Conjunctival changes associated with yellow nail syndrome

The yellow nail syndrome (YNS) is a rare clinical entity characterised by slow growing yellow discoloured nails in association with peripheral lymphoedema, pulmonary manifestations (bronchiectasis, pleural effusions), and chronic sinusitis. About 100 cases of YNS have been described in the literature but it has never been associated with ocular manifestations. We report one patient with YNS in whom chronic chemosis and conjunctival degenerative lesion was observed.

Case report

A 61 year old man was referred with a 2 month history of ocular irritation in the left eye. His past medical history was significant for yellowish slow growing nails, chronic maxillary sinusitis, and bronchiectasis for 5 years diagnosed as YNS. On examination, nails of both hands and feet showed yellow discoloration and thickening (Fig 1). He also had oedema over the lower limbs and subacute bronchial infection for 2 months. On ocular examination, corrected visual acuity was 20/20 in both eyes. Slit lamp examination of the left eye revealed an area of conjunctival injection and thickening in the palpebral fissure adjacent to nasal limbus. A mild nasal chemosis and superficial corneal micropapillae were also observed (Fig 2 top). Tear secretion was normal.

Figure 1

Yellow nail syndrome. Note yellow discoloration, increased curvature, and thickening of the nail plates in fingernails.

Figure 2

Anterior segment photograph of the left eye, showing conjunctival injection, conjunctiva thickening, and micropapillae adjacent to nasal limbus. A mild nasal chemosis was also observed [top]. Photomicrograph of conjunctival biopsy. The lesion shows multilayered epithelium, nuclear pleomorphism with malpighian differentiation. The underlying connective tissue was normal [haematoxylin-eosin-safran, magnification ×400] [bottom].

Comment

YNS was first described by Samman and White in 1964. The syndrome has been defined as the complete triad of slow growing yellow nails, lymphoedema, and pleural effusions but today it is accepted that the presence of two of the three symptoms is sufficient to establish the diagnosis, even though the abnormalities in YNS may appear separately with intervals of several years.

The aetiology of YNS is obscure, while pathogenesis seems to involve impaired lymphatic drainage. Ocular involvement has never been described in the YNS. However, conjunctival chemosis observed in our patient could be related to YNS which may involve the pleura, the lungs, but also other serosal or mucosal membranes such as the conjunctiva. Moreover, ocular symptoms and corneal micropapillae appeared at the same time of a rise of pulmonary symptoms. An inflammatory component, which could alter blood flow and capillary permeability, has not been excluded and, interestingly, topical dexamethasone used to treat chemosis is efficient.

There is very little information on histopathological findings observed in the YNS. Nail biopsies demonstrated features of maturation disarray in the nail bed epithelium associated with dense, fibrous tissue replacing subungual stroma. The changes that we observed in the conjunctival epithelium are similar to that in the nail bed in YNS.

Since it appears that there is a pathogenic association between the YNS and ocular findings, this association is probably not coincidental and could be the first report of ocular manifestation of YNS.

T Bourcier, M Baudrimont, V Borderie, C Mayaud, L Laroche

Quinze-Vingts National Center of Ophthalmology and Department of Pneumology, Tenon Hospital, Paris, France

Correspondence to: Tristan Bourcier, MD, PhD, Service du Professeur Laroche, CHNO des Quinze-Vingts, 28 rue de Charenton 75012 Paris, France; bournier@quinze-vingts.fr

Accepted for publication 28 January 2002

References


Bilateral anterior uveitis as a presenting manifestation of sarcoidosis and syphilis

We report an unusual case of bilateral acute anterior uveitis in an asymptomatic patient in whom ophthalmic examination and laboratory tests showed the diagnosis of syphilis and sarcoidosis.

Case report

A previously healthy 34 year old Hispanic woman with a 2 week history of blurred vision was referred for evaluation. The patient had no systemic complaints. On examination her best corrected visual acuity was 20/30 in...
treated with 12 million units of aqueous penicillin G intravenously daily for 14 days with resolution of the anterior segment inflammation. A chest computed tomograph (CT) confirmed the findings of the chest x-ray (Fig 2B). A transbronchial lung biopsy showed non-caseating granulomas (Fig 2C), in which no micro-organisms could be found with Ziehl-Nielsen, PAS, Grocott's silver, or Warthin-Starry stains and the diagnosis of sarcoidosis, stage 2 disease, was made. Pulmonary function tests were normal. No treatment was indicated for sarcoidosis because the patient was asymptomatic. The radiological lesions remained unchanged on the control performed after 6 months.

**Comment**
During the past decade, there has been a significant resurgence of syphilis, especially among black and Hispanic patients, and an increased number of patients with ocular syphilis has been reported.\(^1\)\(^2\) Syphilitic uveitis has no specific pattern of ocular involvement and, currently, it has been accepted that practically all patients with uveitis should be tested for syphilis. Sarcoïdosis is another condition that can imitate any form of ocular inflammation.\(^3\) We are unaware of any previous reports of the association of sarcoidosis and syphilis in an asymptomatic patient with uveitis, and could find no reference to it in a computerised search using Medline.

The diagnosis of syphilitic uveitis requires a high index of suspicion and the patient's clinical picture should be taken into consideration. The polymerase chain reaction (PCR) assay has been used to detect *Treponema pallidum* in CSF and serum but has not been used in routine diagnosis.\(^4\) In this case, syphilis was presumed to be the cause of the ocular inflammation because there was an associated inflammatory pleocytosis in CSF and this structure is embryologically related to the aqueous humour and, additionally, there was a marked improvement in the anterior segment inflammation with the syphilitic treatment. Moreover, the association of both diseases in this patient could be coincidental; however, it might be possible that the anergy induced by sarcoidosis could help the development of syphilis. We suggest a routine investigation in all cases of unexplained ocular inflammation including chest x-ray and syphilitic serology to screen for sarcoidosis and syphilis, owing to their great mimicry. Other laboratory tests should be performed following a tailored approach.

**References**

**Tangent screens are still useful in the assessment of vigabatrin induced visual field defects**
Vigabatrin induced constriction of peripheral visual fields was first reported in 1997.\(^5\) The potential mechanisms of vigabatrin induced peripheral field constriction are many;\(^6\) but in our opinion, not enough attention has been
Reference 1


Reference 2


Reference 3


Reference 4


Reference 5


Successful treatment of squamous cell carcinoma of the lower eyelid with intralesional cidofovir

Cidofovir (HPMPC), an acyclic nucleoside phosphonate analogue, is a promising drug that acts against a wide number of DNA viruses.1 In 1997, the US Federal Food and Drug Administration approved cidofovir (for intravenous use only) for the treatment of cytomegalovirus retinitis in patients with AIDS.2 Over the last few years, cidofovir in a 1–3% gel or cream vehicle has been found to be effective against unmanageable viral cutaneous lesions induced by herpes, pox, and papilloma families.3 Recent studies have explored intralesional administration of cidofovir for the treatment of HPV related tumours, such as cervical epithelial neoplasia, oesophageal carcinomas, and HSV-8 induced Kaposi’s sarcoma.4 We report a squamous cell carcinoma (SCC) of the eyelid which was successfully treated with intralesional cidofovir.

Case report

A 70 year old man presented with a nodular lesion 10 × 14 mm in size on his right lower eyelid, which had appeared 3 months earlier (Fig 1). The patient, who was otherwise in good general condition, reported a history of chronic, intense solar radiation exposure because he had lived in Somalia for many years. In the past 3 years he had been repeatedly treated with liquid nitrogen for multiple actinic keratosis of his forehead and upper eyelids. The clinical diagnosis of cutaneous...
Kidney toxicity is the most common but less frequently uveitis, macular oedema, neutropenia, thrombocytopenia, nausea, fever, hair loss, and muscle pain have also been observed. When administered topically or intravenously cidofovir has not, to date, shown systemic toxicity.

Surgical excision remains the best possible treatment for SCC, as it is usually curative and permits the histopathological evaluation of margins. However, the success with intralesional cidofovir in this case might be worth considering.

D Calista
Department of Dermatology, “M Bufalini” Hospital, Cesena, Italy
L Riccioni
Pathology Unit, “M Bufalini” Hospital
L Coccia
Private practice, ophthalmologist, Ascoli Piceno, Italy

Correspondence to: Donato Calista, MD, Department of Dermatology, “M Bufalini” Hospital, 47023 Cesena, Italy, calistadal@it
Accepted for publication 15 February 2002

References

Multiple iridociliary cysts in patients with mucopolysaccharidoses

Mucopolysaccharidoses (MPSs) are rare hereditary diseases. They are classified into six types by the distinct lysosomal accumulations of glycosaminoglycans, which give rise to the progressive clinical features with involvement of multisystems. Ophthalmic complications, such as corneal stromal opacity, pigmented retinal degeneration, optic atrophy and, glaucoma, are common in patients with MPSs. Cysts in various organs have been reported in patients with MPSs—for example, multiple dermignous cysts, multifocal large cysts in the white matter and arachnoid of the brain, and bone cysts. In the eye, membrane bound vacuoles in the non-pigmented epithelium of the ciliary processes have been observed by electron microscopy. However, iridociliary cysts have never been reported in patients with MPSs. We present two cases of multiple iridociliary cysts in two patients with MPSs, one with Scheie syndrome and the other with Maroteaux-Lamy syndrome.

Case reports
Case 1
A 18 year old woman, who was diagnosed with Scheie syndrome (MPS type IS) by enzyme assay. The activity of α-L-iduronidase in peripheral blood lymphocytes was not detectable. She had bilateral corneal stromal opacities, shallow anterior chambers, and high intraocular pressures. On 6 April 1998 her corrected visual acuity was 20/30 in both eyes. Her right intraocular pressure was 24 mm Hg and the left was 20 mm Hg with topical medication. Ultrasound biomicroscopy revealed multiple round cystic lesions with uniformly low echo density similar to anterior chamber fluid in all quadrants of the posterior iris, iridociliary sulcus, and pars plicata of both eyes (Fig 1).

Case 2
A 23 year old woman, who was diagnosed with Maroteaux-Lamy syndrome (MPS type VI). The activity of aroylsulfatase B in the peripheral blood lymphocytes was significantly low. At the age of 13 years, she underwent penetrating keratoplasty on her right eye because of corneal stromal opacity. At the age of 23 years, she underwent deep lamellar keratoplasty on her left eye. On 10 December 1997, slit lamp examination disclosed a clear graft and the shallow anterior chamber in both eyes. The corrected visual acuity in her right eye was 20/30 and left 20/40. Her right intraocular pressure was 12 mm Hg and left was 18 mm Hg without medication. Ultrasound biomicroscopy revealed multiple round echoic lesions in the posterior iris and ciliary body similar to case 1 in both eyes (Fig 2). We examined an additional two patients with Scheie syndrome; however, no iridociliary cysts were found in either patient.

Comment
We have demonstrated the presence of multiple round cystic lesions. From this echographic finding, we interpret these lesions as multiple iridociliary cysts. Previously, we found there is a wide gap in the incidence of ciliary body cysts in the posterior ciliary body because of the difficulty in detecting them by conventional methods. Marigo et al retrospectively reported that cystic lesions were identified in 108 eyes of 86 out of 4632 patients by ultrasound biomicroscopy and the incidence of the multiple cysts occupying more than 180° was 13.3%.” Kussnacht et al studied ciliary body in 232 eyes of 116 healthy people by ultrasound biomicroscopy. They reported that ciliary body cysts were detected in 54.3% and all the cysts were located at the iridociliary sulcus or pars plicata. The cysts in our patients were located at the posterior iris as...
MPS has been reported. Multiple iridociliary cysts in a patient without the other hand, angle closure that is caused by high ocular pressure because of the higher work by the glycosaminoglycan, or a false was due to a blockage of the trabecular mesh- suggested that the high intraocular pressure in glaucomas or ocular hypertension. It has been examination nor the analysis of contents of Because no evidence of the progression of the organs in MPSs patients support the notion that iridociliary cysts in MPSs patients were also intracranial lipomas. Also, the reports concerning cysts in other organs in MPSS patients support the notion that iridociliary cysts in MPSS patients were different from usual cysts in normal patients. Because no evidence of the progression of the iris cysts was obtained, neither pathological examination nor the analysis of contents of cysts was performed in our cases.

All of our patients were diagnosed with glaucomas or ocular hypertension. It has been suggested that the high intraocular pressure was due to a blockage of the trabecular meshwork by the glycosaminoglycan, or a false high ocular pressure because of the higher rigidity of the cornea in the MPSS patients. On the other hand, angle closure that is caused by multiple iridociliary cysts in a patient without MPSS has been reported.2 So we suggest that angle closure by the cysts may be another cause for the high intraocular pressure in some MPSS cases.

In summary, some of the patients with MPSSs with shallow anterior chamber demonstrate the presence of multiple iridociliary cysts and ultrasound biomicroscopy is very useful tool for finding the cysts.


**A case of encephalocraniocutaneous lipomatosis**

Encephalocraniocutaneous lipomatosis (ECC) is a rare neurocutaneous syndrome characterised by cranial and facial asymmetry, cutaneous lesions, central nervous system abnormalities, and ocular abnormalities.

A case is described of a young man who presented with limbal dermoids, subcutaneous lipomas, and scalp alopecia. Further investigation revealed cranial and facial asymmetry, intracranial lipomas, and calcification and an arachnoid cyst, supporting a diagnosis of ECC. This patient also had the additional ocular abnormality of bilateral optic disc colobomas, an association with ECC not previously reported in the literature.

**Case report**

A 23 year old Asian man first presented to the eye clinic aged 16 with a left conjunctival lesion. On examination he had bilateral conjunctival dermoliomas, preauricular lipomas, and bilateral optic disc colobomas. Surgery was not advised at this time and no follow up was arranged, although photographs were taken (Fig 1). Aged 20, he presented to the eye clinic again. Before excision biopsy of the left conjunctival dermolioma, a computed tomograph (CT) scan of the head was requested to delineate the posterior extent of the lesion. This revealed some asymmetry of the skull vault, intracranial calcification within the right cerebellar hemisphere, and a possible cystic lesion in the left parietal area (Fig 2 (left)). Subsequent examination by a neurologist was entirely normal with no stigmata of the phacomatoses. Histology of the conjunctival lesion confirmed a complex corneoscleral choristoma comprising collagenous tissue with fat and a focus of cartilage.

Three years later the patient was seen by a dermatologist complaining of a lesion on his left eyebrow, which was clinically a lipoma. Skull and facial x rays revealed asymmetry of the skull vault and facial bones including the zygomatic arches. Further investigation in the form of an magnetic resonance imaging (MRI) scan of the brain showed lipomas within the subcutaneous fat of the scalp and also intracranial lipomas. In addition, there was an arachnoid cyst anterior and inferior to the left temporal lobe (Fig 2 (right)). There was no connection between the soft tissue tumour on the left eyebrow and the intracranial cavity. Subsequent histology of the excised lesion revealed a lipoma.

Review of the patient’s childhood medical records revealed that since birth he had had large patches of scalp alopecia and aged 7 he was noted to have a large suprapubic fat pad. A final diagnosis of ECC was made based on the findings of limbal dermoids, subcutaneous lipomas, scalp alopecia, cranial and facial asymmetry, intracranial lipomas and calcification, and an arachnoid cyst.

**Comment**

ECC is a rare neurocutaneous syndrome of unknown aetiology, first described by Haberland and Perou in 1970. All cases described in the literature have been sporadic and there does not appear to be any geographic, racial,
or sex predilection. The syndrome is characterised by cranial and facial asymmetry, cutaneous lesions, central nervous system abnormalities, ocular abnormalities, and occasionally visceral lipomas. The abnormalities tend to be unilateral, although bilateral involvement has been described.

Cutaneous lesions consist mainly of subcutaneous scalp lipomas with overlying alopecia but lipomas involving the limbs and paravertebral areas have also been reported.流行性皮下脂肪瘤常位于头皮，颅内脂肪瘤和蛛网膜囊肿在额颞叶。右图磁共振成像（MRI）显示脑内脂肪瘤。

Figure 1 (Top) Photograph of left conjunctival dermolipoma. (Bottom) Photographs of right and left optic disc colobomas.

Figure 2 (Left) CT scan of the head showing asymmetry of the skull vault, intracranial calcification within the right cerebellar hemisphere, and a possible cystic lesion in the left parietal area. (Right) Magnetic resonance imaging (MRI) scan of the brain showing lipomas within the subcutaneous fat of the scalp, intracranial lipomas, and an arachnoid cyst anterior and inferior to the left temporal lobe.

and small skin nodules around the eyelids, which histologically represent connective tissue naevi. Other reported ocular abnormalities include a subcutaneous choristoma of the eyelid, a small tag of tissue in the anterior chamber, a persistent posterior hyaloid system, a dysplastic iris, papillodema, and epicanthus inversus plus hypertelorism.

The patient in this case report demonstrates the main features of ECCL: cranial and facial asymmetry, subcutaneous lipomas and scalp alopecia, intracranial calcification and lipomas, an arachnoid cyst, and limb dermoids. There was also the additional finding of optic disc colobomas, an association with ECCL not previously reported in the literature. Other common findings in ECCL are seizures and mental retardation, but neither were apparent in this case and may explain the comparatively late presentation of this patient; most patients present in early childhood. The abnormalities in ECCL are usually unilateral but bilateral involvement does occur and was evident in this patient. Although epibulbar choristomas and limbal dermoids can occur sporadically in isolation or in a Mendelian inherited pattern there may be systemic associations such Goldenhar’s syndrome, the linear naevoid sebaceous syndrome, or ECCL and the ophthalmologist should consider these diagnoses when a patient presents with an epibulbar choristoma or limbal dermoid.

H B Chittenden, K E Harman, F Robinson, E M Higgins
Department of Ophthalmology, St Thomas’s Hospital, Lambeth Palace Road, London SE1 7EH, UK

Correspondence to: Major H B Chittenden
Accepted for publication 11 February 2002

References
Bilateral non-specific orbital inflammation (orbital “pseudotumour”), posterior scleritis, and anterior uveitis associated with hypothyroidism in a child

Posterior scleritis and non-specific orbital inflammation (NSOI), also known as orbital “pseudotumour,” are rarely seen in children. Paediatric posterior scleritis and NSOI seldom have an underlying systemic association and, to our knowledge, hypothyroidism has not been reported as an association, although thyroid abnormalities are recognised in adults. We present a case of a child with bilateral anterior NSOI, posterior scleritis, and anterior uveitis who was also found to be hypothyroid.

Case report

A previously fit and well 13 year old girl presented with a 3 week history of bilateral red eyes and painless puffiness of the left upper and lower lids for 1 week. She had had a headache for 10 days which had failed to respond to oral antibiotics. Systemic inquiry revealed a sore throat for 10 days but no other symptoms, in particular no thyroid related symptoms. Her visual acuity was 6/9 right, and 6/18 unaided, improving to 6/12 with pinhole in the left eye. She read all the Ishihara plates with the right eye, but missed three out of 17 plates with the left. No relative afferent pupillary defect (RAPD) was present. She had mild left periorbital swelling which was not erythematous or tender. There was no proptosis. She had full extraocular movements with no diplopia. The right eye had signs of mild anterior uveitis with 1+ of cells while the left eye had 2+ of cells in the anterior chamber. There was no evidence of posterior segment involvement, with normal vitreous and fundi.

She was commenced with 2 hourly dexamethasone eye drops to both eyes and on review 3 days later her vision improved to 6/6 in both eyes. A week later, she returned with pain and increasing peribulbar swelling, left eye greater than right. Her visual acuity was reduced to 6/12 (right eye) and 6/60 improving to 6/18 with a pinhole (left eye). A mild left RAPD was present. Significant non-tender, mildly erythematous peribulbar swelling was present in the left eye. She had 2 mm left relative proptosis, with generalised restriction of extraocular movements. There was mild bilateral anterior uveitis. The left disc was more swollen than the right and retinal striae were present in both eyes (Fig 1). There was no evidence of vitreous or choroidal inflammation. An orbital computed tomograph (CT) scan suggested a diagnosis of bilateral anterior NSOI without enlargement of the extraocular muscles (Fig 2). B-mode ultrasonography showed bilateral diffuse thickening of the posterior coats of the eyes (maximum left thickness of 4.4 mm) and fluid in Tenon’s capsule consistent with scleritis.

Full blood count, urea, and electrolytes, liver function tests, serum angiotensin converting enzyme, serum calcium, autoantibodies (including ANA, ANCA, and rheumatoid factor), C reactive protein (CRP), and chest x ray were normal. She had negative serology for Borrelia, HTLV-1, and HTLV-2. Her erythrocyte sedimentation rate (ESR) was 32 mm in the first hour and a mildly raised Ig M was found. She was biochemically hypothyroid (raised TSH of 25.9 mU/L (0.4–4.0) and T4 of 10.6 pmol/L (9.20)) with positive anti-thyroid M antibodies. Thyrotrophin releasing hormone stimulation test confirmed primary hypothyroidism.

Treatment was commenced with prednisolone 50 mg which was reduced gradually over 3 months with resolution of her symptoms and signs. She had no relapse at 1 year follow up. She was also treated with thyroxine for her hypothyroidism.

Comment

The distinction between posterior scleritis and diffuse anterior NSOI is not always clear. As in this case, they commonly have evidence of inflammatory changes of the posterior coats of the eye and pericocular tissues. In a series of 29 paediatric NSOI cases, there was an association with peripheral blood eosinophilia, raised ESR, and positive ANA. Normal thyroid function tests (TFTs) were present in all of the nine children tested. Other reports of paediatric NSOI do not state whether TFTs were performed. Similarly, children with posterior scleritis tend not to have any clinical or laboratory evidence of associated systemic disease, but TFTs are not specifically mentioned. This is in contrast with our patient who was found to be biochemically hypothyroid. There is some evidence of thyroid autoimmunity in adult patients with NSOI, as shown by Atabay et al who found antibodies to eye muscle membrane antigens and thyroid microsomal antigen in patients with NSOI. Each of their cases was clinically and biochemically euthyroid. NSOI and scleritis in children may be associated with iritis, unlike the adult form of this disorder. Bloom et al report that children with NSOI and anterior uveitis tend to have a worse prognosis and increased recurrence. Our patient responded well to steroid treatment with no relapse at 1 year.

Scleritis with uveitis, although rare in children, should be recognised as part of the differential diagnosis of acute paediatric orbital inflammation. Hypothyroidism may be an incidental finding in our case, but the role of thyroid autoimmunity in children with NSOI and scleritis needs to be further investigated.

References


Unilateral enlargement of the blind spot: a diagnostic dilemma

Unilateral blind spot enlargement occurs as an isolated entity (acute idiopathic blind spot enlargement) or in association with other conditions such as multiple evanescent white dot syndrome, multifocal choroiditis with chorioretinal staphyloma, or punctate inner choroidopathy. It remains controversial whether blind spot enlargement in these conditions serves to unify them as a diagnostic group. The patient presented here had clinical features suggesting “diagnostic overlap” with some of these conditions, suggesting that diagnostic “lumping” of these diseases may have more logic than “splitting” them.

Case report

A 30 year old female patient presented to us in September 2000 with a blind spot close to the centre of vision in her left eye. She was uncertain as to how long it had been present, having noticed it only when the other eye was temporarily covered by chance. She was fit and well, with no recent viral illness or previous eye problems. Her vision acuity with myopic correction (~3.00 dioptre sphere right, ~3.25 dioptre sphere left) was recorded at 6/6 right and left, and discrete foci of chorioterial scarring were noted above and nasal to the optic disc in the left eye (Fig 1). There was no evidence of vitreous inflammatory activity in
either eye. Humphrey C24-2 testing revealed an enlarged blind spot on the left (Fig 2), while on the right it was normal. Fluorescein angio-

graphy demonstrated window and masking defects consistent with chorioretinal scarring, and late leakage at the optic disc margin.

No treatment was given, and the blind spot has gradually decreased over 12 months.

Comment

Fletcher et al. were the first to describe a syndrome of acute idiopathic blind spot enlargement (AIBSE) without optic disc oedema in a series of seven patients. This phenomenon has since become well recognised both as an isolated finding, and in association with various forms of chorioretinitis including multiple evanescent white dot syndrome (MEWDS), multifocal choroiditis with pan-

uveitis (MCP), acute macular neuroretinitis (AMN), diffuse subretinal fibrosis (DSF), and punctate inner chorioidopathy (PIC). Together, these diagnoses span a wide spectrum of clinical disease expression, and it remains controversial whether blind spot enlargement serves to unify the group or whether other clinical features are sufficiently distinctive for them to be regarded as separate disorders. This patient is young, myopic and female, and presented with unilateral blind spot enlargement and chorioretinal scarring in the absence of acute symptoms such as photophasias. These features make it difficult to assign a specific diagnosis, as discussed below.

AIBSE and MEWDS share many common features. Both tend to present acutely with visual loss and photophasias in young myopic females, and follow a prodromal viral illness. They occasionally recur and can both be bilateral. The visual prognosis is good, with early disappearance of the white spots and later resolution of blind spot enlargement in most, though not all, cases. The principal distinguishing feature of MEWDS is the presence of white spots at the level of the outer retina or retinal pigment epithelium (RPE), and the variable presence of vitreous cells, retinal vascular sheathing, and optic disc swelling. Since the white spots can be fleeting and hard to see, it has led some to believe that AIBSE is really a subset of MEWDS patients first seen after resolution of the white spots. However, this has been strongly refuted by Hoyt and Imes, who argued that, in contrast with MEWDS, the peripapillary visual loss in AIBSE is absolute in density and has steep edged margins. The presence of chorioretinal scarring in our patient would not be in keeping with either of these conditions.

In multifocal choroiditis with panuveitis (MCP), patients again present acutely with visual loss, scotomata, and/or photophasias, with preferential sparing of the central visual field. The presence of acute symptoms such as photophasias and visual loss, scotomata, and/or photophasias is consistent with a diagnosis of MCP, as long as the density of the scotomata is sufficient to cause a relative deviation on visual field testing. In our patient, fixation losses were low, and no fixation defects were noted.

In contrast with MCP, AIBSE is less associated with visual symptoms and photophasias. Instead, the presence of an enlarged blind spot and chorioretinal scarring is the primary clinical feature of AIBSE. In our patient, the enlarged blind spot was present in the absence of visual symptoms, and was noted on routine visual field testing. This is consistent with a diagnosis of AIBSE, as long as the density of the scotomata is sufficient to cause a relative deviation on visual field testing. In our patient, fixation losses were low, and no fixation defects were noted.

In summary, the clinical features of our patient are consistent with a diagnosis of AIBSE. The presence of an enlarged blind spot and chorioretinal scarring is the primary clinical feature of AIBSE, and is consistent with a diagnosis of AIBSE in our patient. The absence of acute symptoms such as photophasias and visual loss, scotomata, and/or photophasias is not inconsistent with a diagnosis of AIBSE, as long as the density of the scotomata is sufficient to cause a relative deviation on visual field testing. In our patient, fixation losses were low, and no fixation defects were noted.

Figure 1 Fundus photograph, left eye. Chorioretinal scarring is present superonasally.
grouped under the term “acute zonal occult outer retinopathy” (AZOOR). Added to the clinical similarities already described, Jacobsen et al demonstrated electoretinographic (ERG) abnormalities in a group of 24 AZOOR patients, though in some cases there were only subtle intereye differences detected. It was concluded that ERG findings help to unify this diagnostic group, as well as indicating that the primary pathophysiology lies at the level of the photoreceptor outer segment. This view was not supported by Jampol and Rimido, who argued that the above entities were sufficiently distinctive to warrant “splitting” rather than “lumping.”

Our patient does not fit neatly into any of the diagnoses discussed above, and the principal clinical features of blind spot enlargement with chorioretinal scarring in the absence of acute symptoms or evidence of vitritis suggest that there is a degree of diagnostic overlap in her case. To the extent that a single case report can inform this debate, it does indicate that some patients do not fit neatly into diagnostic groups, strengthening the case for those who would “lump” these diagnoses rather than “split” them. Perhaps there are other cases which remain unreported because of this diagnostic uncertainty.

R H Gray
Taunton and Somerset Hospital, Musgrove Park, Taunton TA1 5DA, UK
Accepted for publication 25 March 2002

References


Acquired ocular toxoplasmosis in pregnancy

We describe the management of a case of acquired ocular toxoplasmosis that occurred in the first trimester of pregnancy.

Case report

A 27 year old apparently healthy Pakistani woman, at 9 weeks’ gestation, presented to the Birmingham and Midland Eye Centre with a 1 week history of blurred vision in the left eye. She had no past ocular problems. Her first uncomplicated pregnancy was 2 years previously. On examination, the best corrected visual acuities were 6/6 in each eye. The anterior segments were normal and the intraocular pressures were 16 mm Hg right eye, 14 mm Hg left eye. Funduscopy showed a diffuse, elevated white lesion in the left retina half a disc diameter in size located one disc diameter superior to the fovea (Fig 1). There was an area of associated perivascular sheathing and minimal vitreous activity. An active left retinochoroiditis with associated retinal vasculitis was diagnosed. The right fundus was normal.

Sero logical testing revealed antibodies to Toxoplasma gondii at a titre of 1:4096 (2000 IU/mL) using the dye test and a toxoplasma IgM enzyme linked immunosorbent assay (ELISA) on the patient’s peripheral blood was positive. Subsequent serological tests at the PHE Toxoplasma Reference Unit, Swansea, confirmed these results and IgG avidity testing demonstrated that the infection was acute (Table 1). The polymerase chain reaction (PCR) on peripheral blood for T gondii was negative. At 3 weeks after presentation (12 weeks’ gestation), the patient’s visual acuities were unchanged. There was now occlusion of a small retinal arteriole crossing the lesion. After consultation with the obstetrician the patient decided to proceed with the pregnancy. She was commenced on oral spiramycin 1 g three times daily.

Eight weeks after presentation (17 weeks’ gestation) the vision remained the same and the focus of retinochoroiditis was beginning to scar. The patient underwent an amniocentesis for PCR against T gondii. This was negative suggesting the fetus was unaffected. Spiramycin was continued until the end of pregnancy. Sequential fetal ultrasounds were normal.

At term the patient gave birth to a healthy baby girl. Polymerase chain reaction (PCR) and culture for T gondii were negative on placental tissue. Nevertheless, the dye test on cord blood was positive at 500 IU/mL. As toxoplasma IgM ELISA, IgM, and IgA ISAGA on cord blood were negative, the positive dye test was probably detecting passively transferred maternal IgG. The mother’s vision remained normal, and only a small, pigmented scar was present (Fig 2).

Comment

In the United Kingdom ocular toxoplasmosis is normally thought to occur through the congenital route, although recent evidence suggests that we may be underestimating the amount of acquired disease. Overall, about 40% of primary maternal infections lead to congenital infection of children, with a transplacental transmission rate of T gondii reported to be 3% in the first trimester, 22% in the second, and 63% in the third.

In our case the features included an acquired aetiology supporting a lack retinal scars from previous infection, and the positive IgM serology and IgG avidity results. Sera taken early in infection (<3 months) usually have avidity levels of less than 30%. Most sera taken later in infection (>6 months) have avidity levels of greater than 40%. There are conflicting reports on the value of the PCR to detect toxoplasma DNA. This may represent the different target DNA strands used in the studies. The negative PCR result on the mother’s serum in our report is therefore not surprising. A negative PCR on amniotic fluid suggested that the fetus was not infected by toxoplasma, which was supported by the normal fetal ultrasounds.

Spiramycin is effective in reducing the risk of transmission to the fetus and therefore was given throughout pregnancy. This treatment may have contributed to the resultant good outcome for both mother and fetus.

Determining an aetiology of acquired T gondii infection was important in this patient as it allowed the most appropriate management plan to be initiated resulting in an excellent outcome. Acquired toxoplasmosis occurring in pregnancy is rare and we hope this case report will raise the awareness of this unusual presentation.

M Ramchandani
Birmingham and Midland Eye Centre, City Hospital NHS Trust, Dudley Road, Birmingham, UK

J B Weaver
Birmingham Women’s Hospital, Mitchley Park Road, Birmingham, UK

D H M Joynson
Toxoplasma Reference Unit, Public Health Laboratory, Singleton Hospital, Swansea, UK

P I Murray
Birmingham and Midland Eye Centre, City Hospital NHS Trust, Dudley Road, Birmingham, UK

Correspondence to: Professor P I Murray, Academic Unit of Ophthalmology, Birmingham and Midland Eye Centre, City Hospital NHS Trust, Dudley Road, Birmingham B18 7QU, UK; P.I.Murray@bham.ac.uk

Accepted for publication 25 March 2002

Table 1 Serum dye test titres, IgM levels, and IgG avidity levels

<table>
<thead>
<tr>
<th>Time (days) after onset of symptoms</th>
<th>Dye test titre</th>
<th>Dye test (IU/mL)</th>
<th>ELISA IgM</th>
<th>IgG avidity (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>1/4096</td>
<td>2000</td>
<td>Positive 20</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>1/2048</td>
<td>1000</td>
<td>Positive 19</td>
<td></td>
</tr>
<tr>
<td>103</td>
<td>1/2048</td>
<td>1000</td>
<td>Positive</td>
<td></td>
</tr>
</tbody>
</table>

Figure 1 Left fundus showing active retinochoroiditis with retinal vasculitis.

Figure 2 Left fundus showing healed area of previous retinochoroiditis.
References

Spontaneous reduction in myopic correction following varicella disciform stromal keratitis

We present the case of an 11 year old myopic girl who developed significant refractive changes due to corneal scarring following varicella disciform stromal keratitis in her right eye. This has markedly reduced the myopia in her right eye and resulted in significant anisometropia.

Case report
This 11 year old girl presented to her general practitioner with a red and painful right eye with reduced vision. She had had an uneventful episode of primary varicella zoster infection (chickenpox) 3 weeks earlier, from which she had made a full recovery. The general practitioner diagnosed her as having conjunctivitis and she was treated with topical chloramphenicol. One week later, the redness and pain had settled but her vision remained hazy. As a result she was referred to the eye department. Examination confirmed a reduction of visual acuity to 6/24 (Snellen) in the right eye and 6/6 in the left with spectacle correction. She was wearing a correction for myopia with a prescription of −4.75−0.75 × 110° in the right eye and −6.00−0.50 × 90° in the left eye. There was right superficial disciform stromal scar in the central cornea over the visual axis extending towards the periphery at 6 o’clock. Corneal sensation was intact and equal in both eyes. There was no active inflammation with white conjunctiva and quiet anterior chambers. The intraocular pressures were normal. Fundus examination revealed no abnormality. As there was no active inflammation, she was not given any treatment. On review 2 months later, there was no change in her symptoms or in the clinical findings. One year later, she was seen again in the clinic and has a surprising Snellen visual acuity of 6/9–1 unaided, improving to 6/9+2 with −1.75 × 150° in the right eye and 6/6 with −7.00 DS in the left. There was a reduction in opacity of the right corneal scar with stromal thinning (Fig 1). There was no ocular inflammation. Corneal topography showed a flattening of the right corneal surface secondary to disciform stromal corneal scar. Compare this with the unaffected myopic left eye, which has a steeper corneal surface (bottom).

Figure 2. Corneal topography of the affected right eye (top) shows a flattening of the corneal surface secondary to disciform stromal corneal scar. Compare this with the unaffected myopic left eye, which has a steeper corneal surface (bottom).

Figure 1. Anterior segment photograph of the right eye showing mild corneal scarring.

www.bjophthalmol.com
Comment
This is an unusual case of spontaneous myopia correction following corneal scarring secondary to varicella zoster disciform stromal keratitis. Primary varicella zoster infection (chickenpox) is a diffuse vesicular skin rash mainly affecting children and is usually self-limiting. Common ocular findings are eyelid vesicles or marginal erosions and acute conjunctivitis. Corneal changes are infrequent but can occur during the first week or two after the onset of chickenpox. Disciform stromal keratitis is an unusual but well recognised complication of primary varicella zoster infection.2 Varicella viral antigen and intra-cellular viral inclusions has been found in the corneal epithelium of affected eyes. Wilhelmsen et al reported five cases and reviewed the literature and found that this condition is typically unilateral, has a delayed onset, typically several weeks after the onset of skin rash. The complications following disciform stromal keratitis identified in this review are corneal scarring, neurotrophic keratopathy, iridocyclitis with secondary glaucoma, and iris stromal atrophy. The principal cause of loss of vision is corneal scarring. In our case, the corneal scarring had resulted in the flattening of the corneal surface thus reducing the degree of myopia significantly. This was highly unusual and had contributed to improving the unaided visual acuity in her affected eye. The effect on the cornea was similar to post LASIK (laser assisted in situ keratomileusis) and PRK (photorefractive keratectomy) in that the cornea appearance was similar as was the topography. In addition, the degree of corneal haze was limited and there had been a degree of stability for a period of over 1 year.

She was unable to tolerate the full refractive corrections because of the significant anisometropia and aniseikonia. Despite this she was pleased as she can see 6/9 unaided and would rather not wear her rather high myopic spectacle correction. In view of her young age, the uncertainty of the long term stability of her refractive state and her lack of visual complaint, contact lens and refractive surgery was not considered as appropriate treatment at present. However, they may have possible roles in her future management.

Topical corticosteroid therapy and antiviral agents have a role in the management of herpetic stromal disease following herpes simplex and herpes zoster infection. However, their roles in the treatment of stromal keratitis following primary varicella zoster are controversial and have not been determined. In our patient, the keratitis settled despite having neither topical corticosteroid nor antiviral agent.

Y F Choong, N R Hawksworth
Eye Department, Royal Glamorgan Hospital, Ynysmaerdy, Llantrisant, CF72 8XR, UK

Accepted for publication 29 October 2001

References

Presumed ocular candidiasis in drug misusers after intravenous use of oral high dose buprenorphine (Subutex)

Heroin drug misusers are a high risk group for disseminated candidiasis.7 Recently, an oral substitute for heroin with oral methadone or high dose sublingual buprenorphine tablets (Subutex) (HDSB) has proved to be effective in management of opioid addiction.2 We report the first four cases of presumed candida endophthalmitis following intravenous injection of HDSB.

Case reports
Case 1
A 22 year old man, HIV negative, former heroin misuser, was seen complaining of blurry vision in his right eye. He used HDSB intravenously after dissolution in saliva. One week following an injection, he presented with a febrile septicemic syndrome associated with scalp nodules. Funduscopy revealed a moderate vitritis and a white tiny periovealar lesion with few white snowballs (Fig 1). The bacterial and fungal cultures from both blood and anterior chamber tap were negative. Treatment was begun with intravenous fluconazole associated with three intravitreal amphotericin B injections (IVT). After 15 days of therapy, he was discharged on oral fluconazole. Ten days later, the endophthalmitis relapsed with development of a second paramacular necrotising lesion. A posterior vitrectomy was performed. The vitreous cultures were negative for Candida albicans. He was treated again with intravenous amphotericin B, along with amphotericin B IVT with success.

Case 2
A 27 year old man, a former heroin misuser, was receiving HDSB substitution therapy.

Case 3
A 25 year old man, a former heroin misuser, was referred for blurry vision and floaters in the right eye. His ocular symptoms started following an intravenous HDSB injection prepared with rotten lemon juice. Funduscopy revealed a parapapillary white lesion and few white snowballs (Fig 3). Improvement was obtained after 14 days of intravenous fluconazole and amphotericin B IVT.

Case 4
A 30 year old man, a former heroin misuser, was referred for decreased vision in the left eye. He had been using intravenous HDSB by dissolving the tablets in preserved lemon juice. Ten days earlier, he had a disseminated pustular rash with folliculitis over the chest, shoulders, and back. On funduscopy, there was a 2+ vitritis and a white chorioretinal lesion below the inferotemporal arcade (Fig 4). He improved after a treatment with intravenous amphotericin B rapidly switched to intravenous fluconazole combined with two amphotericin B IVT.

Comment
Endogenous candida endophthalmitis diagnosis is usually based on the combination of...
clinical setting (febrile septicaemia following an intravenous injection, skin typical lesions) and typical fundus lesions. Isolation of the fungus from a vitrectomy specimen could provide a definitive diagnosis but this is not routinely performed or required. In our cases, the diagnosis of presumed candida endophthalmitis was based on (1) the characteristic clinical setting, (2) the typical ocular involvement that was characterised by creamy-white chorioretinal lesions with white balls and vitritis, and (3) the response to antifungal therapy. Vitrectomy was performed only in one case. It was not performed in three patients because they presented an isolated chorioretinitis or associated with a mild vitritis and a characteristic clinical presentation. Patients were treated with intravenous amphotericin B or intravenous fluconazole and intravitreal injections of amphotericin B, except in one patient who refused intraocular injections.

In the mid-1980s, in France, an outbreak of candidiasis followed the introduction on the drug market of a new brown heroin. The hypothesis that the lemon juice used to dissolve the heroin might have been contaminated with C. albicans was demonstrated. Our cases also seem to confirm that the fungi probably come from the lemon juice or the patient himself rather than from the buprenorphine itself. Since March 1995, substitution therapy with HDSB tablets (Subutex) is approved for licence in France. Unfortunately, 8% of the patients enrolled in substitution programmes continued to use the intravenous route. This drug is now widely prescribed in France. Recently, in Europe, this treatment obtained the authorisation for commercialisation in 13 European countries. Our report demonstrates the need to inform general practitioners, pharmacists, and patients of the risks involved with the intravenous use of substitute agents.

N Cassoux, B Bodaghi, P Lehoang
Department of Ophthalmology, Pitie-Salpetriere Hospital 47–83 bd de l’Hôpital, 75651 Paris, cedex 13, Paris, France

Y Edel
Department of Public Health, ECIMUD (Hospitalised Drug Abusers Medical and Psychiatric Support Team) Pitie-Salpetriere Hospital 47–83 bd de l’Hôpital, 75651 Paris, cedex 13, Paris, France

Correspondence to: Phuc Lehoang; nathalie.cassoux@psl.ap-hop-paris.fr

Accepted for publication 6 March 2002

Table 1: Details of 44 patients presenting with microbial keratitis at KCMC

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Range</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age [years]</td>
<td>8–97</td>
<td>44</td>
</tr>
<tr>
<td>Time from onset of symptoms to presentation (days)</td>
<td>1–90</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sex</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>29</td>
<td>65.9</td>
</tr>
<tr>
<td>Female</td>
<td>15</td>
<td>34.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural</td>
<td>22</td>
<td>50</td>
</tr>
<tr>
<td>Student/school</td>
<td>6</td>
<td>13.6</td>
</tr>
<tr>
<td>Driver/conductor</td>
<td>4</td>
<td>9.1</td>
</tr>
<tr>
<td>Maasai*</td>
<td>4</td>
<td>9.1</td>
</tr>
<tr>
<td>Retired</td>
<td>4</td>
<td>9.1</td>
</tr>
<tr>
<td>Soldier/guard</td>
<td>1</td>
<td>2.3</td>
</tr>
<tr>
<td>Miner</td>
<td>1</td>
<td>2.3</td>
</tr>
<tr>
<td>Teacher</td>
<td>1</td>
<td>2.3</td>
</tr>
<tr>
<td>Businessman</td>
<td>1</td>
<td>2.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Treatment before presentation at KCMC of all cases (culture negative cases only)</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nil</td>
<td>11 (6)</td>
<td>25</td>
</tr>
<tr>
<td>Local remedy</td>
<td>4 (2)</td>
<td>9.1</td>
</tr>
<tr>
<td>Inappropriate treatment</td>
<td>3 (1)</td>
<td>6.8</td>
</tr>
<tr>
<td>“Appropriate”† treatment, inadequate intensity</td>
<td>18 (5)</td>
<td>40.9</td>
</tr>
<tr>
<td>“Appropriate”† treatment</td>
<td>4 (2)</td>
<td>9.1</td>
</tr>
<tr>
<td>Unknown</td>
<td>4 (2)</td>
<td>9.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>History</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetative trauma</td>
<td>14</td>
<td>32</td>
</tr>
<tr>
<td>All trauma</td>
<td>17</td>
<td>38.6</td>
</tr>
<tr>
<td>Previous corneal scar</td>
<td>14</td>
<td>32</td>
</tr>
<tr>
<td>Lid problems</td>
<td>2</td>
<td>4.6</td>
</tr>
<tr>
<td>Nil</td>
<td>11</td>
<td>25</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Organisms cultured</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fungi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fusarium solani</td>
<td>4</td>
<td>9.1</td>
</tr>
<tr>
<td>Fusarium sp</td>
<td>5</td>
<td>11.4</td>
</tr>
<tr>
<td>Aspergillus fumigatus</td>
<td>1</td>
<td>2.3</td>
</tr>
<tr>
<td>Cladosporium sp + Bacillus sp</td>
<td>1</td>
<td>2.3</td>
</tr>
<tr>
<td>Undetermined fungus + Staphylococci epidermidis</td>
<td>1</td>
<td>2.3</td>
</tr>
<tr>
<td>All fungi</td>
<td>12</td>
<td>27.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gram positive bacteria</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staphylococcus epidermidis</td>
<td>3</td>
<td>6.8</td>
</tr>
<tr>
<td>Staphylococcus aureus</td>
<td>2</td>
<td>4.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gram negative bacteria</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pseudomonas aeruginosa</td>
<td>6</td>
<td>13.6</td>
</tr>
<tr>
<td>Proteus sp</td>
<td>1</td>
<td>2.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No organism cultured</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20</td>
<td>45.5</td>
</tr>
</tbody>
</table>

Aetiology of microbial keratitis in northern Tanzania

The incidence of corneal blindness caused by microbial keratitis in the developing world is far higher than that in the developed world. Microbial keratitis has become a more prominent cause of corneal blindness in east Africa as the uptake of measles immunisation improves, reducing measles keratitis scarring, and with improved recognition and treatment of vitamin A deficiency, reducing its associated xerophthalmia and subsequent corneal scarring.

It has been shown that in tropical climates, keratitis of fungal aetiology is much more prevalent than in temperate climates. Little information is available about microbial keratitis in east Africa. The aim of this study was to identify the causative organisms of the condition seen in patients presenting to the Kilimanjaro Christian Medical Centre (KCMC) hospital in northern Tanzania, east Africa. KCMC is one of the largest hospitals in Tanzania, situated on the foothills of Mount Kilimanjaro, serving five regions in northern and central Tanzania—Kilimanjaro, Arusha, Singida, Tanga, and Dodoma with a population of approximately eight million people.

Clinical cases

Patients referred to, or presenting for the first time to, KCMC with clinical signs of microbial keratitis, were prospectively recruited to the study, between May 1997 and April 1998.
Larger ulcers were more likely to be culture positive and have poorer outcomes: mean ulcer diameter was 6.0 mm in culture positive ulcers and 3.7 mm in culture negative ulcers. Fungal growth had been predicted by positive microscopy for fungal elements in nine of the 12 cases that grew fungi (75%), and there was never positive fungal microscopy without fungal growth. All culture positive isolates had had Gram positive cocci identified on Gram staining initially but, in contrast, there were three cases where Gram positive cocci were initially seen on Gram staining, but cultures had grown other organisms (two fungi, one Gram negative bacilli). Full details are shown in Table 1.

Comment
In this study fungal keratitis accounted for 50% of culture positive cases of microbial keratitis in northern Tanzania, with the majority of these cases (42%) yielding pure fungal isolates on culture. These figures are similar to those published from west Africa, where 56% of microbial keratitis was caused alone or in part by fungi. As in studies from the United States, west Africa, and southern India, the most common genus of fungus isolated was that of the filamentous fungus Fusarium.

There may have been a bias towards fungal ulcers in this study. KCMC is a referral centre, receiving severe ulcers from primary care centres, where topical bacterial treatments are generally available and topical antifungal treatments are generally not. If the culture negative ulcers were predominantly bacterial ulcers, the relative frequency of fungal keratitis in this study would be artificially high. However culture negative ulcers had a similar range of treatments to culture positive ulcers before presenting to KCMC, as can be seen from Table 1. There is no evidence to suggest the culture negative ulcers were predominantly of (treated) bacterial rather than fungal aetiology.

Study design limitations precluded any estimation of prevalence of microbial keratitis in the region, which would have been useful. The findings relate to northern and part of central Tanzania; with a similar climate, risk factors and primary care set up, the aetiology of microbial keratitis is likely to be similar in the wider region. The study set out Gram positive isolates as the antigen as part of the microbiological examination, but this became impossible after logistical difficulties.

The most important factor in outcome was the initial size of the ulcer on examination. Larger ulcers were more likely to be culture positive and to have a poor outcome, such as a blinding corneal scar or requiring evicoration. Culture results were nevertheless useful in ascertaining antibiotic sensitivities, and in adding antifungal treatment where necessary. Any patient undergoing evicoration had usually been an inpatient for several weeks with a painful blind eye, had tried multiple treatment regimens, and had often requested evicoration himself. The overall rate of evicoration was 25%. Although there is little published material on outcomes of microbial keratitis in the developing world, this figure compares with a series of culture positive fungal ulcers in Madurai, India, where 20% were classified as “severe, with little prospect of recovery”.

Clearly, awareness of proper treatment regimens in northern Tanzania is paramount, particularly at the place of first contact, the village health centre, to prevent this overall picture of severe corneal ulcers with very poor visual prognosis. Treatment regimens should also take into account the high proportion of fungal keratitis. Microscopy looking specifically for fungal elements is a simple, quick, and useful test that could help direct initial treatment, along with clinical appearances suggestive of fungal infection. This might be more economically viable and practical than blanket coverage of all keratitis with an antifungal topical treatment in the first line therapy. Unfortunately, consistently effective antifungal topical treatments are not widely available in this part of Africa.

Future studies could examine the efficacy of current treatments for fungal keratitis and how best to improve awareness of appropriate treatment regimens in the region.

Acknowledgements
This work was supported by grants from the British Council for the Prevention of Blindness and the Voluntary Eye Care Foundation.

We are grateful to the hospital director, the staff, and the patients of KCMC for their collaboration in the above study.

TRG Poole, DL Hunter
Department of Ophthalmology, Kilimanjaro Christian Medical Centre, Moshi, Tanzania, Africa

EMK Malinwa
Department of Microbiology

A R C Ramsay
Clinical Laboratory

Correspondence to: Mr Poole; trgp@fish.co.uk
Accepted for publication 10 April 2002

References
for Eye Health, Institute of Ophthalmology, 11–43 Bath Street, London EC1V 9EL, UK (tel: +44 (0)20 7608 6910; fax: +44 (0)20 7250 3207; email: eyeresource@ucl.ac.uk; website: www.jceh.co.uk). Annual subscription (4 issues) UK£25/US$40. Free to workers in developing countries.

**International Centre for Eye Health**

The International Centre for Eye Health has published a new edition of the *Standard List of Medicines, Equipment, Instruments and Optical Supplies* (2001) for eye care services in developing countries. It is compiled by the Task Force of the International Agency for the Prevention of Blindness. Further details: Sue Stevens, International Centre for Eye Health, 11–43 Bath Street, London EC1V 9EL, UK (tel: +44 (0)20 7608 6910; email: eyeresource@ucl.ac.uk).

**Second Sight**

Second Sight, a UK based charity whose aims are to eliminate the backlog of cataract blind in India by the year 2020 and to establish strong links between Indian and British ophthalmologists, is regularly sending volunteer surgeons to India. Details can be found at the charity website (www.secondsight.org.uk) or by contacting Dr Lucy Mathen (lucymathen@yahoo.com).

**SPecific Eye ConditionS (SPECS)**

SPecific Eye ConditionS (SPECS) is a not for profit organisation which acts as an umbrella organisation for support groups of any conditions or syndrome with an integral eye disorder. SPECS represents over fifty different organisations related to eye disorders ranging from conditions that are relatively common to very rare syndromes. We also include groups who offer support of a more general nature to visually impaired and blind people. Support groups meet regularly in the Boardroom at Moorfields Eye Hospital to offer support to each other, share experiences and explore new ways of working together. The web site www.eyeconditions.org.uk acts as a portal giving direct access to support groups own sites. The SPECS web page is a valuable resource for professionals and may also be of interest to people with a visual impairment or who are blind. For further details about SPECS contact: Kay Parkinson, SPECS Development Officer (tel: +44 (0)1803 524238; email: k@eyeconditions.org.uk; www.eyeconditions.org.uk).

**The British Retinitis Pigmentosa Society**

The British Retinitis Pigmentosa Society (BRPS) was formed in 1975 to bring together people with retinitis pigmentosa and their families. The principle aims of BRPS are to raise funds to support the programme of medical research into an eventual cure for this hereditary disease, and through the BRPS welfare service, help members and their families copy with the everyday concerns caused by retinitis pigmentosa. Part of the welfare service is the telephone helpline (+44 (0)1280 860 363), which is a useful resource for any queries or worries relating to the problems retinitis pigmentosa can bring. This service is especially valuable for those recently diagnosed with retinitis pigmentosa, and all calls are taken in the strictest confidence. Many people with retinitis pigmentosa have found the Society helpful, providing encouragement, and support through the Helpline, the welfare network and the BRPS branches throughout the UK. (tel: +44 (0)1280 821 334; email: lynda@brps.demon.co.uk; website: www.brps.demon.co.uk)

**Ophthalamic Anesthesia Society (OAS) 16th Scientific Meeting**

The 16th Scientific Meeting of the OAS will be held on 4–6 October 2002 in The Westin, Michigan Avenue, 909 North Michigan Avenue, Chicago, USA (reservations +1 800 228 3000). Further details: OAS, 793-A Foothill Blvd, PMB 110, San Luis Obispo, CA 93405, USA (tel: +1 805 771 8300; web site: www.eyeanesthesia.org).

**BEAVRS Meeting**

The next BEAVRS meeting will be held in the Dalmahoy Hotel near Edinburgh on 31 October to 1 November 2002. Further details: Susan Campbell, Medical Secretary, Gartnavel General Hospital (email: susan.j.campbell.wg@northglasgow.scot.nhs.uk).

**Cornea 2002—Celebrating 50 Years of Eyebanking**

The Cornea 2002 meeting will be held in Le Meridien Hotel, London, Gatwick on 14–15 November 2002. Subjects to be covered will include eye banking, penetrating and lamellar keratoplasty, stem cell restoration, keratoprosthesis, advanced keratoplasty techniques, paediatric cornea, keratorefractive surgery, and intraocular refractive surgery. Spaces are limited and a beneficial package rate is available prior to 30 September 2002. Further details: CORNEA 2002 organiser at the Corneo Plastic Unit, The Queen Victoria Hospital, Holtye Road, East Grinstead, West Sussex, RH19 3DZ (tel: 01342 410 210 ext 560; fax: 01342 317 181; email: Cornea2002@hotmail.com).

**CORRECTION**

An error occurred in the article: Bilateral circumscribed haemangioma of the choroid not associated with systemic vascular syndrome. *Br J Ophthalmol* 2001;85:1260. The authors should have been listed as P Perri, C Incorvaiá, C Costagliola, F Parmeggiani, G Lamberti, B Paduano, A Sebastiani.
A case of encephalocraniocutaneous lipomatosis

H B Chittenden, K E Harman, F Robinson and E M Higgins

Br J Ophthalmol 2002 86: 934-935
doi: 10.1136/bjo.86.8.934

Updated information and services can be found at:
http://bjo.bmj.com/content/86/8/934

These include:

References
This article cites 9 articles, 1 of which you can access for free at:
http://bjo.bmj.com/content/86/8/934#BIBL

Email alerting service
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/