LETTERS TO THE JOURNAL

Sir,

Infective Panophthalmitis Simulating Malignant Melanoma of the Choroid in a Patient with Myelodysplasia

Malignant melanoma of the choroid can at times be a difficult diagnosis. We report the case of a 72-year-old man suffering from aplastic anaemia with myelodysplasia, treated with steroids and repeated blood transfusions, who had an eye removed for 'malignant melanoma'. Histopathological study of the enucleated specimen showed, however, infective panophthalmitis. Subsequently the patient died and a post-mortem revealed septic vegetations on the aortic valves. The possible course of events is discussed and a brief review of the literature is given.

Case Report

The patient, a 72-year-old man, presented at the Casualty Department of the Victoria Eye Hospital, Hereford, in November 1990 with a 2-week history of visual field loss in the left eye. There was a past medical history of aplastic anaemia with myelodysplasia for which he had been given steroids and repeated blood transfusions. Bone marrow examination in 1988 revealed hypoplasia of all cell lines with minor dysplastic changes. In June 1990 he began to complain of 'dizzy turns'. Clinical examination disclosed a harsh systolic murmur, maximal at the right sternal edge, and an echocardiogram showed moderate aortic stenosis and mild aortic regurgitation, but good left ventricular function. He was treated with oxymetholone 50 mg three times daily, which is an anabolic steroid, and folic acid 5 mg twice daily; he was not taking any corticosteroids.

On ophthalmic examination in November 1990 the vision was 6/6 in the right eye and 6/9 in the left. The right eye was normal in all respects. In the left eye there was a 'solid detachment' of retina from 2 to 9 o'clock. There was associated retinal and subretinal haemorrhage, but no tears or holes were seen.

The blood haemoglobin was 12.5 g/dl and the white blood cell count 2.1 $\times$ 10^9/l. The results of liver function tests and the chest radiograph were normal.

The probable diagnosis on clinical grounds was a malignant melanoma of the choroid, but in view of the past medical history of aplastic anaemia the possibility of haemorrhagic retinal detachment was considered.

Ultrasonography was carried out at Moorfields Eye Hospital, London, in November 1990 and was reported as follows: 'There was evidence of a large, solid-looking lesion inferiorly, transverse base 19.7 mm, longitudinal base 14.9 mm, elevation 7.1 mm. The appearance suggests a probable malignant melanoma; there is associated retinal detachment' (Fig. 1).

It was decided to enucleate the globe and help was sought of the haematologist. Platelet transfusions were given and oral prednisolone 45 mg daily started in an attempt to stimulate the marrow. Four days later, shortly before his planned admission the patient presented to the Casualty Department with a painful red eye. Examination revealed that the visual acuity was reduced to perception of light only and there was proptosis, chemosis, corneal oedema, hypopyon and the intraocular pressure was low. The clinical picture at this stage suggested possible orbital extension from the intraocular tumour.

The left eye was enucleated with the patient under a general anaesthetic, and sent to the Department of Pathology at the Birmingham and Midland Eye Hospital for histopathological examination. At operation there was no evidence of an orbital tumour and the globe appeared to be intact. Haemostasis was secured with 'Sterisponge' and firm pressure.

On ocular pathology the globe was found to be of normal size. Opening in an oblique plane revealed total detachment of the retina together with subretinal haemorrhage and exudate. Sections for microscopy were cut at a number of levels. There was widespread ocular inflammation, particularly intense within the uvea; a large number of both acute and chronic inflammatory cells were

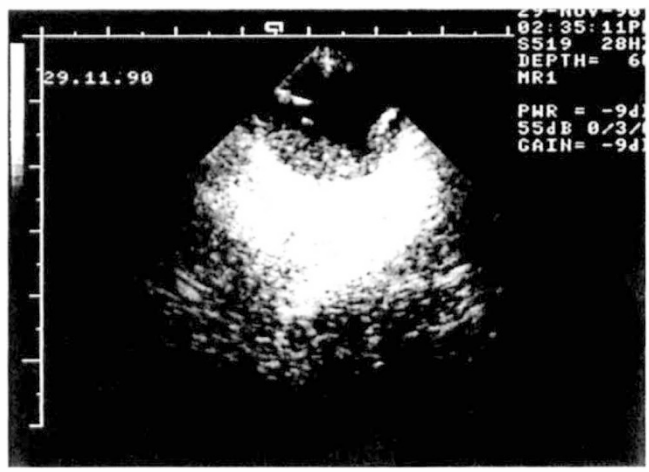

Fig. 1. *Ultrasonogram giving the appearance of an intraocular malignant melanoma with associated detachment of the retina.*

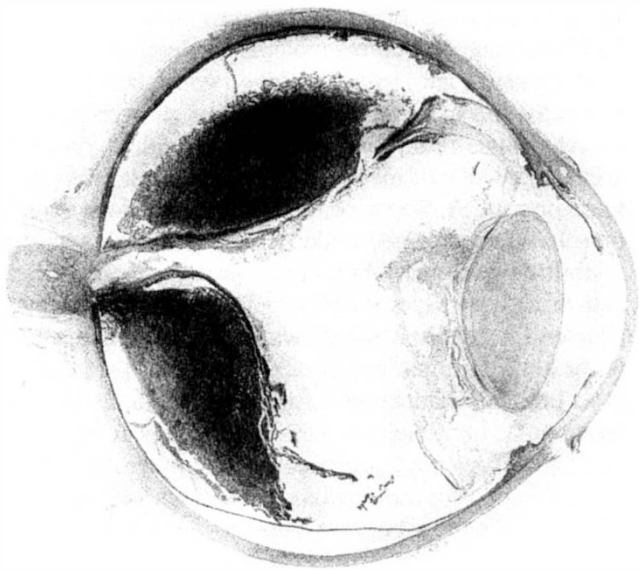

Fig. 2. *Section of the whole eye showing total detachment of the retina which is fragmented; haemorrhagic exudates fill the subretinal space. Haematoxylin and eosin, ×5.*

seen, and there was associated haemorrhage. In particular, there was massive haemorrhage into the subretinal space, the retina being detached, fragmented, and partially destroyed (Fig. 2). Large numbers of Gram-positive cocci were identified (Fig. 3). There was no evidence of an intraocular neoplasm and on histopathological grounds the diagnosis was haemorrhagic retinal detachment and infective panophthalmitis.

On the fourth post-operative day the patient developed a pyrexia; at this time also there was a suspicion of herpes zoster on his left upper arm. Blood cultures were negative. Systemic antibiotics were given and the pyrexia settled; he was subsequently discharged home. About 4–6 weeks later, however, i.e. in January 1991, he complained of severe pain in his chest, back and wrists and shortly after emergency admission to hospital he died.

At post-mortem the cause of death was given as a ruptured thoracic aorta associated with an infective endocarditis and myelodysplasia. There were septic vegetations on the aortic valves and culture produced *Staphylococcus epidermidis, Enterobacter aerogenes* and *Candida albicans*.

Discussion

Although over the years progress has been made in the evaluation of patients with suspected malignant melanoma of the choroid, difficulties continue to exist. Shields *et al.*[1] listed various lesions which clinically may resemble malignant melanoma of the posterior uvea; most commonly these are choroidal naevus, disciform degeneration, choroidal haemangioma and congenital hypertrophy of the retinal pigment epithelium. Morgan and Gragoudas[2] reported three cases of limited suprachoroidal haemorrhage resembling choroidal melanoma and in which serial clinical observation of the patients helped to resolve the diagnosis.

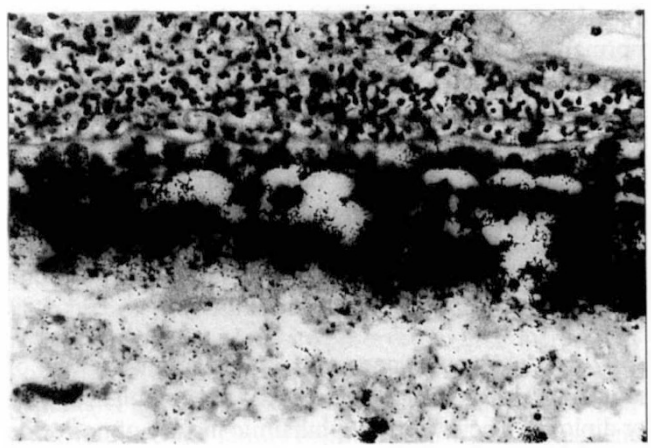

Fig. 3. *Section through the choriocapillaris and the retinal pigment epithelium showing dense infiltration by Gram-positive cocci. Gram stain, ×500.*

In the case presented it would appear that in association with the myelodysplasia, the low platelet count led to the haemorrhagic detachment of the retina which clinically simulated malignant melanoma of the choroid. The low white cell count, pre-existing valvar heart disease and recent corticosteroid treatment were all predisposing factors in the development of infective endocarditis. The panophthalmitis presumably was metastatic. Of significance is the fact that it was only by histopathological study of the enucleated eye and post-mortem examination of the patient that the full, correct diagnosis was firmly established.

A. R. Raghuram, FRCS, FCOphth
A. While, FRCS, FCOphth
Victoria Eye Hospital, Eign Street, Hereford HR4 0AJ, UK

J. Harry, BSc, FRCS, FCOphth
Birmingham and Midland Eye Hospital, Birmingham, UK

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References

1. Shields JA, Augsburger JJ, Brown GC, Stephens RF. The differential diagnosis of posterior uveal melanomas. Ophthalmology 1980;87:518–22.
2. Morgan CM, Gragoudas ES. Limited choroidal haemorrhage mistaken for a choroidal melanoma. Ophthalmology 1987;94: 41–6.

Sir,

Discrete Metastasis to an Extraocular Muscle

We report the case of a patient who was found to have an enlarged lateral rectus muscle in the absence of any clinical signs or symptoms of systemic disease. Biopsy of the swelling demonstrated oat cell carcinoma, which was also