LETTERS TO THE EDITOR

Isolated focal melanocytes collection in the lacrimal sac

EDITOR,—Although the presence of melanocytes located within and under the epithelium of the nasal cavity and paranasal sinuses has been reported, it appears to be a rare finding. Further, only 17 cases of malignant melanoma of the lacrimal sac have been reported. We came across unusual, and unaccounted for, focal collections of melanocytes in the lacrimal sac of a patient and report this finding.

CASE REPORT
A 55 year old woman presented to the ophthalmology department of the Schieffelin Leprosy Research and Training Centre with a left sided lacrimal mucocele. Since she also had a cataract that needed surgery, a dacryocystectomy was done in January 1999. During surgery, when the lacrimal sac was being dissected, a localised small area of black pigmentation was seen on the sac. The excised sac was sent for histopathological examination to rule out melanoma. There were no associated pigmentation on the skin overlying the sac or any fistulas in the region.

Histopathological examination of the lacrimal sac showed focal and diffuse collections of cells containing blackish-brown pigments in the stroma and the epithelial cells of the sac. Inflammatory cell collections consisting of lymphocytes, histiocytes, and plasma cells were also seen in the stroma (Fig 1). The intracellular pigment gave negative results when stained with Perl’s stain for intracellular pigment. Thus, the origin of malignant melanoma of the sac is uncertain. Presumably, it can arise from nests of melanocytes located either within the epithelium of the lacrimal sac or in the underlying stroma. This histopathological finding establishes that melanocytes can be found in isolation in the lacrimal sac. A morphologically similar histopathology can be seen in blue naevus and in the naevus of Ota but clinically the patient did not exhibit any ocular melanosis nor was the skin of the face pigmented.

COMMENT
The pigment in the lacrimal sac was a chance finding. The cells containing the pigment were confirmed to be melanocytes by Fontana-Masson staining. The origin of the pigment present was melanin.

Figure 1 Distortion of pupil after transscleral diode laser cyclophotocoagulation

A 32 year old man with bilateral juvenile glaucoma since 1987 was referred to our hospital. Trabeculotomy and cyclotherapy had been performed in both eyes. In June 1997 visual acuity of the right eye was 20/20 and of the left eye 20/400. Intraocular pressure (IOP) of the right eye was between 12 and 45 mm Hg under maximal medical treatment. IOP of the left eye was normal. Examination of both eyes revealed focal scleral thinning due to cyclotherapy. Gonioscopy revealed a wide peripheral iris.

Figure 2 Photomicrograph of lacrimal sac showing blackish pigments in the epithelial cells and stroma (Fontana-Mason, original magnification ×200).

stained with Fontana-Masson stain for melanin (Fig 2). The pigment was completely bleached and removed, thus confirming that the pigment present was melanin.
open angle with poor pigmentation and dysgenesis of the trabecular meshwork.

We performed TCDLC (Oculight SLx 810 nm, G-probe: 600 µm quartz fibre probe Iris Endoscope, Iris Medical Instruments Inc, CA, USA) under local anaesthesia. The patient received 10 applications using 2 W for 2 seconds per application. Postoperatively, IOP ranged between 8 and 15 mm Hg. No medical treatment was needed during the following 8 months.

In February 1998, the IOP in the right eye increased again and could not be controlled by medication. TCDLC was repeated. Although IOP decreased postoperatively to normal values, 3 months later IOP increased to 38 mm Hg.

TCDLC was repeated a second time using the same application variables with eight spots. In the 2 o'clock position a so called "pop" effect (disruption of tissue) occurred. Postoperatively, visual acuity has not changed. IOP decreased to normal values under reduced topical medication. The patient was seen in our outpatient department 6 weeks later. Cells persisted in the anterior chamber and pupillary distortion was observed toward the 2 o'clock position, where the "pop" effect had occurred (Fig 1). A pigment defect of the peripheral iris was seen in transillumination (Fig 2).

COMMENT

It appears likely that pupillary distortion in this patient was the result of a peripheral iris injury, caused by an anterior displacement of the laser spot. The "pop" effect was caused by the disruption of the iris pigment epithelium. TCDLC using the G-probe is applied at the distance of 1.2 mm posterior to the surgical limbus, parallel to the visual axis, without visualisation of the ciliary body. At least three aspects should be taken into account in the discussion of causes for the displacement of laser spots during TCDLC. (1) Even in normal, emmetropic eyes, the anterior margin of the ciliary body varies between 1.5 and 2 mm depending on the meridian. 1 (2) Individual variations in the anatomical location of the pars plicata of the ciliary body may exist in normal and, especially, in eyes affected by juvenile glaucoma. (3) Bloom and Weber have demonstrated, in human necropsy eyes, that relatively small changes in probe orientation may result in peripheral iris involvement. 2

Our observation supports the need for online control of the induced tissue reaction and visualisation of the ciliary body itself. In our opinion this may become an important step on the way to standardise transscleral cyclophotocoagulation and also to improve efficiency and safety. The possibility of pupillary distortion as a complication of transscleral cyclophotocoagulation should be kept in mind.

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References


Figure 1 Case 1. Fluorescein angiogram shows delayed filling of the iris capillary plexus with large areas of non-perfusion on the right (A). The left iris is normal (B).

Figure 2 Case 2. Fixed and dilated right pupil (A). The left pupil is normal (B).
angiography was not possible in this case owing to her darkly pigmented irides.

COMMENT
To our knowledge these are the first cases of Urrets-Zavalia syndrome to be reported after trabeculectomy. The clinical features of this syndrome following penetrating keratoplasty for various conditions are well established but the pathophysiological mechanisms responsible for the mydriasis remain uncertain. Iris ischaemia secondary to postoperative intraocular pressure has been suggested as the likely aetiology with possible immunological, neurological, and structural iris' changes playing a role. We have discounted other possible causes of an internal ophthalmoplegia in our cases by ruling out Adie's pupil as there was no response to accommodation or to 0.125% pilocarpine. There was also no history of mydriatic use preoperatively or postoperatively and the pupil did not react to 4% pilocarpine. In addition, both patients had full extraocular movements with no ptosis and no other associated neurological signs suggestive of a third nerve palsy. There was no peroperative use of viscoelastic substances and both patients had minimal inflammation postoperatively. The angiography findings confirm the ischaemia as the most probable cause of the unilateral dilated pupil. Peripheral iridectomies performed as part of the trabeculectomy did not protect against this syndrome as is believed by some authors. It is interesting to note that the syndrome occurred unilaterally in case 1 despite bilateral surgery. A similar finding is also reported by Saraux et al following penetrating keratoplasty.

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Fluorescein angiography in altitude retinopathy

EDITOR,—High altitude retinopathy is a condition characterised by asymptomatic retinal haemorrhages that occurs in climbers at above 3000 metres. In some cases disc oedema and cotton wool spots have been described, but in retrospect many of these cases may simply be a description of retinal changes occurring secondarily to cerebral pathology or haematological changes related to altitude exposure. Little is known of altitude retinopathy because of the paucity of studies and difficulty in obtaining high quality fundal photographs and fluorescein angiography in the hostile high altitude environment.

Mountaineering is becoming increasingly popular and the commercialisation of trekking regions with good air and road links has created fast transit times between high altitudes and the office ophthalmologist. Here we document a case of altitude retinopathy in a fit normotensive subject with fluorescein angiography performed within 5 days of descent and the observed haemorrhages are not a consequence of obstruction of venous outflow and more likely represent a primary retinal disturbance. A fluorescein angiogram of altitude retinopathy has been described only once before. In that study there was similarly no disc leakage, but the patient had documented hyperviscosity and required haemodilution. It is therefore unclear to what extent hyperviscosity rather

Figure 1 Fundal appearances of altitude retinopathy at presentation (A and B) and at follow up 2 weeks later (C and D).
than altitude alone had contributed to the retinal haemorrhages seen.

Two prospective studies have shown that the incidence of retinal haemorrhage is greater in subjects exercising heavily at altitude, but is not related to the number of altitude related symptoms.1,2 Similar retinal changes are seen after Valsalva manoeuvres at sea level3 and pathological evidence suggests that haemorrhages at altitude are similar and originate from ruptured capillaries that become grossly dilated in response to chronic hypoxia.4 This case reports retinal haemorrhages occurring without disc oedema or venous stasis in an otherwise healthy subject exercising at altitude. It seems that the most likely mechanism is that of Valsalva retinopathy.

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Panuveitis as a presenting feature of giant cell arteritis

EDITOR.—It is unusual for bilateral panuveitis to be a presenting feature of giant cell arteritis. We present a patient diagnosed as having giant cell arteritis who had developed panuveitis some months previously for which the arteritis was probably responsible.

CASE REPORT
A 79 year old woman presented with gradual blurring and photophobia of 6 weeks’ duration. There was no significant ocular history. She had had a recent history of weight loss and anorexia for which she underwent endoscopy which revealed a duodenal ulcer. Ophthalmological examination revealed a visual acuity of 6/12 in both eyes. There was no relative afferent pupillary defect. There were bilateral keratic precipitates and cells in ante-

Figure 1 Bilateral disc oedema, multiple peripapillary creamy lesions, and left disc haemorrhage.

Figure 2 Fluorescein leakage from the subretinal peripapillary lesions and optic disc.

giant cell arteritis is a potentially blinding disease and its early diagnosis is the key to preventing blindness, it is important to recognise its various ocular manifestations.1 Panuveitis as a presenting feature is uncommon and to the best of our knowledge this is the first report of a subacute panuveitis as a presenting feature of giant cell arteritis. There is one another case reported where the presenting feature was acute anterior and posterior uveitis.2 The fluorescein angiogram showed leakage from the subretinal peripapillary lesions and the optic discs (Fig 2) and there was no wedge shaped alteration suggestive of choroidal ischaemia.3 Although this patient had a history of weight loss and high erythrocyte sedimentation rate at presentation the diagnosis of giant cell arteritis was not considered because of this unusual presentation. Serum angiotensin converting enzyme levels, chest x ray, computed tomograph scans of abdomen and pelvis were done to exclude sarcoidosis and lymphoma. In conclusion we describe a case in which giant cell arteritis offers a possible explanation for the clinical picture of subacute panuveitis in the absence of an exhaustive search for an underlying cause.

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