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CORRESPONDENCE

Sir,

Chalazion-induced hypermetropia: a topographic illustration

Meibomian cysts (chalazia) can cause astigmatic changes as a result of their mechanical effect.[1–4] We report a case of significant hypermetropic shift in an upper-lid chalazion and illustrate the change topographically using Orbscan®.

Case report

A 54-year-old woman presented with a 4-month history of deterioration of vision in her right eye. UCVA in the right eye was 6/60 improving to 6/6-1 with a pinhole, while left eye uncorrected visual acuity (UCVA) was 6/5. The change in refraction is shown in Table 1.

A chalazion was observed centrally in the right upper eyelid. Anterior segment and fundus examination were normal.

Computerised corneal topography (CCT) using Orbscan II (Bausch & Lomb, Rochester, NY, USA) showed a central corneal flattening corresponding to the position of the chalazion with a central corneal power of 40.3 D (see Figure 1).

Following surgical incision of the cyst, refraction returned to baseline (Table 1) and CCT normalised over 2 months with central corneal power of 42.6 D (Figure 2). Final right UCVA was 6/6-1 with pinhole.

Comment

Change in the corneal curvature as a result of a periocular soft tissue mass in the upper eyelid is a well-recognised phenomenon. This most frequently leads to astigmatic problems but cases of spherical shifts have been reported.[1–4]

Table 1

	Right eye	*Left eye*
2 years before presentation	+1.25/−0.25 ×90 6/7.5	+1.00/−0.25 ×130 6/7.5
6 weeks before presentation	+2.75/−0.75 ×70 6/7.5	+1.25/−0.50 ×90 6/6
At presentation	+5.25/−0.50 ×50 6/7.5	+1.25/−0.50 ×90 6/7.5
8 weeks post-chalazion incision	+1.75/−0.50 ×90 6/7.5	+1.25/−0.50 ×90 6/7.5

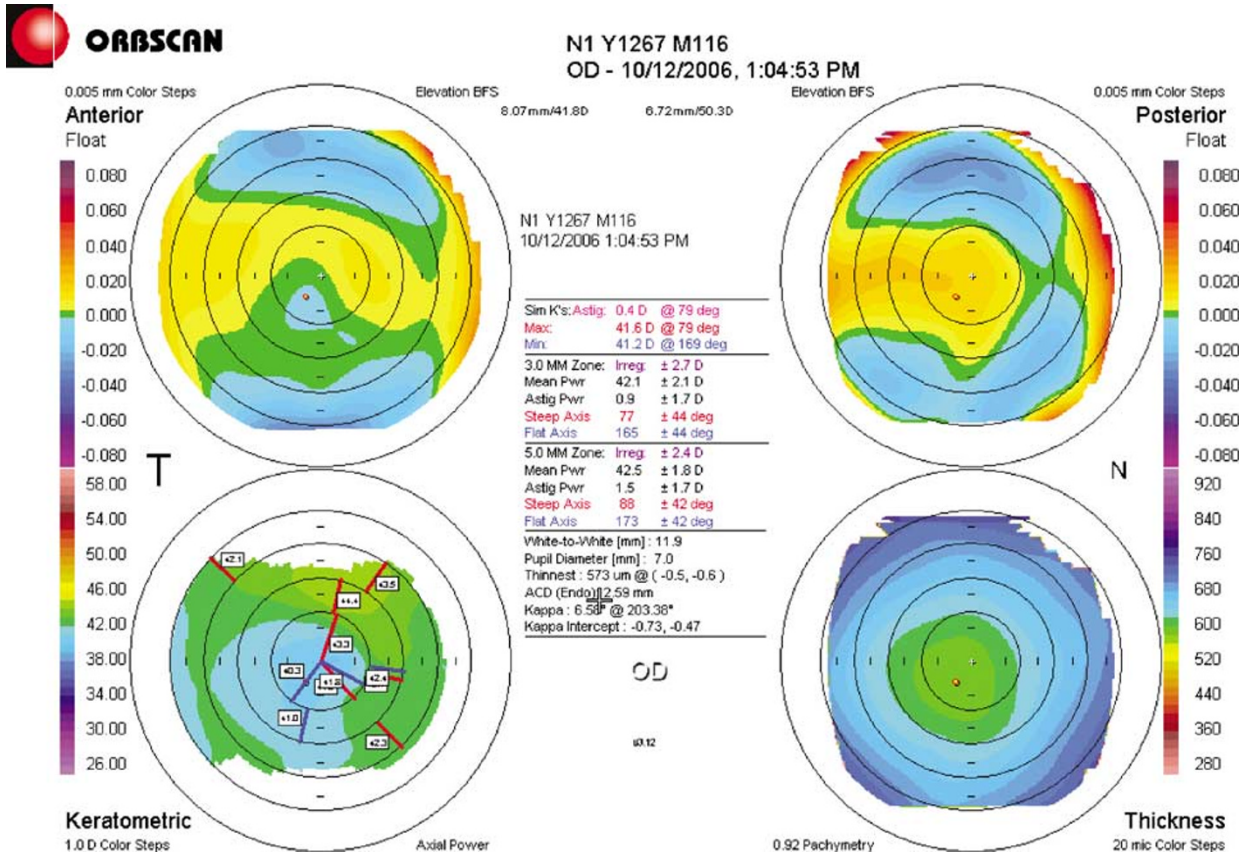

Figure 1 Pre-chalazion incision topography.

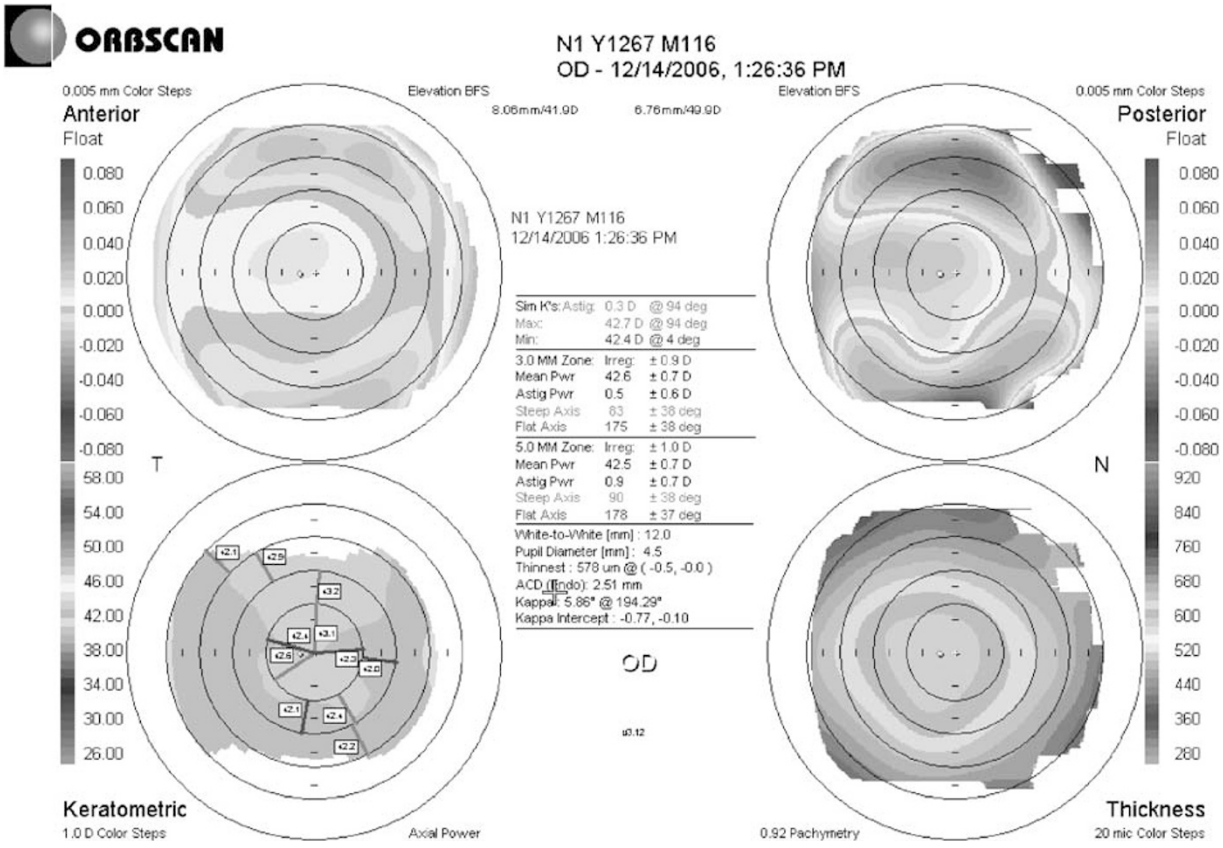

Figure 2 Post-chalazion incision topography.

Our case is unusual in the magnitude of hypermetropic shift induced (4.00 D). We propose that a combination of mechanisms led to this marked degree of central corneal flattening and resultant hypermetropic shift: external pressing on the superior sclera reduced the circumference of the globe causing an egg-shaped deformation previously recorded to induce hypermetropia;[5] peripheral corneal pressure when the eye was open; central corneal pressure from the strong Bell's phenomenon noted in this patient when the eyes were closed.

Incision and curettage in cases of significant chalazion, such as the one presented here should be considered in order to produce a visual improvement.

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Sir,

Firework-related eye injury in the UK

The recent article by Knox *et al*[1] on ocular injury from fireworks highlights an important public health problem in the UK. According to the Department of Trade and Industry (DTI), new fireworks legislation introduced in Britain in 1997 and 2004 were designed 'to help make fireworks safer to use'.[2] Much of the new legislation is aimed at the prevention of firework injuries in public places, and DTI statistics show a decrease in the proportion of firework injuries sustained in a public place from 49% in 1997 to 41% in 2005. However, DTI statistics for firework injuries also show an overall