IP Journal of Diagnostic Pathology and Oncology 4 (2019) 226–229

Content available at: iponlinejournal.com

IP Journal of Diagnostic Pathology and Oncology

Journal homepage: www.innovativepublication.com

Original Research Article

A reterospective study on the endometrial biopsy of AUB correlated to thyroid abnormalities and endometrial thickness

Kishore Khanna[1], **V Sudha**[2,*]

[1] *saveetha medical college, Chennai, Tamil Nadu, India*
[2] *Dept. of Pathology, Saveetha Medical College, Chennai, Tamil Nadu, India*

ARTICLE INFO

Article history:
Received 03-07-2019
Accepted 05-09-2019
Available online 20-09-2019

Keywords:
Bleeding
Endometrium.

ABSTRACT

Aim: To study the histopathological patterns, to categorise the causes of bleeding according to age group and to correlate it with the thyroid profile and with the thickness of endometrium.
Materials and Methods: Strategies:It is a review study directed by the branch of pathology in our institute. An aggregate of 80 cases were taken from the age gathering of 18-60 years. Histopathological patterns were recorded from the endometrial biopsy along with the biochemical and radiological records.
Results: The commonest age group presented with AUB was 40-49 years which shows the perimenopausal period. Most of the histopathological pattern showed normal cyclic endometrium with (42.5%) of proliferative phase followed by(23.7%) of secretory phase. Higher incidence of AUB was seen in the euthyroid cases (65%). ET > 15mm was mostly related towards endometrial hyperplasia.
Conclusion: Endometrial biopsies help in analyzing the diverse causes of abnormal menstrual bleeding.

1. Introduction

Abnormal uterine bleeding is described as bleeding with increased frequency, duration or quantity of blood during menstrual cycle. It is the most common condition seen now, which could be due to a simple hormonal imbalance to a structural cause like endometrial polyp or any neoplastic or non neoplastic conditions. It affects 10-30% of reproductive aged women and up to 50% of perimenopausal women.

Endometrial biopsies are acquired for a number of reasons that encompass bizarre uterine bleeding in certain age people, incomplete abortions, or suspected neoplasia and the endometrium can be sampled as pre operative manner to decide the phase of the cycle and for further assessments or treatments.

In this study we aim to document the varied morphological patterns reported in our histopathology laboratory on patients presented with AUB from the non-gravid from the age group of 18 to 60 years and were compared with their thyroid values and the endometrial thickness through the ultrasonography.

* *Corresponding author*.
E-mail address: sudh7828@gmail.com (V. Sudha).

1.1. Technique

It is a retrospective observation conducted at the specimen received within the branch of Pathology, Saveetha Institute of Medical and Technical Sciences for a length of six months from July 2018 to December 2018. A total range of eighty samples of endometrial biopsies and curettings were accessed. Samples had been constant in 10% formal saline and robotically processed and stained with H&E. Histopathological evaluation was carried out beneath light microscopy.

The demographic details such as age of the cases were collected from the histopathological records. The corresponding pathological findings were recorded. The ultrasongraphy readings regarding the endometrial thickness and the thyroid values were taken from the corresponding Radiology and Biochemistry departments for this study.

Patients have been categorised into reproductive age companies (18-40 yrs), perimenopausal (41-50), and postmenopausal (>50yrs). Perimenopause is defined by WHO as 2-8 years preceding menopause and 12 months after the final menses. [1]

https://doi.org/10.18231/j.jdpo.2019.046
2581-3714/© 2019 Published by Innovative Publication.

2. Result

In this study the patients were taken from the age group of 18 to >50 years. The commonly affected group of patients related to AUB was 40-49 years with (63.7%) followed by 30-39 years with (21.3%) and 50-59 years with (15.4%).

The normal cyclic al endometrium was the commonest endometrial finding in AUB with 42.5% constitutes proliferative endometrium and 23.7% were secretory endometrium and others like disordered proliferative phase, endometrial hyperplasia, atrophic endometrium ,endometrial polyp and endometrial carcinoma constitutes 15%, 15%, 3.8%, 2.5% and 1.2% respectively.

Most of the cases were euthyroid (65%) followed by the hypothyroid (26%) and the hyperthyroid (2%). The hypothyroid state showed more incidence of proliferative phase in the histopathological finding.

Endometrial thickness showed (63.7 %) 5-10 mm, (21.3%) <5 mm, (11.2%) 11-20mm and (3.8%) of 21-30 mm. ET of less than 5mm have been visible in 15 cases of regular endometrium and in 2 cases of disordered proliferative section and three cases of atrophic endometrium. ET of 5-10mm were visible in 7 cases of disordered proliferative section, 6 cases of endometrial hyperplasia and 1 case of endometrial polyp, 2 cases of

carcinoma and remaining normal. ET 11-20 mm showed 2 case of disordered proliferative phase,1 case of hyperplasia and remaining normal. ET 21-30 mm showed 1 of disordered proliferative cases and 2 of hyperplasia.

Table 1: Age wise distribution of cases.

Age	Number	Percentage
18-39	17	21.3
40-49	51	63.7
50-59	12	15.4
Total	80	100

3. Discussion

AUB is the major gynecological problem in the present situation and also one of the causes of hysterectomy. It was determined by our study that the maximum common age group associated with abnormal uterine bleeding was 40-49 years and the similar incidence was stated by way of Muzaffar et al[2] Yusuf et al[3] and Doraiswami et al.[4] This could be because of the transition to an anovulatory phase with decline in the quantity of ovarian follicles and the estradiol levels. This is comparable to the studies carried out by Agarwal et al,[5] Vaidya et al,[6] Salvi et al.[7]

Most of the cases in the study showed normal physiological patterns. The histopathological findings in the endometrial biopsy showed various patterns proliferative phase (42.5%) commonest followed by the secretory phase (23.7%) and the disordered proliferative phase (15%) are

Table 2: Histopathological findings of the endometrium

	Number of patients	Percentage
Proliferative phase	34	42.5
Secretory phase	19	23.7
Disordered proliferative phase	12	15
Atrophic endometrium	3	3.8
Endometrial polyp	2	2.5
Endometrial hyperplasia without atypia	6	7.5
Endometrial hyperplasia with atypia	3	3.8
Endometrial carcinoma	1	1.2
Total	80	100

Table 3: Distribution of cases based on thyroid profile.

Thyroid profile	Number	Percentage
Euthyroid	52	65
Hypothyroid	26	32.5
Hyperthyroid	2	2.5
Total	80	100

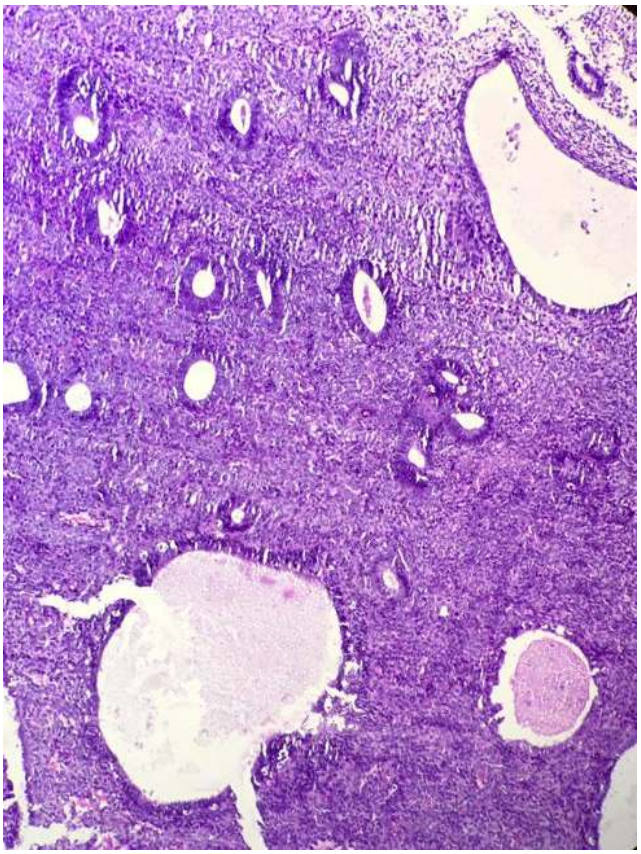

Fig. 1: Disordered proliferative endometrium

Table 4: Endometrial thickness and Histopathology pattern

Endometrial thickness	Proliferative phase	Secretory phase	Disordered proliferative phase	Atrophic endometrium	Endometrial polyp	Endometrial hyperplasia	Endometrial carcinoma	No of cases
< 5	10	5	2	**3**	**0**	**0**	**0**	**20**
5-10	21	12	7	**0**	**2**	**5**	**1**	**48**
11-20	**3**	2	2	**0**	**0**	**2**	**0**	**9**
20-30	0	0	1	**0**	**0**	**2**	**0**	**3**
Total	34(42.5%)	19 (23.7%)	12(15%)	**3 (3.8%)**	**2 (2.5%)**	**9 (11.3%)**	**1 (1.2%)**	**80 (100%)**

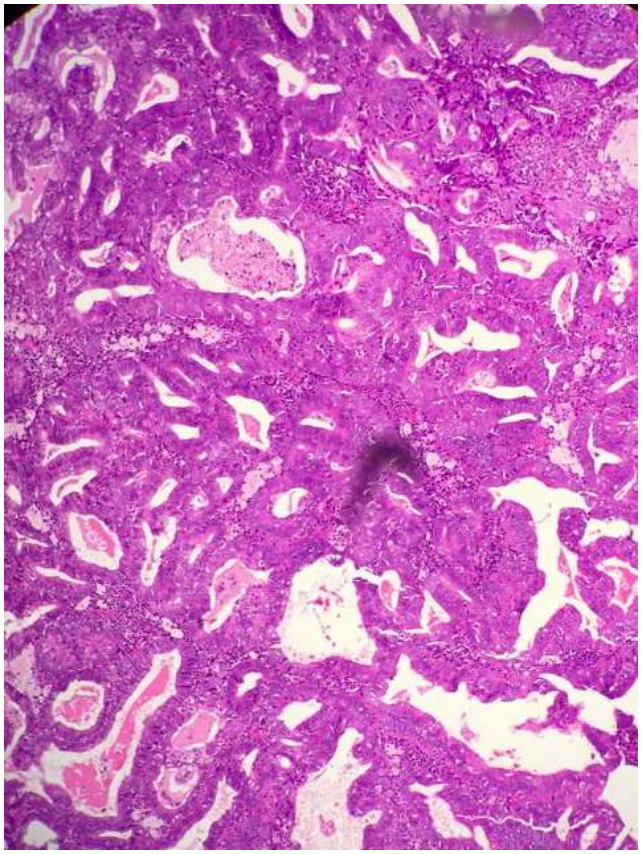

Fig. 2: Atypical hyperplasia

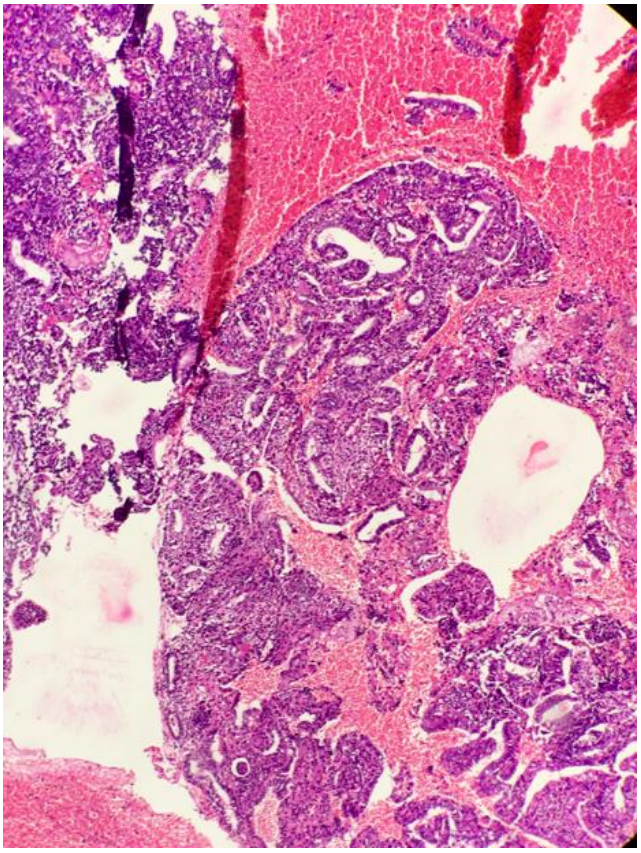

Fig. 3: Hyperplasia without atypia

in concordance with Gorla et al[8] and Byna et al.[9] They reported 45.56%, 32.59%, 9.63% and 35.38%, 30.76% for proliferative phase, secretory phase and disordered proliferative phase respectively.

Endometrial polyp was found in 2 patients below 40 years of age with the history of hormonal intake for the management of infertility.[10] Study of atrophic endometrium constituted 3.8% with most cases presenting in the postmenopausal age group. This is similar to another report by other researchers.[10]

Malignancy is a common differential diagnosis in women of peri and post menopausal age group presenting with AUB. In this study, the endometrial hyperplasia without atypia (7.5%), endometrial hyperplasia with atypia (3.8%) and endometrial carcinoma (1.2%) compared with Gorla et al[8] as they reported 9.6%,0.7% and 0.7%.

In this study it was observed that (65%) were euthyroid category, (32.5%) were hypothyroid category and only (2.5%) were hyperthyroid category compared to Singh et al[11] with 65% euthyroid category, 26% hypothyroid category, 9% hyperthyroid category and Sharma et al[12] with 64% euthyroid category, 22% hypothyroid category,14% hyperthyroid category. This showed similarity in the euthyroid and the hypothyroid but decrease in the hyperthyroid states. This shows that the thyroid state is one of the important causes of AUB. In the current study, we discovered proliferative endometrium (61.9%) is the maximum common presentation in the hypothyroi d

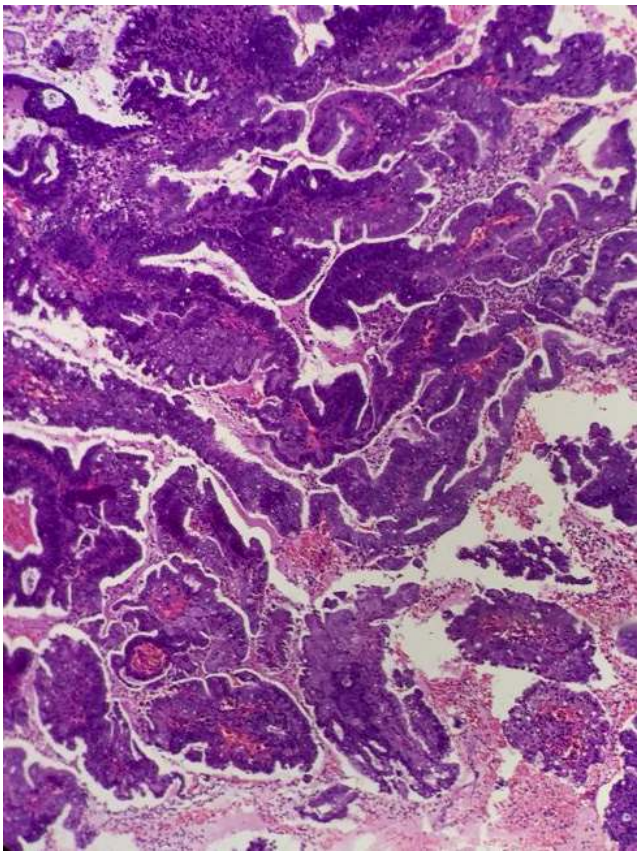

Fig. 4: Endometrial Adenocarcinoma

instances accompanied by secretory endometrium (34.4%) and atrophic endometrium (4.8%). In the study through Kaur et al[13], (64.3 %) hypothyroid sufferers had proliferative endometrium, (21. %) had endometrial hyperplasia, and the remaining (14.3 %) had secretory endometrium. Sharma et al[12] observed 36.36% proliferative, 36.36 % secretory and 27.27 %atrophic endometrium in hypothyroid patients.

The most common endometrial thickness in this study was 5-10 mm with (63.7%) which correlates with (46.4%) of Pillai et al[14] as most of the cases were taken from the premenopausal age group. Increased ET >15 mm showed 4 cases (5%) of hyperplasia compared with 8 cases (4.7%) of hyperplasia of Geethalakshmi et al.[15] Hence the patients with abnormal USG showed abnormal endometrial pathology with more cases of endometrial hyperplasia and carcinoma.

4. Conclusion

In this study AUB were seen mostly in the postmenopausal age group cases and the ET >5mm should undergo endometrial biopsy to know the endometrial abnormalities like endometrial hyperplasia and carcinoma.

The thyroid profile is also important as there were higher incidence of AUB and endometrial abnormalities in the hypothyroid cases. This also helps to find the cause and treat it accordingly.

Source of Funding

None.

Conflict of Interest

None.

References

1. Goldstein SR. Menorrhagia and abnormal bleeding before the menopause. *Best Pract Res Clin Obstet Gynaecol*. 2004;18(1):59–69.
2. Muzaffar M, Akhtar K, Yasmin S, Mahmood-UrRehman, Iqbal W, Khan M. Menstrual irregularities with excessive blood loss: a clinicopathologic correlation. *J Pak Med Assoc*. 2005;55:486–9.
3. Yusuf NW, Nadeem R, Yusuf AW. Dysfunctional uterine bleeding. A retrospective clinicopathological study over 2 years. *Pak J Obstet Gynecol*. 1996;9:27–30.
4. Doraiswami S, Johnson T, Rao S, Rajkumar A, Vijayaraghavan J, et al. Study of endometrial pathology in abnormal uterine bleeding. *J Obstet Gynaecol India*. 2011;61(4):426–9.
5. Mathur A, Vaishnav K. Histopathological study of endometrium in abnormal uterine bleeding women of all age groups in Western Rajasthan (400 cases). *Int J Basic Appl Sci*. 2014;4(3):15–8.
6. Vaidya S, Lakhey M, Amatya V, Sharma S, Hirachand PK, et al. Histopathological pattern of abnormal uterine bleeding in endometrial biopsies. *Nepal Med Coll J*. 2013;15(1):74–77.
7. Salvi A, Mital P, Hooja N, Batar A, Soni P, et al. Spectrum of endometrial histopathology in women presenting with abnormal uterine bleeding. *Sch J App Med Sci*. 2015;3(1A):1–4.
8. Gorla P, Sanapala S, Devi E, Atla BL, Rasaputra M. Histopathology of endometrium in abnormal uterine bleeding, in correlation with thyroid profile and ultrasonography findings. *Int J Res Med Sci*. 2016;4:1463.
9. Byna P, Siddula S, Kolli S, Shaik MV. Histopathological correlation of abnormal uterine bleeding in perimenopausal women. *Int J Reprod Contracept Obstet Gynecol*. 2015;4:1875–83.
10. Doraiswami S, Johnson T, Rao S, Rajkumar A, Vijayaraghavan J, Panicker VK. Study of endometrial pathology in abnormal uterine bleeding. *Obstet Gynaecol India*. 2011;61(4):424–30.
11. Singh P, Dubey P, Yadav S, Yadav SS. Thyroid abnormality in abnormal uterine bleeding: an observational study from Medical College in Western UP, India. *Int J Reprod Contracept Obstet Gynecol*. 2018;7:308–11.
12. Sharma N, Sharma A. Thyroid profile in menstrual disorders. *JK Sci*. 2012;14(1):14–7.
13. Kaur T, Aseeja V, Sharma S. Thyroid dysfunction in dysfunctional uterine bleeding. *Web Med Central Obstet Gynaecol*. 2011;2(9):1–7.
14. Pillai SS. Sonographic and histopathological correlation and evaluation of endometrium in perimenopausal women with abnormal uterine bleeding. *Int J Reprod Contracept Obstet Gynecol*. 2014;3:113.
15. GeethaLakshmi S. Ultrasonographic Measurement of Endometrial Thickness and Histopathological Diagnosis of Endometrial Hyperplasia in Abnormal Uterine of Dental and Medical Sciences (IOSR Bleeding – A Correlative Study. *JDMS*. 2018;17(10):1419.

Author biography

Kishore Khanna MBBS 2eb Year

V Sudha Assistant Professor

Cite this article: Khanna K, Sudha V. A reterospective study on the endometrial biopsy of AUB correlated to thyroid abnormalities and endometrial thickness. *J Diagn Pathol Oncol* 2019;4(3):226-229.