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Sir,

Neodymium:YAG laser peripheral iridotomy as a possible cause of zonular dehiscence during phacoemulsification cataract surgery

Zonular dehiscence during cataract surgery is usually associated with pre-existing weak zonules due to trauma and ocular or systemic diseases.[1,2] We report the case of a 73-year-old patient with bilateral zonular dehiscence during routine phacoemulsification possibly associated with the presence of bilateral neodymium:yttrium aluminium garnet (Nd:YAG) laser peripheral iridotomies (LPIs).

Case report

A 73-year-old Caucasian woman with bilateral cataracts was listed for surgery. Her ocular history included prophylactic bilateral Nd:YAG LPIs for narrow angles (Figures 1a and b). The laser treatment was performed 12 months earlier after acute intraocular pressure (IOP) elevation occurred bilaterally, following dilation with Tropicamide 1%. Her IOPs were normal and the rest of the ocular examination was unremarkable. There was no history of trauma or known systemic disease that could predispose to zonular abnormalities.

During routine phacoemulsification, zonular dehiscence was observed at the stage of cortical aspiration, corresponding to the area of the LPIs (Figures 1c and d). Six months later, the other eye was operated on by a more experienced surgeon and extra care was taken to avoid a similar problem. Despite this, zonular dehiscence occurred at the same location and at the same stage of surgery (Figures 1c and d). A superior approach (10–11 o'clock position) was used and bimanual irrigation–aspiration was used in both surgeries. Posterior chamber intraocular lens implants were inserted in the capsular bag and no further intraoperative or postoperative complications occurred. Her best-corrected visual acuity was 6/6 bilaterally six months postoperatively.

Comment

The most common causes of weak zonular support are traumatic and iatrogenic zonulolysis, pseudoexfoliation syndrome, Marfan's syndrome, homocystinuria, Weil–Marchesani syndrome, aniridia, and intraocular neoplasm.[1] Zonular weakness has also been reported in retinitis pigmentosa and idiopathic cases.[2,3]

In our case there was no history or signs of ocular trauma and no systemic or ocular disease linked to abnormal zonules. The patient had Nd:YAG LPI bilaterally for narrow angles and possibly intermittent angle closure glaucoma (ACG).

Spontaneous anterior crystalline lens dislocation has been reported after laser iridotomies in patients with narrow angles and pseudoexfoliation, retinitis

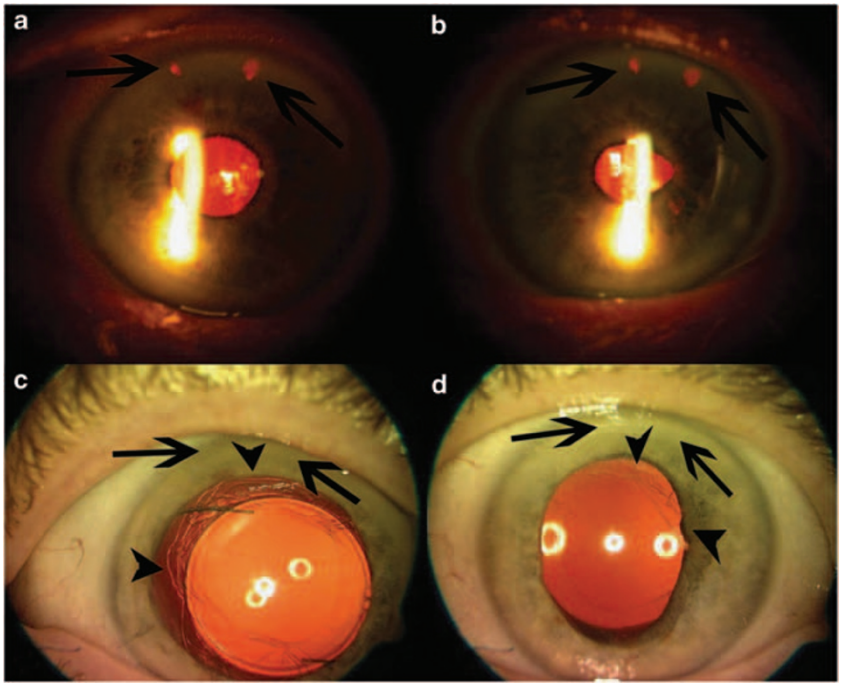

Figure 1 (a, b) Pictures of both eyes following surgery highlighting the location of the iridotomy sites (arrows). (c, d) Pictures of both eyes 4 weeks following phacoemulsification. Note the areas of zonular dehiscence superiorly and temporally (arrowheads) corresponding to the iridotomy sites (arrows—not visible because of the dilated pupil).

pigmentosa, and ocular trauma, as well as in individuals with no additional risk factors.[2–4] Tsatsos and Eke[5] also reported cataract progression following Nd:YAG LPIs in a Caucasian population with no or insignificant crystalline lens opacities.

It has been suggested that intermittent pupillary block and angle closure could lead to zonular laxity through weakening of the iris and the ciliary body[2,3] and that LPIs could result in zonular damage due to a shock-wave effect.[3,4] The bilaterality and symmetrical location of the zonular dialysis in our patient suggest that the Nd:YAG LPIs disrupted the zonules that may have been already weakened by the previous episodes of intermittent ACG. In addition, the documented slight extension of the initial zonular dialysis beyond the area of the iridotomy sites may have been caused by the shearing force during IOL insertion, as well as by the increased zonular tension because of anterior capsule shrinkage after cataract surgery, as previously suggested in the literature.[6]

To the best of our knowledge, this complication has not been described before. Retrospective and prospective studies on patients similar to the one described here are required to ascertain the risks involved. Nd:YAG LPI may be regarded as an isolated risk factor for structural zonular damage and appropriate precautions should be taken during cataract or other intraocular surgery. The ophthalmic surgeon should always be aware of this possibility and proceed with caution.

Conflict of interest
The authors declare no conflict of interest.

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Sir,

Juvenile xanthogranuloma: an unusual eyelid presentation

Juvenile xanthogranuloma (JXG) is an uncommon dermatological condition rarely linked to systemic manifestations, with predilection for the eyes. We would like to present a case of an unusual eyelid presentation of JXG, which had not been reported previously.

Case report

A 2-year-old baby girl of African extraction presented to the eye clinic with a 6-month history of a slowly enlarging pedunculated spherical left upper eye lid painless tumour that was 6 mm in diameter with a central umbilication (Figure 1). She was otherwise fit and healthy. Ocular examination was otherwise unremarkable. Her mother was concerned that the lesion would get bigger and affect vision. The lesion was surgically removed. Histopathology confirmed the diagnosis of juvenile xanthogranuloma (JXG). In view of the rare possibility that there may be systemic involvement, she was referred to the paediatric medical team for further systemic investigations, which proved negative. Follow-up at 4 months did not show recurrence.

Comment

JXG is frequently a self-limiting dermatological disorder, rarely linked to systemic manifestations.[1] JXG presents with single or multiple yellowish, firm, and slightly raised papulonodular skin lesions, several millimetres in size. This usually occurs in the head and neck region. It also has a predilection for the ocular structures, especially the uveal tract and, occasionally, the orbits and the eyelids.[2–4] The present case was an unusual eyelid presentation, wherein the lesion was atypical (Figure 1). It was the only lesion found. Histopathology confirmed the lesion to be JXG. It is therefore important to recognise an unusual JXG presentation, to perform a full ocular examination, and then to refer the case to the paediatric medical team for a systemic work-up to rule out the unlikely event of latent systemic manifestations.

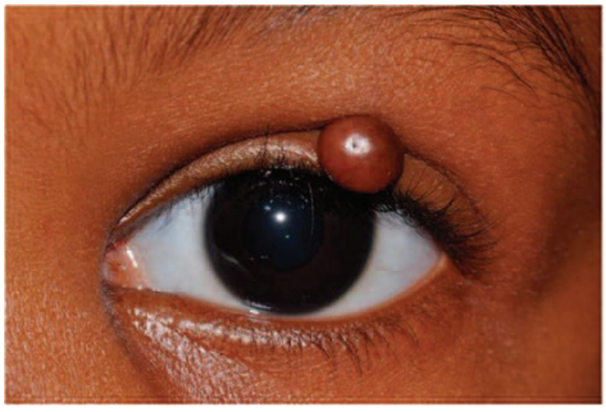

Figure 1 A spherical 6-mm-diameter central umbilicated painless lesion on the left upper eyelid.