9. Hayreh SS. Recent advances in fluorescein fundus angiography. Br J Ophthalmol 1974;58:391–412.
10. Foulds WS, Lee WR, Taylor WOG. Clinical and pathological aspects of choroidal ischaemia. Trans Ophthalmol Soc UK 1971;91:325–43.

S. Mirza, FRCS ✉
A.R. Raghu Ram, MD, FRCS, FRCOphth
B.S. Bowling, FRCS, FRCOphth
M. Nessim, FRCS
Department of Ophthalmology
East Glamorgan General Hospital
Church Village
Mid Glamorgan CF38 1AB, UK
Tel/fax: +44 (0)1443 216121

Sir,

Interferon-associated retinopathy in a diabetic patient

Manifestations of retinal ischaemia are rarely reported complications of interferon alpha treatment.

Case report

A 59-year-old man was initially referred to the diabetic screening clinic with a 7 week history of decreasing visual acuity in both eyes and right retinal haemorrhage noticed by his optician.

Three months previously he had been found to have cerebral and pulmonary metastases from a renal cell carcinoma that had been diagnosed in 1992. At this time his full blood count, urea and electrolytes and liver function tests were normal. He was treated with oral dexamethasone, radiotherapy for the cerebral metastases and subcutaneous interferon alpha for the pulmonary metastases, and was soon found to have maturity-onset diabetes mellitus. His blood sugars were reported to be well controlled on oral gliclazide. In addition he was taking allopurinol and lansoprazole and he was an ex-smoker. At this time his blood pressure was noted to be normal.

On examination in the Eye Clinic his corrected visual acuity in each eye was 6/9. Both anterior segments were normal without significant lens opacities. Fundoscopy revealed four cotton wool spots in the left eye only, without any other evidence of changes associated with diabetes. The right fundus was unremarkable, and there was no evidence of the haemorrhage previously noted by the optician. A diagnosis of diabetic retinopathy was made at this time.

The patient was reviewed 4 months later, which was 2 weeks after his interferon alpha-2A course had been stopped by the oncologists. There had been no further deterioration in his vision or any other new symptoms, although he had now developed a few cotton wool spots in both eyes (Fig. 1), still without any other diabetic changes. He was reviewed 2 months later, when the cotton wool spots had begun to fade (Fig. 2).

Comment

The most commonly reported retinal changes described with interferon therapy are cotton wool spots, splinter haemorrhages, retinal haemorrhages[1,2] and arteriolar occlusion,[3] which the manufacturers claim occur in about 1 per 10 000 patients (Roche). Other rarely reported ocular complications include oculomotor paralysis,[4] hypertrichosis,[5,6] corneal allograft rejection,[7] papilloedema[8] and AION.[9] Most of the cases described in the literature are incidental findings in asymptomatic patients and occur within the first few weeks of starting therapy: e.g. 86% within 8 weeks.[1]

Some studies report the disappearance of cotton wool spots and haemorrhages while still on interferon treatment;[1,2] however, there are few data on the persistence of cotton wool spots after treatment has stopped, as in our case.

It is interesting to note that one study[1] found that the incidence of ischaemic retinopathic signs was increased in diabetic and hypertensive patients on interferon, suggesting a microcirculatory disturbance as the underlying pathological mechanism of retinal damage.

Interferon-associated retinopathy is a well-recognised if uncommon phenomenon, and in diabetic patients could easily be mistaken for diabetic retinopathy, as was the case with our patient initially.

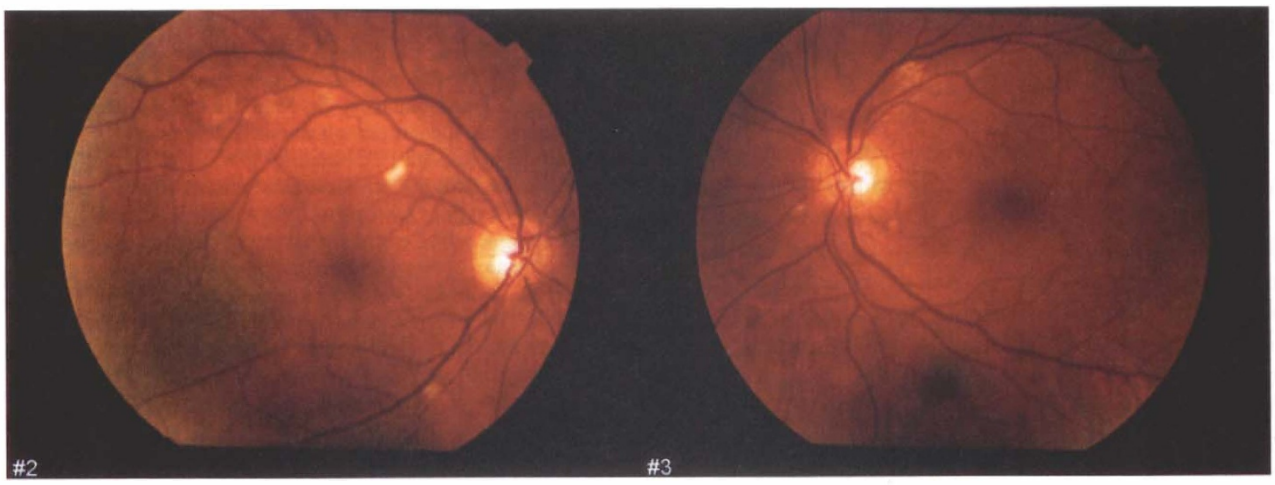

Fig. 1. *Cotton wool spots without any other evidence of diabetic retinopathy.*

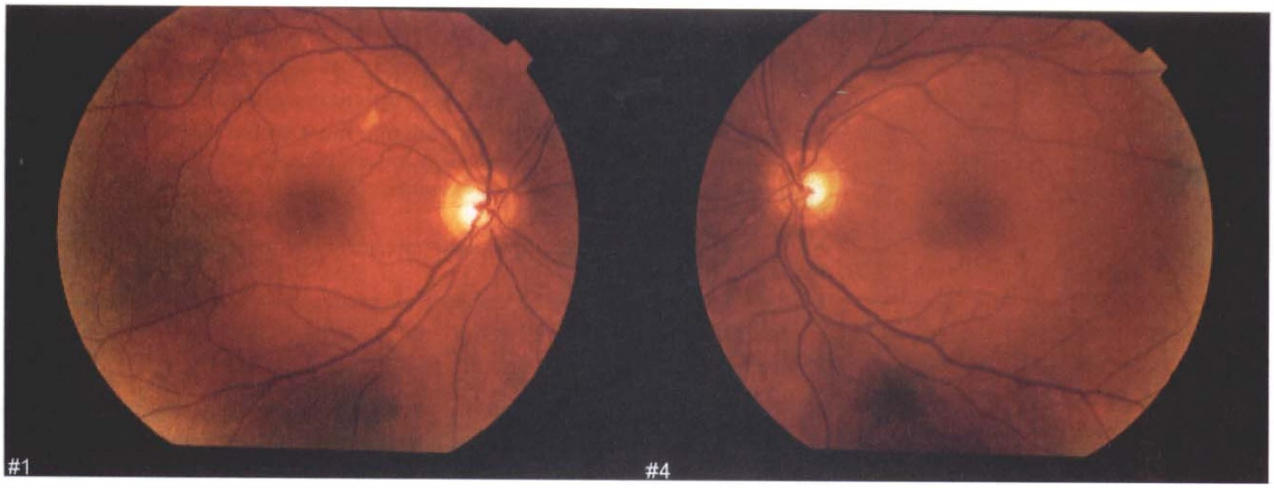

Fig. 2. *Resolution of cotton wool spots 2 months later.*

References

1. Kawano T, *et al.* Retinal complications during interferon therapy for chronic hepatitis C. Am J Gastroenterol 1996;91:309–13.
2. Harada T, *et al.* Interferon-associated retinopathy. Klin Monatsbl Augenheil 1995;207:302–4.
3. Guyer DR, *et al.* Interferon-associated retinopathy. Arch Ophthalmol 1993;111:350–6.
4. Bauherz G. Oculomotor nerve paralysis induced by alpha II-interferon. Acta Neurol Belg 1990;90:111–4.
5. Berglund EF, *et al.* Hypertrichosis of the eyelashes associated with interferon alpha-therapy for chronic granulocytic leukemia. South Med J 1990;83:363.
6. Foon KA, Dougher G. Increased growth of eyelashes in a patient given leukocyte A interferon. N Engl J Med 1984;311:1259.
7. Jacobs AD, *et al.* Induction of acute corneal graft rejection by Alpha-2 interferon. Am J Med 1987;82:181–2.
8. Farkkila M, *et al.* Neurotoxic and other side effects of high-dose interferon in amyotrophic lateral sclerosis. Acta Neurol Scand 1984;70:42–6.
9. Purvin VA. Anterior ischaemic optic neuropathy secondary to interferon. alpha. Arch Ophthalmol 1995;113:1041–4.

N. Murugananthan ✉
J. Vodden
R.H. Gray
Ophthalmology Department
Taunton and Somerset NHS Trust
Taunton
Somerset TA1 5DA, UK

Sir,

***Mycobacterium marinum* keratitis: pigmentation a clue to diagnosis**

To our knowledge there has only been one reported case of *Mycobacterium marinum* keratitis to date.[1] We present the second such case. The unique features of this case are the absence of antecedent ocular trauma, or underlying ocular pathology, and a good visual result.

Case report

A 65-year-old man was referred with a 6 week history of a foreign body sensation affecting his left eye. He had been unsuccessfully treated by his local ophthalmologist with gentamicin 0.3% drops and prednisolone acetate 1%. The patient denied a history of ocular trauma despite having been cleaning the barnacles off his boat several weeks prior to the onset of symptoms.

On examination, his unaided visual acuities were right 6/9–2 and left 6/12, improving to 6/7.5 with a pinhole. The anterior segment on the right was normal. On the left there was a corneal ulcer, measuring approximately 4 mm by 7 mm. Numerous mutton fat and pigmented keratic precipitates were seen inferiorly. There was 2+ cells in the anterior chamber. Intraocular pressure was 26 mmHg by pneumotonometry. Epithelial nodules were noted in the adjacent paralimbal area. General physical examination was unremarkable. No unusual skin lesions were noted.

Topical therapy was changed to g. tobramycin and g. atropine. A corneal scraping was taken and sent to the laboratory for microscopic examination and culture. Microscopy revealed necrotic corneal stroma, numerous Gram-positive cocci and pleomorphic Gram-positive bacilli. A decision was made not to alter the antibiotics

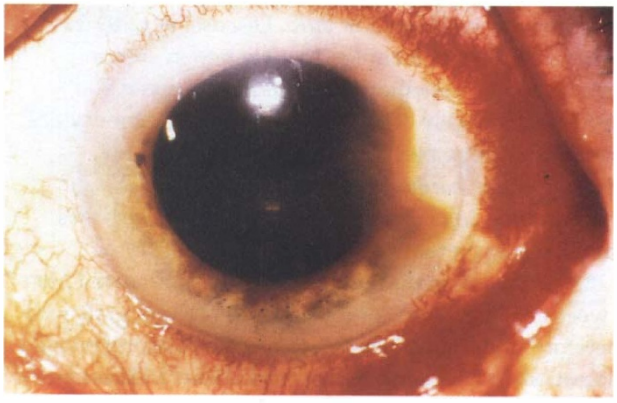

Fig. 1. *Yellow pigmentation is seen adjacent to the ulcer.*