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Meningeal Tumour Infiltration in Hormone Resistant Prostate Cancer Demonstrated with Magnetic Resonance

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PALLIATION OF symptoms is the main goal of treatment in hormone resistant prostate cancer. Neurological disturbances may present as paraplegia, general cerebral dysfunction or cranial nerve palsy. The latter is frequently due to extension of skull base metastases to neighbouring neural structures [1, 2]. Cerebral dysfunction and cranial neuropathy may also be due to metastases to the meninges as we have observed in 6 patients in our hospital. Such lesions may be demonstrated with gadolinium dimeglumine (Gd-DTPA) enhanced magnetic resonance (MR) imaging.

A 59-year-old patient with adenocarcinoma of the prostate underwent MR because of impaired vision of the left eye. Contrast enhanced MR images demonstrated diffuse meningeal metastases on the left side with a large tumour in the temporal region adjacent to the optic nerve (Fig. 1). The vision improved considerably following 3 days of radiotherapy combined with high dose dexamethasone (4 mg × 4 daily) per os. The patient died of his widespread malignancy 5 months later.

The acute or subacute development of cerebral dysfunction or cranial nerve palsy in an elderly man is no rare event and is often interpreted as a sign of cerebrovascular infarction. In a patient with prostate cancer such symptoms should raise the suspicion of an intracranial tumour manifestation. The present case illustrates that meningeal metastasis may be the cause of the symptoms.

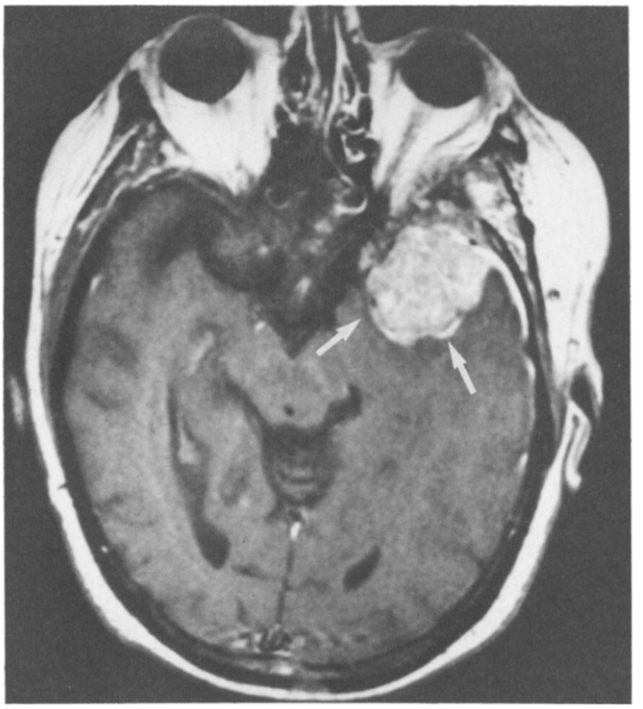

Fig. 1. Bulky meningeal metastasis in left temporal region demonstrated with contrast enhanced MR (arrows).

Involvement of the meninges has previously been demonstrated with contrast enhanced MR imaging in carcinomas of the breast, lung, oesophagus, head and neck and lymphoma and leukaemia [3]. Most of these have shown diffuse curvilinear enhancement underneath the inner table of the skull or small nodular tumours on the surface of the brain [3, 4]. A bulky metastasis like in the present patient seems unusual.

There is evidence that the incidence of meningeal metastases is particularly high in cancer patients with longtime survival. CT and radionuclide bone scan may be negative in spite of widespread meningeal involvement.

The palliative treatment of meningeal tumour in patients with hormone resistant prostate cancer consists of radiotherapy and high dose dexamethasone and may result in a dramatic relief of symptoms. Though the median survival is only 8 months, the effectiveness of such treatment with regard to improving quality of life justifies the cost of a contrast enhanced MR examination to make a correct diagnosis.

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