CASE NOTES

CHOROIDAL MELANOMA INVADING THE ORBIT WITHOUT DISTANT METASTASES*

BY

V. H. SMITH AND A. NICOL

*From Manchester Royal Eye Hospital and the Department of Pathology,
University of Manchester*

It is now generally accepted that the prognosis of choroidal melanoma is not necessarily very bad, depending on such variables as cell type and pigmentation, the age of the patient, and the stage of the growth when the eye is enucleated. The present case is reported because it demonstrates that, even when the growth has progressed beyond the bulb and is freely invading the orbital tissues, distant metastases need not occur. Reese (1956) quotes a mortality of 91 per cent. for this stage of melanotic growth followed over a 5-year period. In the present case a satisfactory result might have been obtained by exenteration, a procedure which was considered and ultimately abandoned because of the poor condition of the patient.

Case Report

An unmarried woman aged 77 was admitted to the Manchester Royal Eye Hospital under the care of Mr. A. Stewart Scott on December 20, 1958, with a proptosis of the left eye of 2 weeks' duration; this had increased in size more rapidly immediately before admission.

Examination.—She was semi-comatose and disorientated.

Left Eye.—No perception of light; the eye was grossly proptosed, with marked chemosis and a totally-staining cornea, through which a small inactive pupil and opaque lens could just be discerned. The lids were swollen and bruised and were firmly held apart by the protruding globe.

Right Eye.—This seemed normal although no visual acuity was recordable.

The patient was dyspnoeic and cyanosed. There was a mid-systolic murmur at the apex, tubular breathing was heard over the right lower lobe, and ankle and sacral oedema were prominent. The liver was not palpably enlarged. Chest x ray showed a rounded opacity in the right lower zone. A tentative diagnosis was made of carcinoma of a bronchus metastasizing to the left orbit with superimposed congestive heart failure.

Treatment.—Penicillin, digoxin, and diuretics were prescribed and aureomycin ointment was applied to the eye under a dressing of tulle gras.

* Received for publication December 4, 1959.

The prognosis was thought to be so poor that at first the eye was considered only in terms of comfort. Routine investigation showed a normal blood count, bleeding and clotting times. Further chest *x* ray showed resolution of the opacity which was assumed to have been of inflammatory origin. An *x* ray of the skull showed numerous opacities, but these were subsequently proved on histological examination to be angiomaticous malformations with no evidence of neoplasm.

The patient's general condition slowly improved and on January 30, 1959, surgical exploration was undertaken by Mr. A. Stewart Scott. The nature of the lesion was at once revealed; the proptosis was caused by haemorrhage following rupture of the globe by a choroidal melanoma. It was impossible to remove the whole eye as the posterior pole was irretrievably bound down to the orbital contents which were densely infiltrated by tumour.

The anterior portion was sent for section and was reported by Dr. J. L. S. Smith as follows:

"Malignant melanoma of uvea and episclera. The specimen comprises several strips of sclera and some small haemorrhagic fragments. The globe contents include large masses of melanotic tumour of a deeply pigmented character, the great majority of the cells being of a fully differentiated type. In places these elements form aggregates of rounded-off chromatophores interspersed with some inflammatory cells and abundant haemorrhage. The tumour is singularly free from mitoses. The supporting blood vessels are well-formed. Large areas of granulation tissue, almost devoid of tumour cells, are also present. The episclera contains large plaques of melanoma, in places admixed with haemorrhage. The intra-ocular component of this tumour has undergone a partial necrosis and there has been considerable intravitreal growth of granulation tissue. In all probability, plentiful tumour tissue is still present in the orbit. The tumour type suggests a very moderate grade of malignancy."

Result.—Post-operatively the patient suffered from recurrent attacks of dyspnoea and developed auricular fibrillation with some nausea, vomiting, and angor animi. In view of her poor condition it was felt that exenteration was too severe a procedure. Consequently she was seen by Dr. E. C. Easson from the Christie Hospital and Holt Radium Institute who suggested a palliative course of *x*-ray therapy to the orbit. Unfortunately she never became fit enough for transfer, suffering from repeated attacks attributed to myocardial ischaemia which were complicated terminally by attacks of vomiting and abdominal distension. She died on May 21, 1959.

Necropsy

This was performed 5 hours after death. The body was that of an elderly female showing no jaundice or skin pigmentation; the superficial lymph nodes were not palpably enlarged. The significant findings were as follows:

The left eye had been partially removed, leaving a horizontal band of black pigmented tissue. The remaining orbital contents were exenterated. Subsequent histological examination showed that at no point did melanotic cells penetrate the orbital fascia, nor were there secondary deposits in the optic nerve.

The heart (370g.) showed moderate left ventricular hypertrophy and dilatation of both ventricular chambers; there was fairly severe coronary atherosclerosis with occasional flecks of myocardial fibrosis confirmed histologically.

The peritoneal cavity showed a generalized peritonitis as a result of perforation of one of a number of ulcers, mostly superficial, of the mucosa of the pelvic colon. Histologically these ulcers showed necrosis of the mucosa with acute inflammatory

cell infiltration extending throughout the wall of the gut; there was no indication as to their aetiology.

An exhaustive search, both macroscopically and microscopically, was made of all organs, including brain, liver, lungs, kidneys, adrenals, gastro-intestinal tract, and lymph nodes, for the presence of melanotic deposits, but none was found. It was concluded that death was due to myocardial ischaemia as a result of severe coronary atherosclerosis, accelerated by a terminal peritonitis.

We wish to thank Mr. A. Stewart Scott for permission to publish this case and Professor A. C. P. Campbell for helpful advice and criticism.

REFERENCE

- REESE, A. B. (1956). "Tumors of the Eye and Adnexa", in "Atlas of Tumor Pathology", Sect. X, Fasc. 38. Armed Forces Institute of Pathology, Washington, D.C.