were carriers, with maternal nasal and vaginal swab being MRSA positive. In addition, the infant was breast fed. These were some of the risk factors found by Peacock *et al*[4] in determining infant carriage of MRSA. Bacterial typing of the MRSA strain was not available in this case.

In summary, MRSA conjunctivitis can be an additional cause for neonatal conjunctivitis. This case highlights the potential risk of healthcare workers transmitting disease to their households. Chloramphenicol eye drops have been reported to be effective in 81% of cases of MRSA conjunctivitis.[5] However, strains resistant to chloramphenicol have been described. In addition topical chloramphenicol has been the subject of much discussion where concerns have been raised about its systemic side effects.[6]

D N Sahu, S Thomson, A Salam, G Morton, P Hodgkins
Southampton Eye Unit, Tremona Road, Southampton SO16 6YD, UK

Correspondence to: Mr Debendra N Sahu, Southampton Eye Unit, Tremona Road, Southampton SO16 6YD, UK; dnsahu@hotmail.com

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Integrity of foveal cones in multiple evanescent white dot syndrome assessed with OCT and foveal reflection analyser

In this report, foveal photoreceptor involvement in a case of multiple evanescent white dot syndrome (MEWDS) is described by using two optical techniques: optical coherence tomography (OCT) and foveal reflection analysis (FRA). OCT showed a transient disruption of the foveal photoreceptor outer segments. FRA, a recently developed quantitative technique, showed disarray of the foveal cones.

Case report

A 20 year old myopic Sudanese female presented at our hospital with a central visual field defect of her right eye, associated with photopsia. Visual acuity was 0.3; intraocular pressure was 16 mm Hg. Funduscopic examination of the affected eye showed some pigment epithelial alterations in the macular area, with an irregular macular reflex. Upon visual field examination, the affected eye showed a 12 dB decrease in central sensitivity, and a small blind spot enlargement was seen. No such changes were found in the left eye. OCT showed degeneration or disarray of foveal photoreceptor outer segments in the affected eye (fig 1, top), and no abnormalities in the non-affected eye (not shown). Intensity series of scotopic and photopic full field flash electroretinograms (ERGs) were registered after, respectively, 20 minutes of dark adaptation and 10 minutes of light adaptation. The amplitudes in the affected eye were 10% smaller compared to the non-affected eye, but all were within normal limits. Electro-oculography (EOG) was normal in both eyes, although the Arden ratio (ratio of light peak to dark trough) was slightly smaller in the affected eye than the non-affected eye (213% *v* 223%). Fluorescein angiography (FAG) of the affected eye showed some hyperfluorescent macular lesions in the late phase.

The sudden onset of the aforementioned unilateral visual disturbances in a young, myopic female, followed by complete recovery in a short period of time, points to the diagnosis of MEWDS.[1] White dots had probably disappeared at the time of examination, which also explains the mildly abnormal FAG. The a-wave on ERG, representing photoreceptor function,[2] was not markedly reduced. This can be explained by the localised macular involvement. A multifocal ERG probably would have shown abnormal responses.

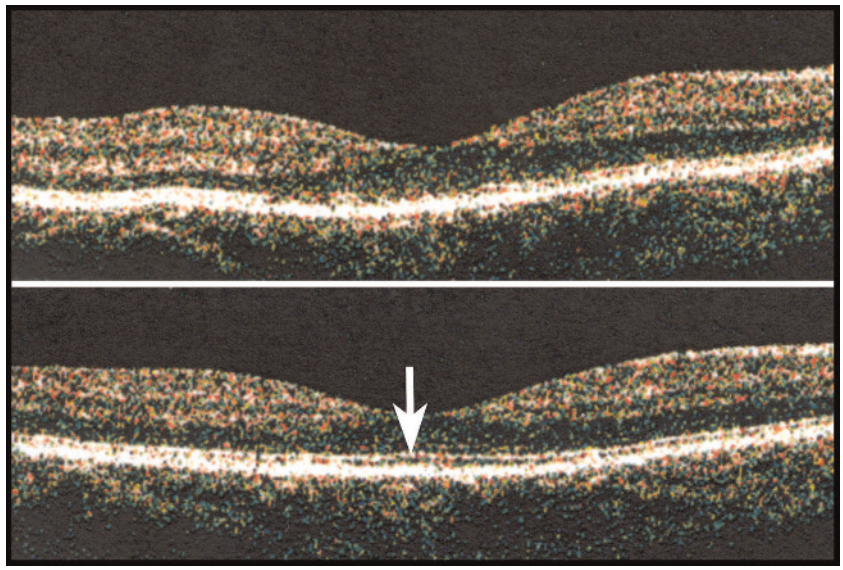

Figure 1 Top: OCT image of the macular area of the affected eye in the acute phase of MEWDS. The thin reflection line, representing the junction between photoreceptor inner and outer segments,[4] is not discernible. This points to the degeneration or disarray of photoreceptor outer segments. Bottom: OCT image of the macular area of the same eye after 21 weeks. The junction between photoreceptor inner and outer segments is clearly discernible (arrow).

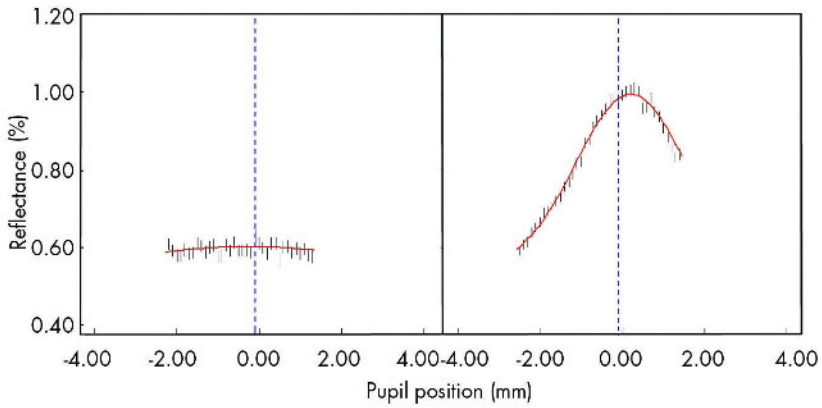

Figure 2 Left: Pupil profile at 540 nm of the affected eye at initial presentation. Black bars represent measurement values. In red, the model fit is drawn. Directionality rho is derived from the model fit (rho = 0.00). Right: Pupil profile at 540 nm of the same eye after 21 weeks. Foveal cones aim at the pupil centre again (rho = 0.12).

The foveal reflection analyser is a device recently developed at our department.[3] Healthy cones show a strong directional reflex towards the centre of the pupil, the so called ''optical Stiles Crawford'' effect. An FRA measurement provides a parameter rho as a quantitative measure of the cone directionality. In addition, it provides estimates of the densities of lens, macular pigment and melanin (not shown).

At initial presentation, rho was 0.00 (fig 2, left). Ten weeks later rho was 0.12, within normal limits. Visual acuity was 1.0 at that time. Twenty one weeks after the initial presentation, OCT (fig 1, bottom) and FRA (fig 2, right) were repeated, both with normal outcomes (rho 0.12). Visual acuity had not changed.

Comment

The foveal reflection analyser that measures the cone specific optical Stiles Crawford effect in a fast and patient friendly way, indicates that in MEWDS the cones are temporarily in disarray, but regain their original orientation in a matter of weeks. This is in agreement with OCT findings, where a transient disruption of the foveal photoreceptor outer segments is seen. In conclusion, this case demonstrates the usefulness of the new, sensitive FRA technique, in studying small, central visual defects, not discernible on full field ERG, in places where multifocal ERG is not available. In such cases OCT is also helpful.

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M J Kanis, D van Norren

University Medical Center Utrecht, Heidelberglaan 100, PO Box 85500, AZU E03.136, Utrecht, Netherlands

Correspondence to: Mr Martijn J Kanis, University Medical Center Utrecht, Heidelberglaan 100, PO Box 85500, AZU E03.136, Utrecht, Netherlands; mkanis@azu.nl

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PVR as a complication of rhegmatogeneous retinal detachment: a solved problem?

Proliferative vitreoretinopathy (PVR) is a common cause of blindness after buckling procedures and after primary vitrectomy.[1] PVR occurs in 10% of eyes after rhegmatogenous retinal detachment.[2] Re-detachment is seen mostly within the first 6–8 weeks after surgery. Efforts to reduce the risk of PVR include trying to reduce the surgical trauma, early surgery, and lower thresholds to use silicone oil or retinotomies, pharmaceutical adjuncts, as well as improvements in surgical technique during recent years.[3]

Surgeons are under the impression that the burden of PVR has lessened over recent decades. This is hypothetically attributable to a change in the surgical technique (for example, more primary vitrectomy instead of scleral buckling). To test this hypothesis, we have retrospectively analysed all patients who underwent primary surgery for rhegmatogenous retinal detachment in 1988 at the University of Cologne and compared the results to the patients operated on in 2003 in the same location. The follow up for eventual re-operations was 1 year in both instances.

In a second step, all vitreoretinal operations, including those for retinal detachment and other indications, were counted in 1988 and 2003 to analyse whether the total number of operations changed compared to the number of re-operations.

Case series

In 1988, a total of 197 eyes were operated for rhegmatogenous retinal detachment (fig 1A); 187 (95%, 187/197) of them were treated by buckling surgery. Out of these, re-detachment occurred in 21 of the cases during 1 year of follow up (11.2%, 21/187). Primary vitrectomy combined with buckling surgery was performed in only 10 patients. Out of those, three (33%, 3/10) needed re-operation for retinal re-detachment.

In 2003, in contrast, 157 of 217 eyes (72%) underwent primary PPV and buckling surgery (fig 1B). In 13 of these cases (8.3%, 13/157) re-detachment of the retina was seen. Primary buckle without PPV was chosen for 60 eyes in 2003. Re-detachment occurred in 17 eyes (28.3%, 17/60).

PVR, seen as star fold and membrane formation and defined as anterior and posterior PVR grade C leading to re-detachment, was responsible for the described re-detachment in three of 60 cases (5%) after buckling surgery in 2003 compared to 12 of 157 eyes (7.6%) after primary PPV and buckle. Thirteen of 187 cases (7%) operated with buckling surgery in 1988 showed PVR induced re-detachment compared to three of 10 eyes (30%) after primary PPV and buckle. This high rate of PVR re-detachments after primary PPV and buckle in 1988 could probably be explained by the fact that these were more complicated cases, which required the, in 1988, uncommon need for primary PPV in rhegmatogenous retinal detachment. Beside this, the number of PVR induced re-detachment after primary operation for rhegmatogenous retinal detachment in 2003 did not decrease compared to 1988.

Nevertheless, the total number of re-detachments is a little lower after primary PPV in 2003, with 8.3% (13/157) compared to 11.2% (21/187) in 1988 after buckling surgery alone (fig 1).

But why do surgeons have the subjective impression of a lower rate of PVR in everyday practice? To answer this question, we recorded all vitreoretinal operations, including those for rhegmatogenous retinal detachment, which are described above, but also those for other indications. While surgery for retinal detachment still remains the number one indication for surgery, the spectrum of diseases approached by vitreoretinal surgery widened during the past decade with increasing numbers of surgery for macular diseases (for example, macular pucker, macular hole, age related macular degeneration) (fig 2). Ocular trauma as a significant source of PVR complication is reduced. The more conscious use of protective eyewear and the seatbelt legislation have led to a reduction in cases with severe ocular trauma and intraocular foreign bodies in 2003 compared to 1988. There are fewer patients with severe ocular trauma in which PVR development is a frequent complication.[2]

In both years, re-vitrectomy was necessary in nearly an equal number of eyes (18% (146/813) of all performed operations in 2003 compared to 23.3% (161/692) in 1988). This included reoperations because of PVR induced re-detachment and re-detachment without PVR, but also re-vitrectomy because of macular pucker formation and others. Interestingly, in 2003, the indication for re-vitrectomy more frequently included macular pucker formation (fig 2).

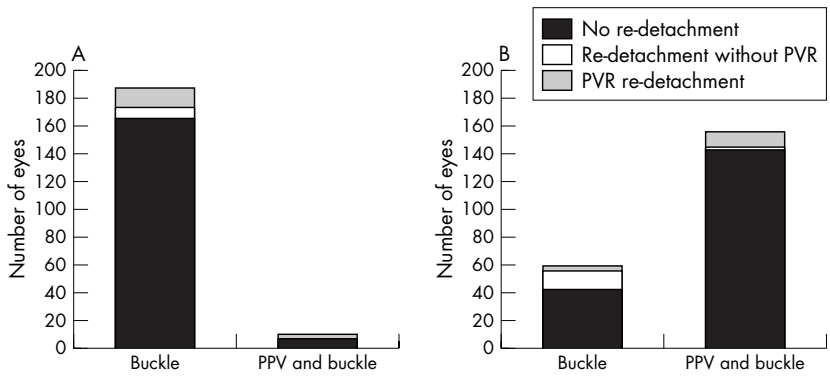

Figure 1 Primary operations for rhegmatogenous retinal detachment in 1988 (A) and 2003 (B) and required re-operations because of re-detachment with or without PVR.