References

1 Garrity JA, Trautmann JC, Bartley GB *et al*. Optic nerve sheath meningoceles. Clinical and radiographic features in 13 cases with a review of the literature. *Ophthalmology* 1990; **97**: 1519–1531.
2 Saari M, Mustonen E, Palva A, Jokinen K, Reunanen M. Arachnoid cyst of the intraorbital portion of the optic nerve. *Acta Ophthalmol* 1977; **55**: 959–964.
3 Jinkins JR. Optic hydrops: isolated nerve sheath dilatation demonstrated by CT. *Am J Neuroradiol* 1987; **8**: 867–870.
4 Rothfus WE, Curtin HD, Slamovitis TL, Kennerdell JS. Optic nerve/sheath enlargement: a differential approach based on high-resolution CT morphology. *Radiology* 1984; **150**: 409–415.
5 Lunardi P, Farah JO, Ruggeri A *et al*. Surgically verified case of optic sheath nerve meningocele: case report with review of the literature. *Neurosurg Rev* 1997; **20**: 201–205.
6 Dailey RA, Mills RP, Stimac GK, Shults WT, Kalina RE. The natural history and CT appearance of acquired hyperopia with choroidal folds. *Ophthalmology* 1986; **93**: 1336–1342.
7 Helmke K, Hansen HC. Fundamentals of transorbital sonographic evaluation of optic nerve sheath expansion under intracranial hypertension. II. Patient study. *Pediatr Radiol* 1996; **26**: 706–710.
8 Talks SJ, Mossa F, Elston JS. The contribution of macular changes to visual loss in benign intracranial hypertension. *Eye* 1998; **12**: 806–808.

V Shanmuganathan[1], B Leatherbarrow[1], A Ansons[1] and R Laitt[2]

[1]Manchester Royal Eye Hospital
Manchester
M13 9WH, UK

[2]Department of Neuroradiology
Manchester Royal Infirmary
Manchester, UK

Correspondence: B Leatherbarrow
Tel: 0161 276 5569
Fax: 0161 272 6618
E-mail: bollin@mighty-micro.co.uk

Sir,

Bilateral multiple extraocular muscle enlargement and gangrenous limb extremities: Is there an association?
Eye (2002) **16,** 802–804. doi:10.1038/sj.eye.6700111

Bilateral enlargement of multiple extraocular muscles is a feature of various orbital diseases namely: dysthyroid eye diseases, inflammatory conditions, vascular problems and acromegaly.[1,2] Imaging techniques, haematological and histological investigations are employed when establishing the aetiology of extraocular muscle enlargement.

We report a case of bilateral orbital proptosis due to enlarged extraocular muscles associated with gangrenous limb extremities, which posed a diagnostic dilemma.

Case report

A 33-year-old man presented with sudden onset of itchy eyes which progressed into significant bilateral orbital swellings overnight. This was associated with a flu-like illness. There was no history of chemicals or irritants entering the eyes at work. Tetracycline eye ointment and oral herbal medicine were prescribed by the respective practitioners. Two weeks later the patient started to have cold and clammy limb extremities which turned bluish.

The patient was healthy, never smoked but drank moderately and was employed as a farm labourer. Major ocular findings included: unaided vision of hand movement close to face with right eye, no perception of light with left eye, bilateral proptosis of 5 mm, conjunctival chemosis (Figure 1), lid retraction, exposure keratopathy obscuring anterior segment details and total external ophthalmoplegia. Systemic examination showed cold extremities with some gangrenous digits (Figure 1), feeble peripheral pulses, generalized lympadenopathy, mild splenomegaly, normal sized thyroid, blood pressure of 140/90 and pulse of 90 beats per minute.

The MRI scan showed bilateral multiple extraocular muscle enlargement with relative sparing of the tendons (Figure 2). The optic nerves were stretched out and there was posterior 'coning/tenting' of both eyeballs (Figure 2). The medial orbital walls appeared straight and paranasal sinuses were normal.

Dysthyroid eye disease with gangrenous limb extremities was suggested and investigations done showed the following abnormalities: a leucocytosis of $21.98 \times 10^3/\mu$l, neutrophilia of $16.93 \times 10^3/\mu$l, lymphocytosis of $4.08 \times 10^3/\mu$l, erythrocyte sedimentation rate of 120 mm/h and a positive double ELISA test for HIV.

High dose prednisolone tablets (70 mg daily), systemic crystalline penicillin and chloramphenicol, moist chambers and chloramphenicol eye ointment were prescribed in hospital. The proptosis regressed completely within 2 weeks of treatment. Unfortunately the gangrenous limbs progressively worsened despite the use of vasodilators and anticoagulant therapy (nitroprusside and heparin) and the patient demised before angiography and doppler ultrasonography were

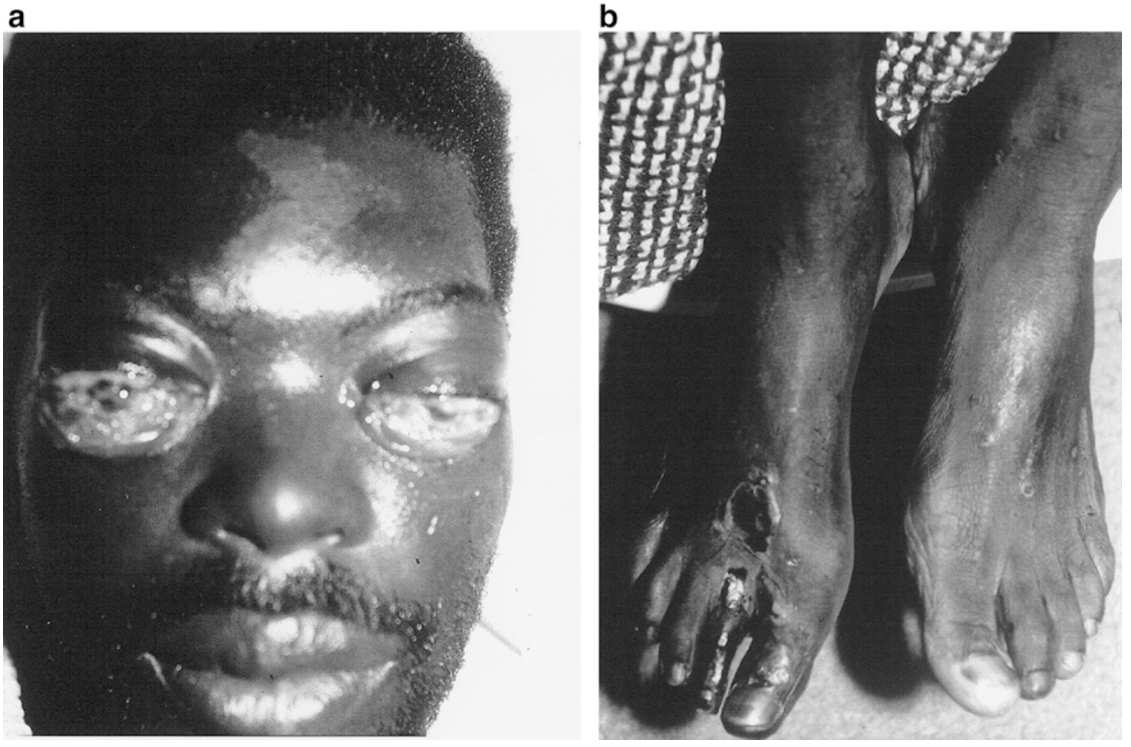

Figure 1 Photographs to illustrate (a) bilateral orbital proptosis with extensive chemosis; and (b) gangrenous toes.

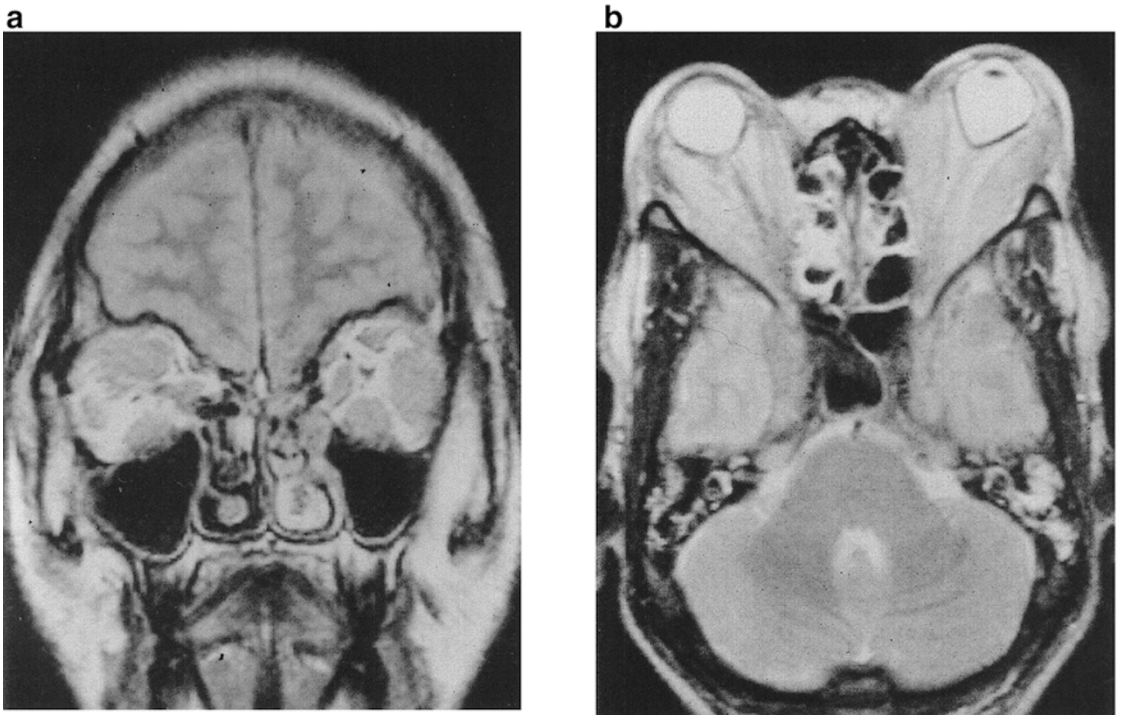

Figure 2 (a) Enlargement of extraocular muscles with tendon sparing; and (b) coning of the globe.

performed. Permission to perform a post-mortem was not granted.

Comments

Dysthyroid eye disease was considered the most likely diagnosis on the grounds of the patient's age, bilateral disease, MRI scan findings and response to treatment. However, there was no documentary evidence of an association between dysthyroid eye disease and gangrene of limb extremities. Therefore an assumption that the orbital and limb problems were features of the same disease would eliminate dysthroid eye disease from the list of likely causes unless this could be the first reported case. A very high ESR of 120 mm/h would be more in favour of inflammatory disease than dysthyroid eye disease, although acute thyroiditis is associated with moderately elevated ESR.

Generalised Wegener's granulomatosis can cause both orbital proptosis and gangrene and involvement of the kidneys and the respiratory tract is pathognomonic.[3] Our patient did not show signs of kidney and respiratory diseases as evidenced by normal levels of urea and electrolytes and a clear chest x-ray. Unfortunately an ANCA test for Wegener's granulomatosis was not performed on our patient and this disease has not been reported among blacks in Africa.[4]

Granulomatous orbital myositis is known to cause bilateral extraocular muscle enlargement. One reported case had elevated ANCA, normal thoracic imaging and characteristic histology findings on muscle biopsy.[5] Reported association of this condition with gangrene of the limbs could not be established.

Traditional medicines have been reported to cause gangrene of the limb extremities in Zimbabwe because of their powerful vasoconstriction effects.[6,7] Our patient admitted to taking oral traditional medicine prior to development of limb problems. Unfortunately the nature of the medicine was not disclosed to the patient. The onset of orbital symptoms in relation to the time when traditional medicine was ingested and the resolution of proptosis on systemic corticosteroids exonerate herbal medicine as a cause of orbital symptoms.

The rapid deterioration of the patient despite appropriate treatment could be attributed to HIV infection. Medical practitioners should beware of the modifying effect of traditional medicines and HIV infections on symptoms of various diseases. We emphasise that accurate and meticulous clinical history, examination and investigations are of paramount importance in reaching a correct diagnosis.

References

1 Patrinelly JR, Osborn AG, Anderson RL, Whiting AS. Computed tomographic features of nonthyroid extraocular muscle enlargement. *Ophthalmology* 1989; **96**: 1038–1047.
2 Bailey CC, Kabala J, Laitt R, Goddard P, Hoh HB, Potts MJ, Harrad RA. Magnetic resonance imaging in thyroid eye disease. *Eye* 1996; **10**: 617–619.
3 Binder C, Schattenkirchner M, Kruger K. Severe toe gangrene as an early manifestation of Wegener's granulomatosis in a young patient. *Zeitschrift fur Rheumatologic* 1998; **57**: 227–230.
4 Fukase S, Ohta N, Inamura Y, Aoyagi M, Koike Y. Diagnostic specificity of antineutrophil cytoplasmic antibodies (ANCA) in otorhinolaryngological diseases. *Acta Oto-laryngologica Supp* 1994; **511**: 204–207.
5 Menon GJ, Hollman AS, Dutton GN. Granulomatous orbital myositis. *Eye* 2000; **14**: 676–678.
6 Sinzobahamvya N, Kalangu K. Some particular aspects of vascular diseases in Zimbabwe. *Louvain Med* 1988; **107**: 549–555.
7 Noyez JF, Sinzobahamvya N, Kalangu K. Peripheral gangrene in African children: a clinical report of twelve cases. *Acta Orthopaedica Belgica* 1996; **62**: 207–210.

A Magava, R Masanganise, KKN Kalangu and K Naik

Department of Surgery
University of Zimbabwe Medical School
Parirenyatwa Hospital, Box A178
Avondale, Harare, Zimbabwe

Correspondence: R Masanganise
Tel: 263 4 791631 ext 2169
Fax: 263 4 791995
E-mail: surgery@healthnet.zw

Sir,

Therapeutic external ophthalmoplegia with bilateral retrobulbar botulinum toxin—an effective treatment for acquired nystagmus with oscillopsia

Eye (2002) **16,** 804–806. doi:10.1038/sj.eye.6700167

Acquired nystagmus is often associated with oscillopsia and visual impairment. Therapeutic options for this incapacitating condition remain limited. We report the case of a young male with nystagmus and oscillopsia, treated successfully with retrobulbar botulinum toxin A.

Case report

A 39-year-old male, confined to a wheelchair due to multiple sclerosis, manifested bilateral visual