

- 5 Culbertson WW, Tseng SC. Corneal disorders in floppy eyelid syndrome. *Cornea* 1994; **13**: 33–42.
- 6 Bucci FA, Krohel GB. Optic nerve swelling secondary to the obstructive sleep apnoea syndrome. *Am J Ophthalmol* 1986; **105**: 428–430.
- 7 Hayreh SS. Acute ischemia disorders of the optic nerve: pathogenesis, clinical manifestations, and management. *Ophthalmol Clin North Am* 1996; **9**: 407–442.
- 8 Luescher TF. The endothelium and cardiovascular disease: a complex relationship. *N Engl J Med* 1994; **330**: 1081–1083.

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Sir,  
**Orbital floor fracture: an unusual late complication**

Complications associated with alloplastic implants (silicone/silastic/supramid) are rare.<sup>1</sup> However, they can occur some considerable time after surgery.<sup>2</sup> A 36-year-old Caucasian male presented with complete lower eyelid retraction 3 years after silicone sheet orbital floor implant. The implant extruded spontaneously 3 days prior to eyelid reconstructive surgery and was not replaced. The surgical technique is discussed, and a brief discussion of the complications of alloplastic implants presented. More modern porous implants may reduce the chance of implant extrusion and lower eyelid retraction.

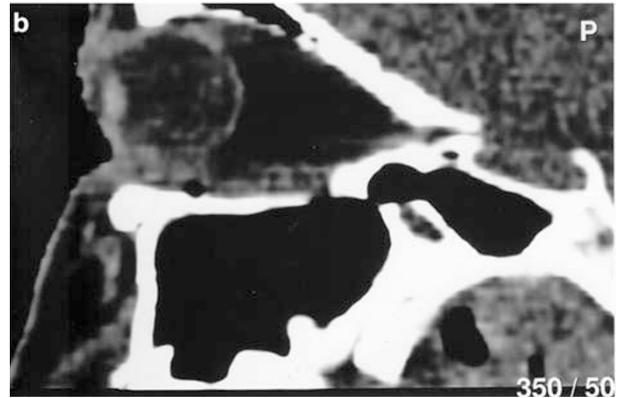
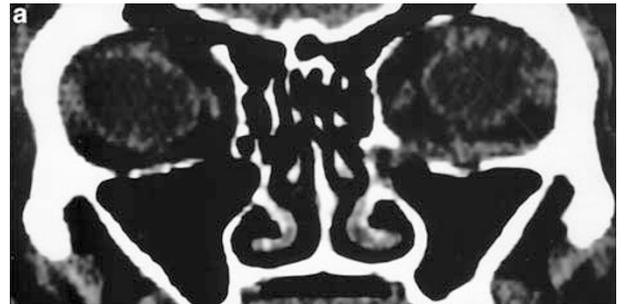
**Case report**

The patient initially presented to our unit with a left orbital cellulitis. Three years previously he had undergone a left orbital floor fracture repair with insertion of a silastic implant at another hospital. On this occasion, he was treated with oral antibiotics and the infection subsided. However, he represented 3 months later with an unsightly red left eye. Examination revealed a complete retraction of the left lower lid, extensive chemosis of the inferior bulbar conjunctiva, and restriction of upgaze in the affected eye (Figure 1).

A CT scan of the orbits revealed a well-defined opacity in the region of the orbital floor implant (Figure 2a and b). The inferior rectus cannot be differentiated from this.



**Figure 1** Appearance of left eye on presentation with no visible lower eyelid and marked inferior conjunctival chemosis.



**Figure 2** (a) Coronal CT scan demonstrating previous left orbital floor fracture and a radiological opacity extending horizontally above the fracture. The paranasal sinuses are clear. (b) Sagittal CT scan demonstrating the position of the lower eyelid along the anterior one-third of the orbital floor.

At 3 days prior to elective surgery, the silastic implant extruded spontaneously. Exploration revealed an opening in the inferior conjunctival fornix, through which the implant had presented. Reconstructive surgery was performed. The eyelid margin, tarsal plate, and anterior lamella of the lower eyelid had completely retracted along the floor of the orbit. A dense fibrous tissue reaction around the implant had caused this. The lower eyelid was carefully dissected from the deep

fibrous tissue, with care not to damage the inferior rectus. The retractors were recessed and an abdominal dermis fat graft was harvested. This was placed along the inferior orbital margin. A hard palate graft was also harvested. This was sutured into place between the lower lid retractors and the lower border of the tarsus.

The orbital implant was not replaced. The immediate postoperative appearance is shown in Figure 3. The patient was instructed to follow an intensive regime of wound massage for 4 months. Figure 4 shows the appearance of the patient at 9 months postoperatively. He was pleased with the cosmetic result. Ocular motility was normal but there was residual limited lower lid retraction on downgaze.

### Comment

Alloplastic implants can become encapsulated within a dense fibrous capsule, which can make treatment of



**Figure 3** Immediate postoperative appearance of lower eyelid following reconstruction.



**Figure 4** Lower eyelid appearance at 9 months postoperative. Note residual bulge of fat from dermis fat graft which will atrophy over time.

implant infection very difficult.<sup>3</sup> Occasionally, fibrovascular tissue around nonintegrated implants can haemorrhage and cause acute swelling of the capsule. In such cases, patients present with pain and proptosis.<sup>2</sup> The haematoma may spread beyond the capsule to compromise the orbital apex. Unless this is promptly recognized, blindness may result.

More recently, porous implants have been used. These allow better integration into the hosts' tissues. Fibrovascular proliferation occurs through the implant. Thus, helping to stabilize the latter and reduce the theoretical risk of migration. If an implant were to move anteriorly, this would cause direct pressure on the mucosa and subsequent extrusion or fistula formation may result.<sup>4,5</sup> An unstable implant can also move posteriorly towards the optic nerve.<sup>6,7</sup> Blindness may result from compression of the latter. For this reason, an implant should never be placed more posteriorly than the posterior wall of the maxillary sinus.

Other recognized complications from alloplastic implants include extraocular muscle entrapment,<sup>8</sup> dacryocystitis,<sup>3,9</sup> presumably from local spread of infection, hyperglobus,<sup>10</sup> and ectropion with scleral show from excessive scarring.<sup>10</sup> Hyperglobus may result from implant stacking or the formation of granulation tissue around the implant. The formation of cysts has been reported in the use of gelatin film alloplastic grafts.<sup>11</sup> These form when there is partial reabsorption of the gelatin implant into the tissues.

The treatment of all the complications is the same; remove or reposition the implant. In practice, the surgeon may find it difficult to identify normal structures due to extensive scar tissue and bleeding from fibrovascular sources. It is very important to visualize all margins of the fracture. All herniated orbital tissues must be repositioned. The orbital floor defect must be covered completely without orbital tissue herniation; the smallest implant that will achieve this in the subperiosteal position is ideal. The ideal material will induce little scarring or tissue reaction. The majority of ophthalmic surgeons use alloplastic implants. It is, therefore, worthwhile explaining to patients the potential complications of their use.

### References

- 1 Jordan DR, St Onge P, Anderson RL, Patrinely JR, Jeffrey A, Nerad MD. Complications associated with alloplastic implants used in orbital floor fracture repair. *Ophthalmology* 1992; **99**: 1600–1608.
- 2 Mauriello JA, Flanagan JC, Pegster RG. An unusual late complication of orbital floor fracture repair. *Ophthalmology* 1984; **91**: 102–107.

- 3 Mauriello JA, Fiore PM, Kotch M. Dacryocystitis: late complication of orbital floor fracture repair with implant. *Ophthalmology* 1987; **94**: 248–250.
- 4 Goldman RJ, Hessburg PC. Appraisal of 130 cases of orbital floor fracture. *Am J Ophthalmol* 1973; **76**: 152–155.
- 5 Wolfe SA. Correction of lower eyelid deformity caused by multiple extrusions of alloplastic orbital floor implant. *J Plastic Reconstr Surg* 1981; **68**: 429–432.
- 6 Burres SA, Cohn AM, Mathog RH. Repair of orbital blowout fractures with marlex mesh and gelafilm. *Laryngoscope* 1981; **91**: 1881–1886.
- 7 Weintraub B, Cucin RL, Jacobs M. Extrusion of an infected orbital floor prosthesis after 15 years. *Plastic Reconstr Surg* 1981; **68**: 586–587.
- 8 Mauriello JA. Inferior rectus muscle entrapment in teflon implant after orbital floor fracture repair. *J Ophthalmic Plastic Reconstr Surg* 1990; **6**: 218–220.
- 9 Kohn R, Romano PE, Puklin JE. Lacrimal Obstruction after migration of orbital floor implant. *Am J Ophthalmol* 1976; **82**: 934–936.
- 10 Browning CW. Alloplastic materials in orbital repair. *Am J Ophthalmol* 1967; **63**: 955–962.
- 11 Lotfield K, Jordan DR, Fowler S, Anderson RL. Orbital cyst Formation associated with gelafilm use. *Ophthalmic Plastic Reconstr Surg* 1988; **3**: 187–191.

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Sir,  
**Efficacy of amblyopia therapy initiated after 9 years  
of age**

I have read with interest the article of KH Park *et al*<sup>1</sup>.

It raises several questions:

The title gives the impression that the article is about the usual amblyopia observed in children with convergent strabismus. However, as we read on, we see that instead it deals with anisometropias and a few divergent strabismus, two of which are intermittent.

The discussion seems to imply that all amblyopias are alike, as the authors talk of a 'critical period', a term usually referring to the period in which treatment of amblyopia with convergent strabismus may be successful.

In amblyopia with convergent strabismus, early detection and treatment are essential. Our group, PHORD (Forum d'Othopsie Renouvelee et Digitale) is at present experimenting early detection with digital cameras.

While clinical observations are always interesting, I fear that, by suggesting such a high rate of success in late treatment, this article could induce nonspecialists to continue occlusion on children with convergent strabismus longer than the period in which positive results may be obtained, with the risk of creating irreversible psychological damages.

**References**

- 1 Park KH, Hwang JM, Ahn JK. Efficacy of amblyopia therapy initiated after 9 years of age. *Eye* 2004; **18**(6): 571–574.

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Sir,  
**Reply to A Franceschetti**

We thank Dr Franceschetti for his interest in our article. As our title, 'Efficacy of amblyopia therapy initiated after 9 years of age' implies, none of the children in our study had undergone a prior ocular examination. Therefore, none had ever worn spectacles, received amblyopia therapy, or had strabismus surgery. It is quite rare that an amblyopia associated with esotropia had never undergone a previous ocular examination until the age of 9 years. Therefore, it is difficult to understand why our title gave the impression that the article was about the usual amblyopia observed in children with convergent strabismus.

As a result of the inclusion criteria according to the age when the amblyopia was detected, most of our patients were related with anisometropia. Therefore, we did not