

Solitary plasmacytoma of the carina

SUSAN J KOBER

From the King Edward VII Memorial Chest Hospital, Hertford Hill, Warwick, UK

Extramedullary plasmacytomas are rare tumours that have been described in various sites in the body, the most usual being the nasopharynx and upper respiratory tract. A patient who had received several courses of radiotherapy for plasmacytomas of the oro- and naso-pharynx was found to have a solitary plasmacytoma at the carina.

Case report

A 69-year-old woman was admitted with a three-week history of shortness of breath and wheezing accompanied by infrequent small haemoptyses. She had been treated at home for asthma with bronchodilators, and steroids, but had shown no improvement.

She had stridor but no other added sounds in the chest. Systematic examination was normal. A blood count and film were normal. ESR was 40 mm/min. Urea, electrolytes, and liver function tests were normal. Protein electrophoresis showed a discrete band in the gamma region but immunoelectrophoresis showed normal immunoglobulin levels and no monoclonal band. Urine contained no Bence-Jones protein. Sternal marrow was normal with no excess of plasma cells. Chest radiograph and tomograms of the trachea showed a lobulated mass at the carina, which was confirmed by bronchoscopy. A biopsy specimen taken at bronchoscopy showed normal epithelium with heavy submucosal infiltration by compact masses of plasma cells (fig 1). The features were those of a plasmacytoma.

In 1959 this patient had been seen in the ENT department complaining of hoarseness, and a prolapse of the right laryngeal ventricle and small areas of lymphoid tissue in the nasopharynx had been found. Histology of these areas showed multiple small plasma cell tumours. A course of radiotherapy to the affected area resulted in rapid disappearance of the lesions. The next year small plasmacytomas recurred on both right and left sides of the nasopharynx and on the roof of the soft palate, and these again disappeared with radiotherapy. Comparison of the biopsy from the carinal lesion with slides from the earlier biopsies from the nasopharynx (fig 2) showed the histology to be identical.

The carinal tumour was first treated by radiotherapy but two weeks after completion of treatment her stridor was still present and further tomography showed no significant change in tumour size. This was confirmed at a second bronchoscopy when a large portion of tumour was removed via the bronchoscope.

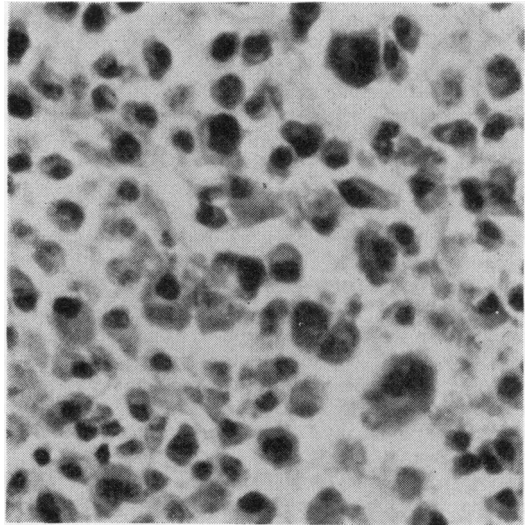


Fig 1 *Biopsy specimen from carinal tumour, showing compact masses of plasma cells ($\times 1000$).*

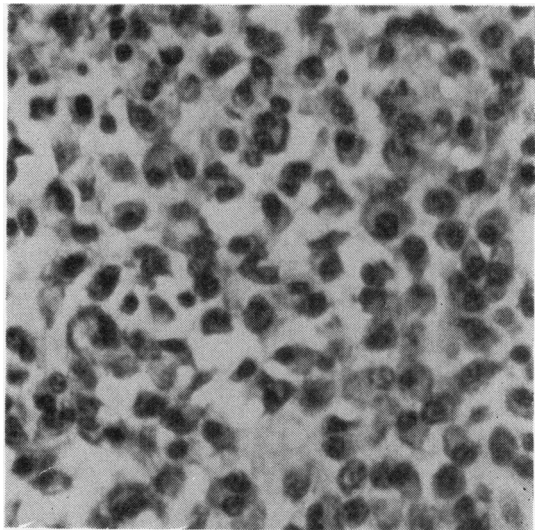


Fig 2 *Biopsy specimen from nasopharyngeal lesion removed in 1959, showing similar histology to that of carinal lesion ($\times 1000$).*

Discussion

Plasma cell tumours occur most commonly in the bone marrow and only rarely in extramedullary sites. Most extramedullary tumours are found within the upper respiratory tract and oral cavity, but very few have been reported occurring below the larynx in the trachea or main bronchi. In 1943 Hellwig, in a review of publications, found 128 cases of extramedullary plasma cell tumours, of which 110 were located in the conjunctiva and air passages. Of those reported in the air passages, none was located below the larynx. Herskovic *et al* (1965) reviewed 33 cases of intrathoracic plasmacytoma and of these, six were in the trachea and two in the bronchi. One patient also had tumours in both trachea and bronchus. In 1965 Dines *et al* reported a patient with solitary plasmacytoma of the trachea in whom, as in our patient, stridor had been mistaken for asthma.

Plasmacytoma may arise as a primary tumour, or a secondary deposit from a primary growth in the bone marrow. Histologically it consists entirely of plasma cells of varying degrees of maturity. Foci of smaller cells resembling lymphoid follicles have been described which give rise to the larger, more mature myeloma cells. As in multiple myeloma, abnormal and excessive plasma globulins may be found in the peripheral blood, and Bence-Jones protein may be excreted in the urine.

Solitary plasmacytomas tend to appear in elderly patients, and the prognosis appears to be better than that of patients with disseminated myeloma. Treatment of the tumours has been by resection wherever possible with or without radiotherapy, or by radiotherapy alone. Long-term follow-up reports of patients with solitary lesions are few. In the paper by Herskovic *et al* (1965) eight out of 33 patients were regarded as having solitary lesions and were alive from nine

months to eight years after diagnosis with no evidence of disseminated disease. In the remaining 21 patients myelomatosis was already present or developed soon after the plasmacytoma had been diagnosed. Childress and Adie (1950, 1955) reported cases of plasmacytoma of lung and mediastinum treated by excision. Two patients were alive after five years and ten months respectively, and a third had a recurrence after four years, which was again removed by surgical excision. The case of solitary tracheal plasmacytoma reported by Dines *et al* (1965) was treated by excision but no follow-up is available. While some patients with solitary plasmacytoma later develop disseminated myeloma, most reported cases have not done so.

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Requests for reprints to: Dr S J Kober, Brook Farm, Gt Ashford Road, Norton, Bury St Edmunds, Suffolk