Before surgery, adequate pre-operative assessment is required. This should be recorded at the time of listing and assessment, with a strategy formulated to improve communication and reduction of anxiety during surgery. If a patient uses two hearing aids, that on the side of the operation can be removed so as to avoid damage from it becoming wet. When a patient has one hearing aid on the opposite side of the operative eye, then this can be left in safely. For those who only have one device that is on the side of surgery, careful cover with Tegaderm, taking care to place it well anterior of the hair line, should protect the device from becoming wet (Figure 1). Care should be taken not to displace the hearing aid, as a mal-fitting device may squeak as a result of positive feedback, causing irritation to the patient and the surgeon, and losing its effectiveness.

In one patient, despite these measures, the placement of a drape over the eye resulted in positive feedback. The patient is an 82-year-old retired lecturer with otosclerosis since childhood and despite several operations has severe hearing impairment in her right ear. She has hearing impairment on the left and uses a hearing aid on this side (Phonak, Zurich, Switzerland). When attending lectures, she uses additional transmitter and receiver devices (Figure 2). The transmitter is placed on the speakers' lectern and sends the sound to a receiver

PHONAK

**Figure 2** Patient's transmitter and receiver devices. The transmitter is on the right (ZoomLink+, Phonak, Switzerland) and is placed on the surgeon's person. The receiver on the left (MyLink+, Phonak, Switzerland) is held by the patient. The receiver is set to pick up auditory signals from the transmitter, which is in turn picked up by the patient's hearing aid.

held by the patient. The hearing aid is then programmed to pick up this sound from the receiver and allows the patient to hear the speaker from anywhere in the lecture theatre or even outside. This technique was adjusted for theatre during left cataract surgery. The same draping technique was used as in Figure 1, but also the surgeon (CL) had the transmitter on his person and the patient had the receiver on her person, allowing the patient to hear all instructions clearly with no feedback. There were no complications during surgery and the patient did not experience any anxiety.

If despite the above measures a patient is unable to tolerate the procedure under local anaesthesia, a general anaesthetic may be used as it once was more commonly practised.

We have described above our algorithmic approach when dealing with a patient with hearing impairment. By taking time and care to allow the patient to hear and communicate with the surgeon during the operation, they can have a better experience during the procedure, which would positively enhance their view of surgical success.

## Conflict of interest

The authors declare no conflict of interest.

### References

- 1 Tay HL, Reilly PG, Montgomery PQ, Narula AA. A hearing survey in patients awaiting cataract operation. *Br J Audiol* 1992; 26(6): 397–398.
- 2 Nijkamp MD, Kenens CA, Dijker AJ, Ruiter RA, Hiddema F, Nuijts RM. Determinants of surgery related anxiety in cataract patients. Br J Ophthalmol 2004; 88(10): 1310–1314.
- 3 Mokashi A, Leatherbarrow B, Kincey J, Slater R, Hillier V, Mayer S. Patient communication during cataract surgery. Eye (London) 2004; 18(2): 147–151.

RMH Lee<sup>1</sup>, J Goodfield<sup>2</sup> and CSC Liu<sup>1,3</sup>

<sup>1</sup>Sussex Eye Hospital, Brighton, UK <sup>2</sup>George Mason University, Fairfax, VA, USA <sup>3</sup>Tongdean Eye Clinic, Hove, UK E-mail: cscliu@aol.com

*Eye* (2011) **25,** 120–121; doi:10.1038/eye.2010.163; published online 5 November 2010

### Sir, Giant cell arteritis presenting as macular choroidal ischaemia

We present a case of giant cell arteritis presenting as macular ischaemia.

# Case report

A 65-year-old woman being treated for Ramsay Hunt by her general practitioner was referred to us with acute



visual loss in her right eye of 1 week duration. General health included malaise, right-sided jaw pain, ear ache, headache, and leg pains for 2 weeks. A month earlier, she had seen the optician and had Snellen's corrected visual acuity of 6/6+2 Rt and 6/5-2 Lt, and normal bilateral posterior segments (Figures 1a and b).

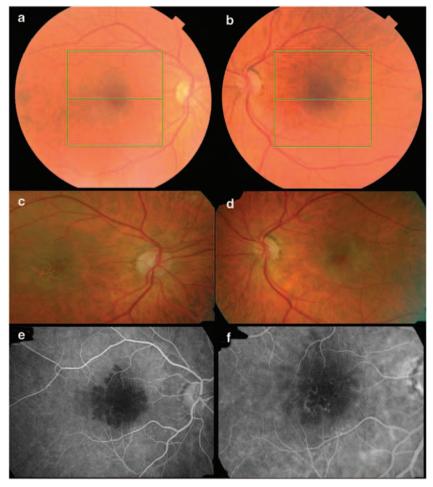
On examination, there were no vesicles present. Best corrected visual acuity was 6/120 and 6/12 in the right and left eyes, respectively, with normal pupil reaction. Dilated fundoscopy showed macular pigment epithelial changes in both eyes with possible loss of foveal architecture suggesting choroidal ischaemia in the right macula (Figures 1c and d). Visual field showed only central scotoma, and fundus fluorescein angiography showed right-sided choroidal ischaemia (delayed choroidal filling even after 52 s) involving only the macular region (Figures 1e and f) and with no change in dye-filling pattern in the retinal vessels. Moderate ischaemic changes were also found in the left macular area. Her ESR was 110 and CRP was 62. Temporal artery biopsy was positive for giant cell arteritis (GCA).

Systemic symptoms improved on systemic steroids and repeat angiograms showed some improvement in para-foveal perfusion.

#### Comment

GCA with eye involvement commonly presents as sudden loss of vision associated with relative afferent pupillary defect and optic disc swelling with haemorrhage, or less commonly as branch or central retinal artery occlusion owing to involvement of the posterior ciliary or branches of the ophthalmic artery. Unilateral or bilateral delayed choroidal filling with pupil involvement in biopsy-proven GCA has also been described. 3,4 It can be associated with persistent yellow white retinal lesions in the same patients. 5

In our patient, there was no pupil or optic disc involvement and the only ophthalmic finding was pigment epithelial changes in the macular area with loss of foveal architecture. To the best of our knowledge, this has never been reported in literature and GCA



**Figure 1** (a, b) Coloured fundus photographs of both eyes of the patient few weeks before onset of the disease. (c) Coloured fundus photograph of the right eye showing pigment epithelial changes in the macular area with loss of choroidal vascular pattern. (d) Coloured fundus photograph of the left eye showing pigment epithelial changes in the macular area. (e) FFA at 19 s for the right eye showing enlargement of the foveal avascular zone with delayed filling. (f) Fundus fluorescein angiography at 52 s for the right eye showing persistence of the enlarged foveal avascular zone.



should be considered in patients with unexplained loss of foveal architecture.

## Conflict of interest

The authors declare no conflict of interest.

#### References

- 1 Keltner JL. Giant cell arteritis. Signs and symptoms. *Ophthalmology* 1982; **89**: 110–110.
- 2 Glutz Von Blotzheim S, Borruat F-X. Neuro-ophthalmic complications of biopsy-proven giant cell arteririts. Eur J Ophthalmol 1997; 7: 375–382.
- 3 Hyreh SS. Posterior ischaemic optic neuropathy. Ophthalmologica 1981; 29: 182.
- 4 Cohen S. Bilateral choroidal ischaemia in giant cell arteritis. Arch Ophthalmol 2006; 124: 922.
- 5 Quillen DA, Cantore W, Schwartz SR, Brod RD, sassani JW. Choroidal nonperfusion in giant cell arteritis. *Am J Ophthalmol* 1993; 116: 171–175.

C Olali, S Aggarwal, S Ahmed and M Gupta

Department of Ophthalmology, United Lincolnshire Hospitals NHS Trust, Pilgrim Hospital, Boston, England E-mail: akikio771@hotmail.com

Eye (2011) **25,** 121–123; doi:10.1038/eye.2010.169; published online 12 November 2010

Sir,

Review:

Response to 'Inhibitory effects of maternal smoking on the development of severe retinopathy of prematurity'

The article by Hirabayashi  $et\ al^1$  is an interesting report on the inhibitory effects of maternal smoking on the development of severe retinopathy of prematurity (ROP). However, I do not believe that the conclusion derived (that maternal smoking leads to a reduction in the incidence of severe ROP) is at all supported by the results reported. There were 27 infants that developed severe ROP, of whom only a single mother smoked (and the

Maternal Smoking - Eye Journal

other 26 mothers were non-smokers). The authors' conclusion that maternal smoking reduced the incidence of severe ROP is based on a single smoker, as they ignored the 26 other non-smoking mothers. In fact, using the reported events rates for development of severe ROP (1/27 maternal smokers versus 26/27 non-smokers), one obtains a relative risk (RR) of 0.04 and 95% CI of 0.01-0.26 (P = 0.0009, see Figure 1). This clearly shows that non-smoking provides protection against the development of severe ROP, with a reduction in risk of 96% compared with maternal smoking. Strangely enough, the authors reported these data using odds ratios, especially as the event rate in the maternal smoking group is low and their reported 95% CI (Table 2, p 1026) includes '0' in the interval, making the result statistically non-significant. Therefore, one can only conclude that maternal smoking does not reduce the incidence of severe ROP.

The authors have erroneously concluded that maternal smoking reduced the incidence of severe ROP, when in fact only 1/27 (or 4%) reported maternal smoking and 26/27 (or 96%) did not report any maternal smoking. Lack of evidence does not equate to evidence of an effect (or association in this case). In the non-severe ROP group, 15/59 (or 25%) mothers reported maternal smoking and the authors did not report a reduction in the incidence of non-severe ROP. Re-analysis of the reported data (development of non-severe ROP; smokers 15/59 versus non-smokers 44/59) provides the following: RR 0.12, 95% CI 0.05–0.27 (*P* < 0.00001), favouring non-smokers with a reduction in the incidence of non-severe ROP of 88%.

The correct and only conclusion from this report should read as follows: No maternal smoking provides protection against the development of both severe and non-severe ROP. There is no evidence to support that maternal smoking offers any protection against the development of ROP (Figure 1).

# Conflict of interest

The authors declare no conflict of interest.

## Reference

1 Hirabayashi H, Honda S, Morioka I, Yokoyama N, Sugiyama D, Nishimura K *et al.* Inhibitory effects of maternal

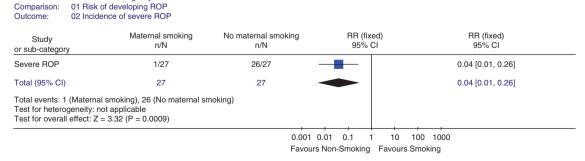


Figure 1 Risk of developing severe retinopathy of prematurity during maternal smoking