AN ETHMOIDAL TUMOUR TREATED WITH METHOTREXATE

By IVOR FREW (Newcastle)

THE appearance of a secondary deposit may sometimes be the first indication that a patient has a neoplasm. Should the primary tumour be accessible for possible cure, then the metastasis may remain as the major hazard to the patient. In the patient to be described, the primary tumour was adequately dealt with, but the secondary deposit remains as the main risk to his life.

In 1961 a male patient, aged 59 years, was found to have a neoplasm arising in the left ethmoid region, extending into the maxillary antrum and the lateral wall of the nose. Histology demonstrated a secondary deposit from a Hypernephroma. The kidney tumour was removed, and it was decided that the sinus disease should be treated with preliminary surgery, and then by high voltage therapy. A trans-palatal approach was used, and as much tumour as possible removed. 5,750 r. were given by the Linear Accelerator, and eventually all trace of the tumour disappeared.

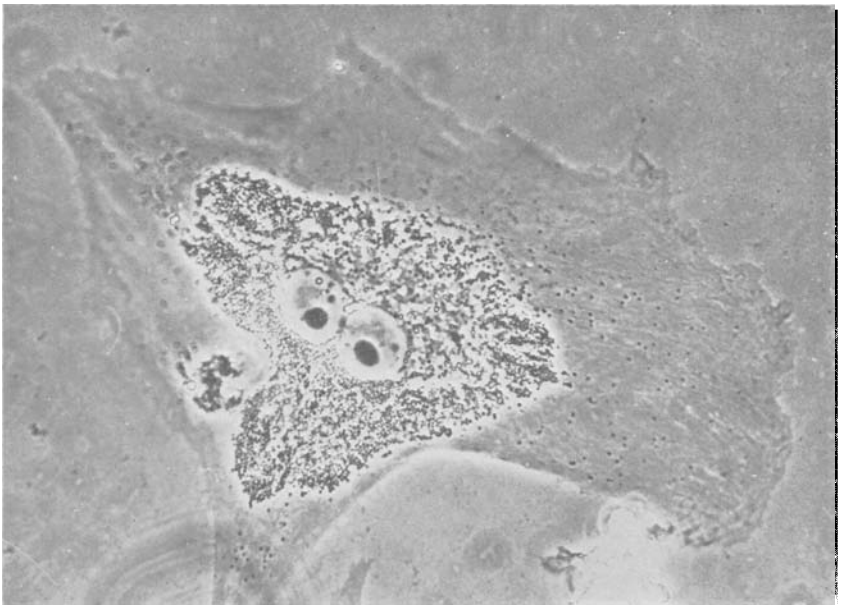
He remained well until *February, 1965,* when he returned, between review appointments, complaining of severe epistaxis. Examination showed a small tumour on the roof of the nose, apparently quite localized. Biopsy confirmed a recurrence of the Hypernephroma. The patient had already received a full tumour dose of Radiotherapy, and surgery was not possible in this area.

A tumour culture was set up (Fig. 1) and cells were successfully grown from the biopsy material. The response to Vincristine was sufficiently good (Fig. 2) to suggest arterial perfusion might be worth while. There was not sufficient material to carry out a sensitivity test for Methotrexate. While good results have been obtained using Vincristine in children for the treatment of Medulloblastoma (Lassman, Pearce and Gang, 1965), I have not found such a good response in neoplasms of the upper respiratory tract. Therefore, it was decided to use Methotrexate in the perfusion and to keep the Vincristine as a reserve in case of recurrence.

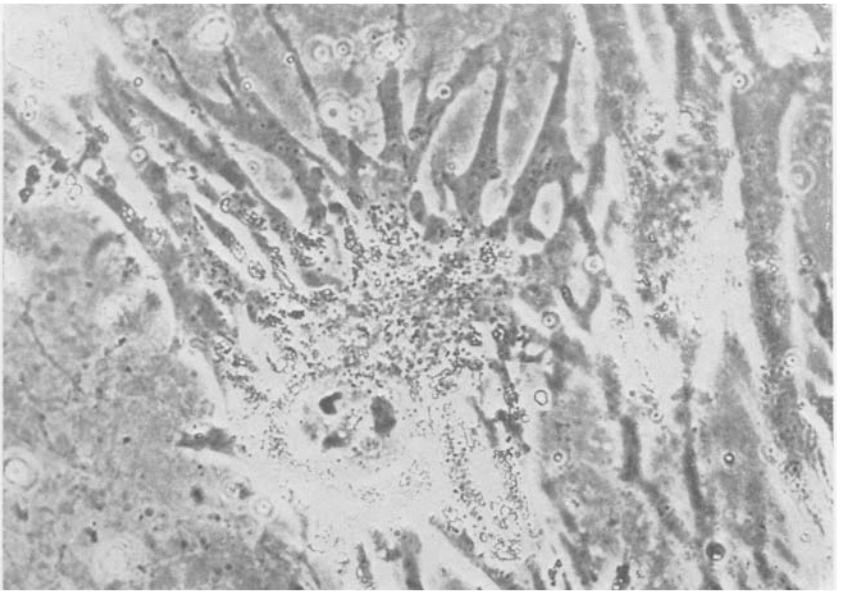
A catheter was inserted *via* the left common carotid artery into the internal carotid artery. Injection of dye produced good coloration of the tumour. Infusion was started using a DCL Pump, with 6 mg. Methotrexate in 500 c.c. of 4·3 per cent. Dextrose, containing 10,000 units of Heparin, delivered in 12 hours. Leucovorin 12 mg. was given intra-muscularly 6 hourly. The initial white cell count was 8,100 c.mm. After 24 hours the epistaxis had ceased, and in 7 days the tumour had started to diminish in size. The Methotrexate was continued for a further 4 days, when the tumour had practically disappeared. The white cell count was now 2,000 c.mm. and it was decided to stop the infusion. Since then the tumour has continued to regress and all that remains is a small scarred area.

There is no guarantee that recurrence will not occur, but I suggest this as a means of controlling tumours in this area, especially vascular types producing

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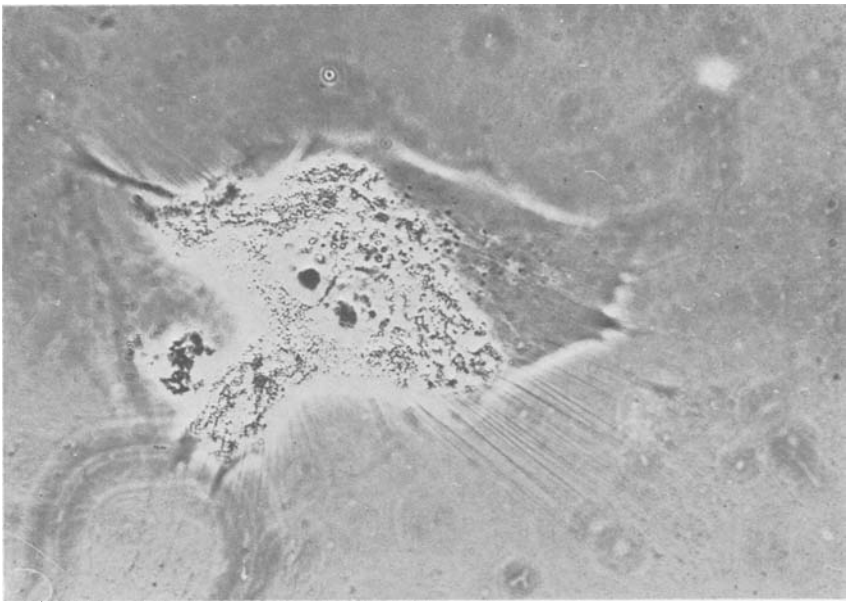


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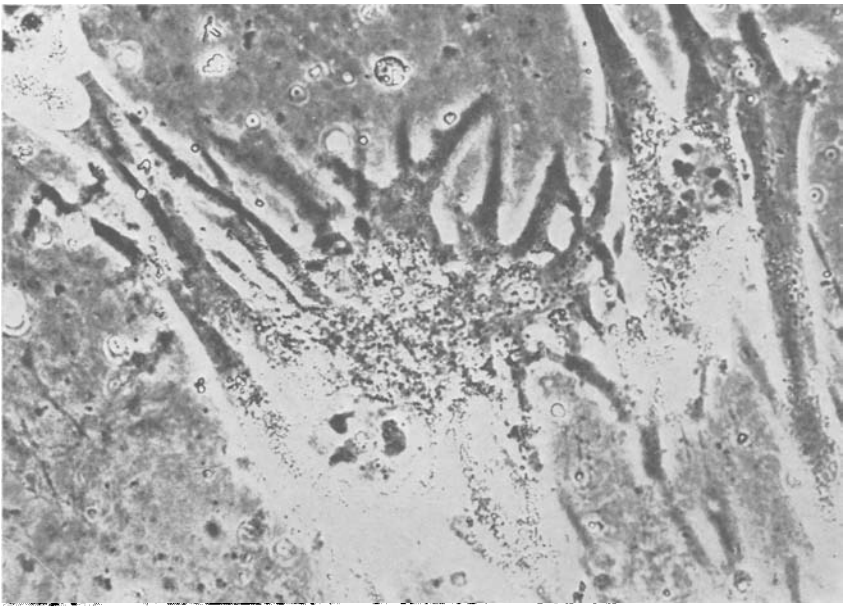
FIG. 1.

Two typical tumour cells after 7 days culture.

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(*a*)



(*b*)

FIG. 2.

Same cells 20 minutes after Vincristine. The cells partly regenerated and required more Vincristine to kill them.

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epistaxis difficult to control, and those tumours considered to be resistant to high voltage therapy.

The high voltage therapy was by Mr. Roger Finney and Dr. Geoffrey Pearce supervised the tumour culture and provided the photographs.

REFERENCE

LASSMAN, L. PEARCE, G. W. and GANG, J. (1965) *Lancet*, **1**, 296.

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