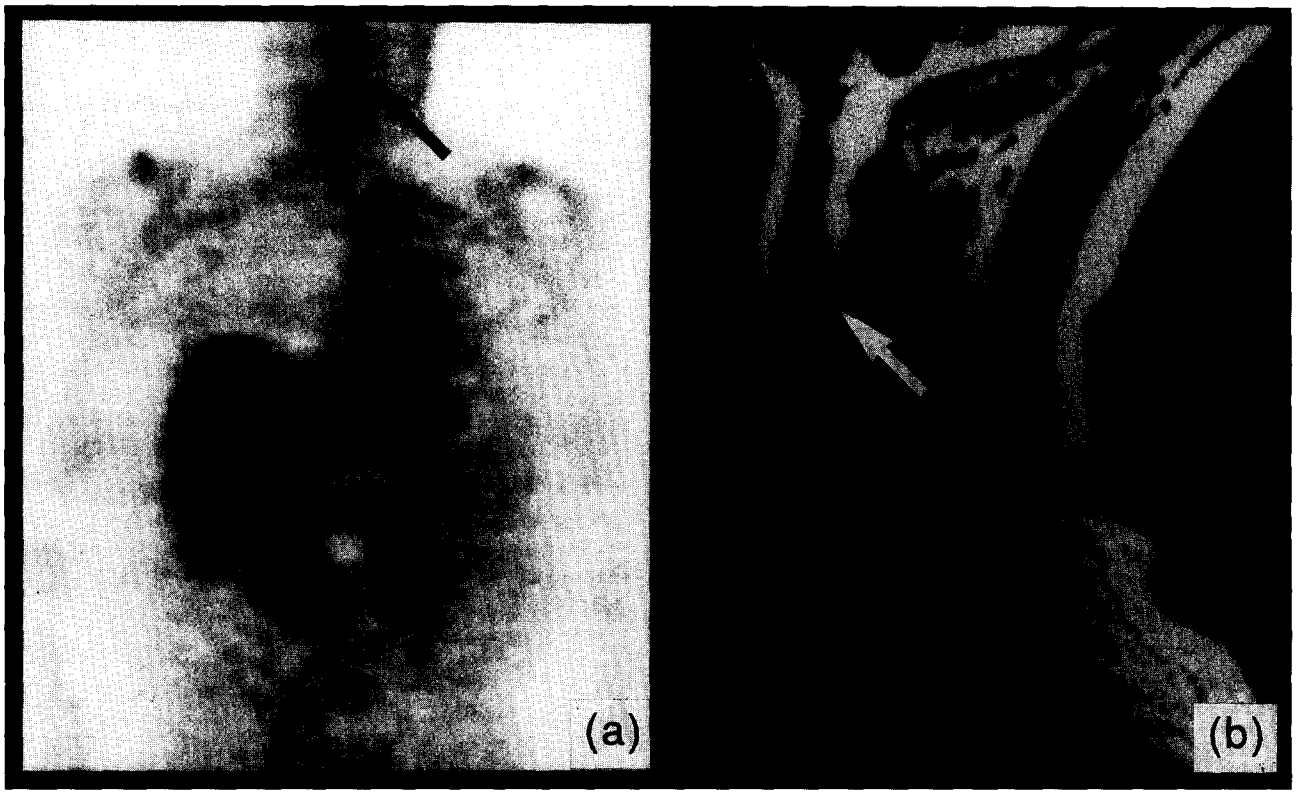

Figure 1. (a) Coronal FDG PET image showing a metastatic tumour focus in the neck (arrowed), a large cavitating tumour deposit in the liver, and normal bilateral renal concentration of tracer. (b) Sagittal MR image revealing the cervical metastasis to be an intramedullary deposit (arrowed) in the cervical spinal cord.

This capability makes PET a useful tool in tumour evaluation because tumour tissue is metabolically more active than normal tissue. FDG PET has been found to be sensitive in the detection and staging of carcinoma of the lung [1, 2].

Intramedullary spinal cord metastases are extremely rare and account for only 1.3% of all spinal metastases [3]. Historically, intramedullary metastases are difficult to demonstrate radiologically [4], even in clinically symptomatic patients, but MR imaging has made evaluation easier [5]. To our knowledge, the detection of an asymptomatic intramedullary spinal cord metastasis has not previously been reported. The early identification of this patient's metastasis by FDG PET, subsequently confirmed by MR imaging, enabled treatment to be given prior to the development of neurological symptoms. The detection of an unexpected metastasis at an unusual site with FDG PET demonstrates its usefulness in the detection of metastatic disease.

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Primary Mediastinal Seminoma

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PRIMARY MEDIASTINAL seminoma is a rare malignant entity, histologically identical to its gonadal counterpart, and

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believed to arise from primordial germ cells that did not complete their migration from the urogenital ridge to the gonads during embryogenesis [6]. These germ cells may be more prone to malignant transformation, similar to that of undescended testes [1]. The anterior mediastinum is the most frequent site of extragonadal seminomas, followed by the pineal body and the retroperitoneum. Here we report three case reports.

A 33 year-old male was first seen in March 1989 because of dyspnoea, fatigue and dysphagia. Chest X-ray showed a mass in the mediastinum. Thorax CT confirmed the presence of a tumour occupying the anterior portion of the mediastinum, compressing the trachea, normal lung parenchyma and hilar. Needle biopsy permitted diagnosis of seminoma. Abdominal CT and testicular ultrasound were normal. Assay of alphafetoprotein (AFP) was negative, βHCG (human chorionic gonadotrophin) 58.7 U/l (normal <3). Treatment consisted of chemotherapy (BVP (bleomycin, vinblastine, cisplatin) × 2) followed by radiotherapy to the mediastinum, supra-infraclavicular and cervical regions, to a dose of 36 Gy in 20 fractions, and an additional boost of 14 Gy to the anterior mediastinum and two additional BVP cycles and vinblastine chemotherapy. The patient is well and disease-free after 70 months.

A 40 year-old male presented in May 1993 with 2 months thoracic pain, dyspnoea and recent haemoptyses. Clinical examination showed left vocal cord paralysis. Thoracic CT showed a large tumour in the anterior portion of the mediastinum extending to the left pulmonary hilum. Transthoracic biopsy was inconclusive. Diagnosis of seminoma was obtained by thoracotomy and biopsy of the tumour. Abdominal and cerebral CT, testicular US and alphafetoprotein were normal. βHCG was 17.8 U/l (normal <15).

The patient was treated with radiotherapy, to a dose of 36 Gy to the mediastinum and supraclavicular regions in 20 fractions, followed by an additional dose to the anterior mediastinum up to a total dose of 43 Gy. The patient is well and disease-free after 30 months.

A 21 year-old male was first seen in July 1994 with an anterior chest wall mass, asymptomatic. Clinical examination revealed supraclavicular nodes. CT scan showed polilobulated mass, located mainly in the right paratracheal space, and infiltration of the parasternal thoracic wall. Abdominal and cerebral CT scans and testicular ultrasound were negative. Alphafetoprotein assay was negative, βHCG = 1.8 U/l (<1).

The patient was treated by chemotherapy (PEB (platinum, etoposide, bleomycin) × 4) followed by radiotherapy to the mediastinum and supraclavicular regions, to a dose of 30 Gy in 17 fractions, followed by an additional dose to the anterior mediastinum to a total dose of 40 Gy. The patient is disease-free after 16 months.

The management of these tumours has varied. Although surgical resection is occasionally curative [7, 8], it is not accepted as the only treatment modality for these tumours. Radiotherapy alone or associated with surgery is the standard therapy in the favourable forms [3–5], with eventual salvage chemotherapy. The emerging role of chemotherapy in the treatment of advanced testicular seminoma has led some authors to use it as a primary form of treatment [2]. For poor-risk tumours (patients with metastases at diagnosis, bulky tumours, advanced age or female sex), combined treatment with chemotherapy–radiotherapy must be considered, although with caution because of potential overlap toxicity [9].

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