneous onset of labor (n=260) were excluded from this analysis. **RESULTS:** Of the 1,116 recruited pregnancies overall, 852 (76%) cases required active decision making by the managing clinician regarding mode and timing of delivery. Forty percent (338/852) had a pre-labor cesarean delivery and 60% (514/852) had a labor induction. The mean GA at delivery was 37.5 weeks (SD +/- 3.0) corresponding to a mean birthweight of 2,427grams (SD +/- 664). Table 1 outlines the Top 10 delivery indications in the IUGR setting. Poor interval fetal growth accounted for the majority of fetal indications. The predominant maternal condition prompting delivery was hypertensive disease/ pre-eclampsia. Concerning ultrasound findings influenced decision making in 77% of cases (656/852). Pregnancies complicated by hypertensive disease/ pre-eclampsia and/ or UA Doppler abnormalities were more commonly delivered by elective pre-labor cesarean section (p<0.0001). **CONCLUSION:** Our data outline descriptively the maternal and fetal issues pertaining to delivery for the fetus <10th centile in contemporary clinical obstetrical practice. (Table presented).

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Uterine artery Doppler at IUGR diagnosis can it predict adverse perinatal outcome?

Citation: American Journal of Obstetrics and Gynecology, January 2014, vol./is. 210/1 SUPPL. 1(S63-S64), 0002-9378 (January 2014)

Author(s): Unterscheider J., O'Donoghue K., Daly S., Geary M., Kennelly M., McAuliffe F., Hunter A., Morrison J., Burke G., Dicker P., Tully E., Malone F.

Language: English

Abstract: **OBJECTIVE:** The aim of the Prospective Observational Trial to Optimize Pediatric Health in IUGR (PORTO) Study was to evaluate the optimal management of fetuses with EFW<10th centile. The objective of this secondary analysis was to establish whether an abnormal uterine artery (UtA) Doppler at IUGR diagnosis can be utilized to predict subsequent adverse perinatal outcome. **STUDY DESIGN:** Over 1,100 consecutive ultrasound-dated singleton pregnancies with EFW<10th centile were subjected to sonographic surveillance at least every two weeks with biometry and multi-vessel Doppler assessment at each visit. Uterine artery Doppler was recorded once at enrollment to the study. Adverse perinatal outcome was defined as composite outcome consisting of intraventricular hemorrhage, periventricular leucomalacia, hypoxic ischemic encephalopathy, necrotizing enterocolitis, bronchopulmonary dysplasia, sepsis or death. Comparisons were performed using Fisher's exact test and p<0.05 was considered significant. **RESULTS:** Of the 1,116 pregnancies completing the study protocol, 823 (74%) had uterine artery Doppler assessment at enrollment (mean GA 31 weeks; IQR=28-34 weeks). Abnormal uterine artery Doppler, defined as either presence of notching or UtA pulsatility index (PI) >95th centile was observed in 26% (n=214) cases. Uterine artery abnormalities identified 58% (n=25) of adverse perinatal outcomes (Table 1) and 66% (n=53) of IUGR pregnancies complicated by pre-eclampsia. The sensitivity for predicting adverse perinatal outcome by UtA Doppler alone was 58%. The negative predictive value (NPV) of UtA Doppler was 97%. **CONCLUSION:** Abnormal uterine artery Doppler at IUGR diagnosis is strongly associated with adverse perinatal outcome and preeclamptic pregnancy complications. If the uterine artery Doppler is normal at IUGR diagnosis, the risk of adverse outcome is very small. Therefore UtA Doppler evaluation could be incorporated into the risk stratification of IUGR pregnancies at diagnosis, even in the late second and third trimester.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Applying customization of fetal growth to the PORTO cohort can we improve the appropriate identification of infants at risk?

Citation: American Journal of Obstetrics and Gynecology, January 2014, vol./is. 210/1 SUPPL. 1(S62-S63), 0002-9378 (January 2014)

Author(s): Unterscheider J., O'Donoghue K., Daly S., Geary M., Kennelly M., McAuliffe F., Hunter A., Morrison J., Burke G., Dicker P., Tully E., Malone F.

Language: English

Abstract: **OBJECTIVE:** The aim of the Prospective Observational Trial to Optimize Pediatric Health in IUGR (PORTO) Study was to evaluate the optimal management of fetuses with EFW<10th centile. Customization of fetal growth has been proposed to provide improved identification of IUGR taking into account physiological maternal and fetal variables. The objective of this secondary analysis was to test whether customization of fetal growth (EFW_{cust}) performs better in identifying fetuses at risk of adverse perinatal outcome when compared to conventional population standards (EFW_{pop}). **STUDY DESIGN:** Over 1,100 consecutive ultrasound-dated singleton pregnancies with EFW_{pop}<10th centile were subjected to sonographic surveillance at least every two weeks with biometry and multi-vessel Doppler assessment at each visit. Co-efficients for customized growth standards were derived from over 11,000 singleton pregnancies in Ireland and applied to the PORTO cohort. Adverse perinatal outcome was defined as composite outcome of IVH, PVL, HIE, NEC, BPD, sepsis or death. **RESULTS:** Of the 1,116 fetuses with EFW_{pop}<10th centile (Hadlock- 4), 72% (800) remained <10th centile when adjusted for maternal factors and fetal gender (EFW_{cust}). If customized centiles had been used 316 (28%) would not have been considered true cases of IUGR. The rate of adverse perinatal outcome was 6.4% (51/800) in those with EFW_{cust}<10th and 2% (6/316) in those with EFW_{cust}> 10th centile. This represents a 25% increase in the risk (RR=1.25) of detecting an adverse outcome using customized centiles compared with standard population centiles. When applying customized centiles to actual birthweights (BW), 64% (714) infants in the overall cohort had a BW <10th customized centile, compared to 72% (796) with BW <10th centile using population norms. **CONCLUSION:** Results of this large prospective study validate the usefulness of fetal weight customization for the most appropriate identification of fetal growth restriction in the antenatal setting.

Publication Type: Journal: Conference Abstract

Source: EMBASE

Title: Renal function in normal and disordered pregnancy

Citation: Current Opinion in Nephrology and Hypertension, January 2014, vol./is. 23/1(46-53), 1062-4821;1473-6543 (January 2014)

Author(s): Hussein W., Lafayette R.A.

Language: English

Abstract: **PURPOSE OF REVIEW:** Renal dysfunction during pregnancy is a common and serious complication. Understanding normal physiology during pregnancy provides a context to further describe changes in pregnancy that lead to renal dysfunction and may provide clues to better management. **RECENT FINDINGS:** Hormonal changes during pregnancy allow for increased blood flow to the kidneys and altered autoregulation such that glomerular filtration rate (GFR) increases significantly through reductions in net glomerular oncotic pressure and increased renal size. The mechanisms for maintenance of increased GFR change through the trimesters of pregnancy, continuing into the postpartum period. Important causes of pregnancy-specific renal dysfunction have been further studied, but much needs to be learned. Pre-eclampsia is due to abnormal placentation, with shifts in angiogenic proteins and the renin-angiotensin-aldosterone system leading to endothelial injury and clinical manifestations of hypertension and organ dysfunction. Other thrombotic microangiopathies occurring during pregnancy have been better defined as well, with new work focusing on the contribution of the complement system to these disorders. **SUMMARY:** Advances have been

made in understanding the physiology of the kidney in normal pregnancy. Diseases that affect the kidney during pregnancy alter this physiology in various ways that inform clinicians on pathogenesis and may lead to improved therapeutic approaches and better outcomes of pregnancy. © 2013 Wolters Kluwer Health Lippincott Williams & Wilkins.

Publication Type: Journal: Review

Source: EMBASE

Title: Definition and management of fetal growth restriction: A survey of contemporary attitudes

Citation: European Journal of Obstetrics Gynecology and Reproductive Biology, 2014, vol./is. 174/1(41-45), 0301-2115;1872-7654 (2014)

Author(s): Unterscheider J., Daly S., Geary M.P., Kennelly M.M., McAuliffe F.M., O'Donoghue K., Hunter A., Morrison J.J., Burke G., Dicker P., Tully E.C., Malone F.D.

Language: English

Abstract: Objective To evaluate opinions among Irish obstetricians and obstetric trainees regarding the optimal definition, assessment and management of pregnancies affected by intrauterine growth restriction (IUGR). Study design An anonymous, structured, web-based survey that comprised 14 questions was sent to 200 obstetricians and obstetric trainees in Ireland. Results Of the 113 participants (57% response rate), the majority (50%) were consultants, with over 10 years' clinical experience (46%), who worked in large maternity units (58%) with neonatal units providing care for preterm IUGR fetuses (94%). Eighty-three clinicians (74%) agreed that an estimated fetal weight (EFW) below the 10th centile constitutes small-for-gestational age (SGA). The majority (n = 93; 82%) would deliver the SGA fetus between 37⁺⁰ and 39⁺⁶ weeks gestation. In total, the survey yielded 30 different IUGR definitions; the top three definitions were (i) an EFW below the 5th centile (n = 18; 16%), (ii) an EFW below the 10th centile with oligohydramnios and abnormal umbilical artery (UA) Doppler (n = 16; 14%), and (iii) an EFW below the 10th centile (n = 12; 11%). In the evaluation of the preterm IUGR fetus with abnormal UA Doppler, the assessment of amniotic fluid volume, middle cerebral artery, ductus venosus, cardiotocograph (CTG) and biophysical profiling was performed in 74%, 60%, 60%, 54% and 52% respectively. The majority of clinicians applied three or more assessment modalities and 60% referred to a maternal-fetal medicine (MFM) subspecialist. Interestingly, even among MFM subspecialists there was no common consistent management approach. Most doctors (81%) would deliver the IUGR fetus for CTG abnormalities but MFM subspecialists more commonly deliver on the basis of absent end-diastolic flow in the UA alone (37% vs. 10%; p = 0.006). Two-thirds of doctors (n = 74) would implement customised growth charts if they became available for their population and over 80% thought that a national guideline on IUGR would be beneficial. Conclusion The results of this survey confirm the inconsistencies surrounding the clinical management of IUGR pregnancies and highlight the need for standardisation of terminology and antenatal surveillance, implementation of fetal weight customisation and national guidance for Ireland. © 2013 Elsevier Ireland Ltd.

Publication Type: Journal: Article

Source: EMBASE

Title: Assessment of clinical outcomes and prescribing behavior among inpatients with severe preeclampsia and eclampsia: An Indian experience

Citation: Indian Journal of Pharmacology, January 2014, vol./is. 46/1(18-23), 0253-7613;1998-3751 (January-February 2014)

Author(s): Kumar S., Bansal D., Hota D., Jain M., Singh P., Pandey B.

Language: English

Abstract: Objectives: The study aims to evaluate the management, maternal-fetal outcomes, and prescription behavior among inpatients with severe preeclampsia and eclampsia. Materials and Methods: This prospective cohort study in a tertiary referral center was conducted in 164 inpatient pregnant women who fulfilled the inclusion criteria. The study was conducted between November 2005 and February 2007. The patients were followed-up till delivery. Antepartum and intrapartum care and maternal and perinatal outcome were noted. Chief outcome measures were maternal and perinatal mortality and drug use indicators. Results: Median age at delivery of the women was 25 (22-28) years. Majority were suffering from antepartum eclampsia (52.5%), followed by preeclampsia (31%) and postpartum eclampsia (16.5%). Nulliparity (61.6%) was more common in eclampsia, while multiparity in preclampsia group. A total of 48% had preterm delivery. Most presented with headache (50%) and hyperreflexia (29%). Only 15% presented with all three prodromal symptoms and 86% had hypertension. There was increased morbidity, operative intervention, and admission to intensive care unit. Most babies (67%) weighed <2.5 kg and had poor outcome. The maternal mortality was 0.4/1000. Average number of drugs prescribed in patients of preeclampsia, antepartum eclampsia, and postpartum eclampsia were 13.2, 14.9, and 14.2, respectively. Antibiotics (24.6%) were the most common class of the drugs prescribed in all the groups, followed by vitamin and calcium supplements (22.7%) and antihypertensives (13.5%). Most common antihypertensive used were calcium channel blockers and anticonvulsant magnesium sulphate. Conclusions: There was increased maternal and perinatal morbidity. Protocols for the management of eclampsia, including antihypertensive and anticonvulsant therapies, should be available and reviewed regularly to improve the standard of care and reduce the prevalence of this dangerous condition.

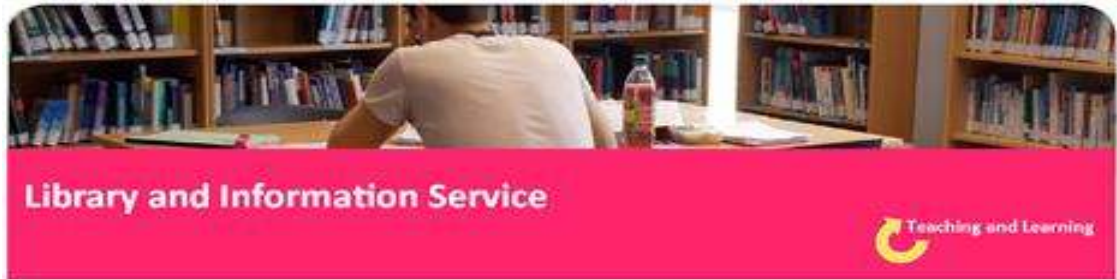
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