

LETTERS TO THE EDITOR

Resolution of calcific band keratopathy after lowering elevated serum calcium in a patient with sarcoidosis

EDITOR,—Calcific band keratopathy and its relation to hypercalcaemia is well known, but resolution following correction of a high serum calcium level is rare. We report a case where such resolution was documented using corneal light scattering measurements in a patient with sarcoidosis.

CASE REPORT

A 32-year-old black man presented with a 6 month history of blurred vision in both eyes but no photophobia or ocular discomfort. Three months earlier he had developed a right sided facial palsy which resolved spontaneously over 2 weeks. His medical history was notable for weight loss of 12 kg over the previous 6 months, excessive thirst, a dry cough, and shortness of breath on exertion.

General examination was normal. The best corrected visual acuities were 6/12, N8 right, 6/9, N6 left. Yellow nodules were present in the inferior fornices of both eyes. Both corneas had interpalpebral calcific band keratopathy and occasional mutton fat keratic precipitates (Fig 1A). A mild anterior uveitis was present but examination of the vitreous, fundi, and ocular motility was normal.

The clinical diagnosis of sarcoidosis with hypercalcaemia was supported by findings of bilateral hilar lymphadenopathy on chest x ray; raised angiotensin converting enzyme level (188 IU/l; normal range under 53 IU/l); and abnormal liver and renal function tests. The corrected serum calcium was elevated at 3.56 mmol/l (normal range 2.1-2.5 mmol/l) with a normal serum phosphate and albumin. The diagnosis was confirmed histologically by biopsy of a conjunctival granuloma.

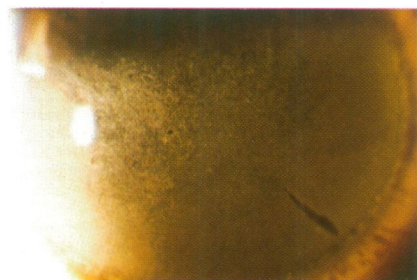


Fig 1A

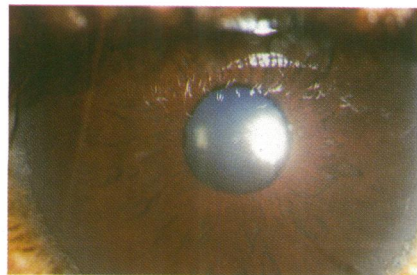


Fig 1B

Figure 1 (A) Interpalpebral calcific band keratopathy at presentation with a serum calcium level of 3.56 mmol/l. (B) Resolution of calcific band keratopathy after 3 months of treatment with a tapering course of oral prednisolone and a normal serum calcium.

The patient was treated with intravenous rehydration and high dose systemic steroids (80 mg orally tapered over 6 months). Within 1 week his general condition had improved and his serum calcium was normal. Almost complete resolution of the band keratopathy (Fig 1B) and improvement of the visual acuity to 6/6, N4.5 in both eyes occurred over the following 6 months. Corneal light scatter (glare) measurements¹ confirmed the resolution of his band keratopathy (Fig 2).

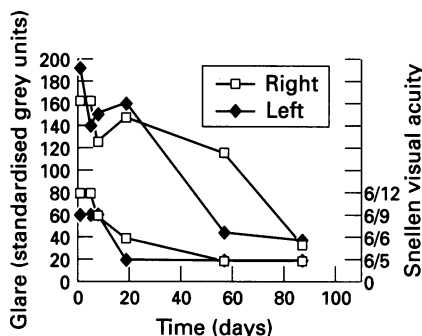


Figure 2 Glare (upper two lines) and Snellen visual acuity (lower two lines) measurements over the treatment period. Glare of under 50 standardised grey units is normal.

COMMENT

Calcific band keratopathy is associated with systemic conditions causing hypercalcaemia or raised serum phosphate and a number of chronic ocular conditions, including glaucoma, uveitis, corneal infections, and long term intraocular silicone oil.² Sarcoidosis is the most common cause of hypercalcaemia associated with band keratopathy and is thought to be due to activated pulmonary macrophages producing 1,25 dihydroxyvitamin D.³ In patients who have sarcoidosis with ocular involvement, hypercalcaemia occurs in 17% but calcific band keratopathy is rare occurring in only 4-5% of cases.⁴ The deposition of calcium salts is dependent not only on the solubility product of calcium and phosphate being exceeded, but also on altered tissue physiology⁵ and raised pH which occurs interpalpebrally and accounts for the distribution of band keratopathy.⁶ Patients may be asymptomatic or complain of reduced vision or glare, and if the calcium breaks through the corneal epithelium it causes ocular discomfort. It is widely assumed that when calcific band keratopathy is present the only effective treatment is surgical or excimer laser therapy. There have been two case reports of early band keratopathy improving with treatment to lower the serum calcium (one associated with renal failure⁷ and one with hypervitaminosis D⁸). This is the first reported case of advanced band keratopathy resolving in a patient with sarcoidosis. Photography and glare measurements using a PC generated flickering glare source, were used to document improvement.¹ The latter is a measure of visual impairment due to 'forward scattering' of light by corneal opacities. It is a more sensitive measure of the effect of corneal opacities on visual function than Snellen visual acuity and may be useful in deciding an endpoint to treatment (Fig 2).

In those systemic diseases where band keratopathy arises as a result of hypercalcaemia a period of observation is indicated, following normalisation of serum calcium, before considering surgical or excimer laser therapy, as the keratopathy may improve as happened in this case.

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- Lohmann CP, Fitzke F, O'Brart D, Kerr-Muir M, Timberlake G, Marshall J. Corneal light scattering and visual performance in myopic individuals with spectacles, contact lenses, or excimer laser photorefractive keratectomy. *Am J Ophthalmol* 1993; 115: 444-53.
- O'Brart DPS, Gartry DS, Lohmann CP, Patmore AL, Kerr-Muir MG, Marshall J. Treatment of band keratopathy by excimer laser phototherapeutic keratectomy: surgical techniques and long term follow up. *Br J Ophthalmol* 1993; 77: 702-8.
- Morita R, Yamamoto I, Takuda M, Ohnaka Y, Yuu I. Hypervitaminosis D. *Jap J Clin Med* 1993; 51: 984-8.
- Obenaus CD, Shaw HE, Sydnor CF, Klintworth GK. Sarcoidosis and its ophthalmic manifestations. *Am J Ophthalmol* 1978; 86: 648-55.
- Klaassen-Broekema N, van Bijsterveld OP. Limbal and corneal calcification in patients with chronic renal failure. *Br J Ophthalmol* 1993; 77: 569-71.
- Doughman DJ, Olson GA, Nolan S, Hajny RG. Experimental band keratopathy. *Arch Ophthalmol* 1969; 81: 264.
- Feist RM, Tessler H, Chandler JW. Transient calcific band-shaped keratopathy associated with increased serum calcium [Letter]. *Am J Ophthalmol* 1992; 113: 459-61.
- Meesmann A. Hypokalzaemie und linse; ein beitrag zur behandlung der cataracta tetanica mit AT 10 holtz. *Klin Monatsbl Augenheilkd* 1938; 100 (suppl): 137.

Pseudoexfoliative material on an acrylic lens

EDITOR,—We report deposition of pseudoexfoliative material on the anterior surface of an acrylic posterior chamber intraocular lens which has been observed for 5 years. The morphological pattern of radial striations closely resembles that normally seen on the crystalline lens and detailed examination of the distribution pattern suggests that deposition has occurred in areas exposed to highest flow of aqueous humour.

CASE REPORT

A 59-year-old Somali seaman presented in January 1980 with a 2 year history of decreased vision caused by cataract. Ocular examination was otherwise unremarkable and he had extracapsular cataract extraction from the left eye in August 1980. The procedure was uneventful. A Pearce tripod posterior chamber intraocular lens was inserted in the capsular bag inferiorly and the sulcus superiorly.

In June 1990 following dilatation of the left pupil pseudoexfoliative material was found on the temporal half of the anterior surface of the intraocular lens (Fig 1). Radial striations were observed, similar to those commonly seen in

Germany on 2-6 June, 1996. Further details: INTERPLAN, c/o Mr B Lichtinger, Sophienstrasse 1, D-80333 München, Germany. (Tel: ++-(0)89-594492; Fax: ++-(0)89-591610.)

Office of Continuing Medical Education

An update on the management of age-related macular degeneration will take place on 7-8 June 1996 at the Johns Hopkins University School of Medicine, Johns Hopkins Medical Institutions, Baltimore, Maryland, USA. Further details: Office of Continuing Medical Education, Johns Hopkins Medical Institutions, Turner 20, 720 Rutland Avenue, Baltimore, MD 21205-2195, USA. (Tel: (410) 955-2959; Fax: (410) 955-0807.)

International Society of Dacryology

The IVth International Congress of the International Society of Dacryology will be held in Stockholm on 9-11 June 1996. Further details: Dr G B van Setten, St Eriks Eye Hospital, Fleminggaten 22, S-112 82 Stockholm, Sweden.

The Brian Harcourt Memorial Symposium

The 7th Brian Harcourt Memorial Symposium will take place on 2 July 1996. The symposium topic will be glaucoma. Further details: Mr Mitchell Ménage, Eye Department, Leeds General Infirmary, Clarendon Wing, Belmont Grove, Leeds LS2 9NS. (Tel: 0113 243 2799; Fax: 0113 292 6479.)

International Congress New Developments in Ophthalmology 1996

An international congress on 'New developments in ophthalmology' will be held on 29-31 August 1996 in Nijmegen, the Netherlands. Further details: Professor dr AF Deutman/Mrs Y Hennink, University Hospital, Department of Ophthalmology, PO Box 9101, 6500 HB Nijmegen, the Netherlands. (Tel: (31)24 361 5105; Fax: (31)24 354 0522.)

Baylor/Welsh Cataract & Refractive Surgical Congress 1996

The Baylor/Welsh Cataract & Refractive Surgical Congress 1996 will be held at the Hyatt Regency Hotel, Houston, Texas on 5-7 September 1996. Further details: Eula Mae Childs, Cullen Eye Institute, Baylor College of Medicine, 6501 Fannin (NC200), Houston, TX 77030, USA. (Tel: 713-798-5941; Fax: 713-798-4364.)

International Symposium on Fluorescence Angiography

The International Symposium on Fluorescence Angiography will be held at the University of St Gall, St Gall, Switzerland on 8-12 September 1996. Further details: ISFA '96, c/o AKM Congress Service, Clarastrasse 57, PO Box, CH-4005 Basel, Switzerland. (Tel: ++41 61 691 51 11; Fax: ++41 61 691 81 89.)

British and Eire Association of Vitreo-Retinal Surgeons (BEAVRS)

The next meeting of the British and Eire Association of Vitreo-Retinal Surgeons (BEAVRS) will be held at the Manor House

Hotel, Morehampstead, Devon on 17-18 October 1996. Further details: Mrs Jill Gledhill, Torbay Hospital, Lawes Bridge, Torquay TQ2 7AA. (Tel: 01803 654825; Fax: 01803 655011.)

2nd International and 4th European Congress on Ambulatory Surgery

The 2nd International and 4th European Congress on Ambulatory Surgery will be held at the Queen Elizabeth II Conference Centre, Westminster, London on 15-18 April 1997. Further details: Congress Secretariat, Kite Communications, The Silk Mill House, 196 Huddersfield Road, Meltham, West Yorkshire HD7 3AP. (Tel: +44 1484 854575; Fax: +44 1484 854576.)

Correction

Unfortunately, one of the authors of a letter (Resolution of calcific band keratopathy after lowering elevated serum calcium in a patient with sarcoidosis) which appeared in the November issue of the *BJO* (Johnston *et al*, p 1050) was left out. She is Melanie C Corbett, Medical Eye Unit, St Thomas's Hospital, London. We apologise for this omission.

Correction

Owing to a computer error the wrong graphical material appeared in Figure 1 of the paper by Damato *et al* (Risk factors for residual and recurrent uveal melanoma after transcleral local resection), in the February issue of the journal (*BJO* 1996; 80: 102-8). The correct version of this figure is given below.

Figure 1 Kaplan-Meier curves showing the percentage of eyes without recurrent tumour according to tumour cell type. Local recurrence was more common with mixed and epithelioid tumours than with spindle cell tumours.

