Thorax, 1979, **34**, 401–403

Short reports

Solitary pulmonary bilharzioma

H T THOMPSON, R PETTIGREW, AND E A JOHNSON

Departments of Cardiothoracic Surgery and Pathology, Princess Margaret Hospital, Christchurch, New Zealand

Since Bilharz first discovered the parasite in 1851 the protean signs of schistosomiasis have been increasingly recognised. Pulmonary involvement, however, is usually generalised. A solitary pulmonary granuloma has been reported only on two previous occasions (Mallah and Hashem. 1953; Tizes *et al*, 1967).

Case report

A 40-year-old man presented in February 1974 with an unproductive cough, pyrexia, night sweats, and lassitude. A heavy smoker, he had lost over 12 kg in weight in two months.

Born in Kenya in 1933, he had also lived in Rhodesia and Tanzania before moving to England in 1957. In 1968 he was admitted to the Hospital for Tropical Diseases in London with intermittent pyrexia and weight loss. The schistosoma complement fixation test was positive to a titre of 1/160, and ova of *Schistosoma mansoni* were found in his stools. A chest radiograph showed consolidation in the posterior segment of the right upper lobe. At bronchoscopy a polyp was seen in the right upper lobe bronchus. Biopsy showed a non-caseating giant cell granuloma. The patient was treated with stibocaptate (Astiban) and made an apparently complete recovery. He migrated to New Zealand in 1971 and remained well until the beginning of 1974.

The patient had pronounced clubbing of the fingers and toes. Radiological examination showed a 5 cm opacity in the posterior segment of the upper lobe of the right lung and enlarged hilar nodes (figs 1 and 2).

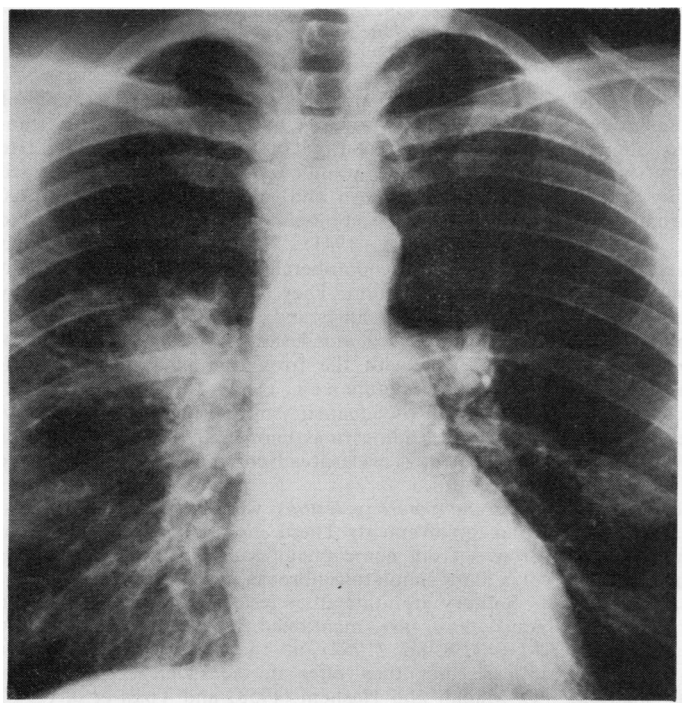

Fig 1 *Lesion is seen in posterior segment of right upper lobe. There is increased shadowing in right hilar region.*

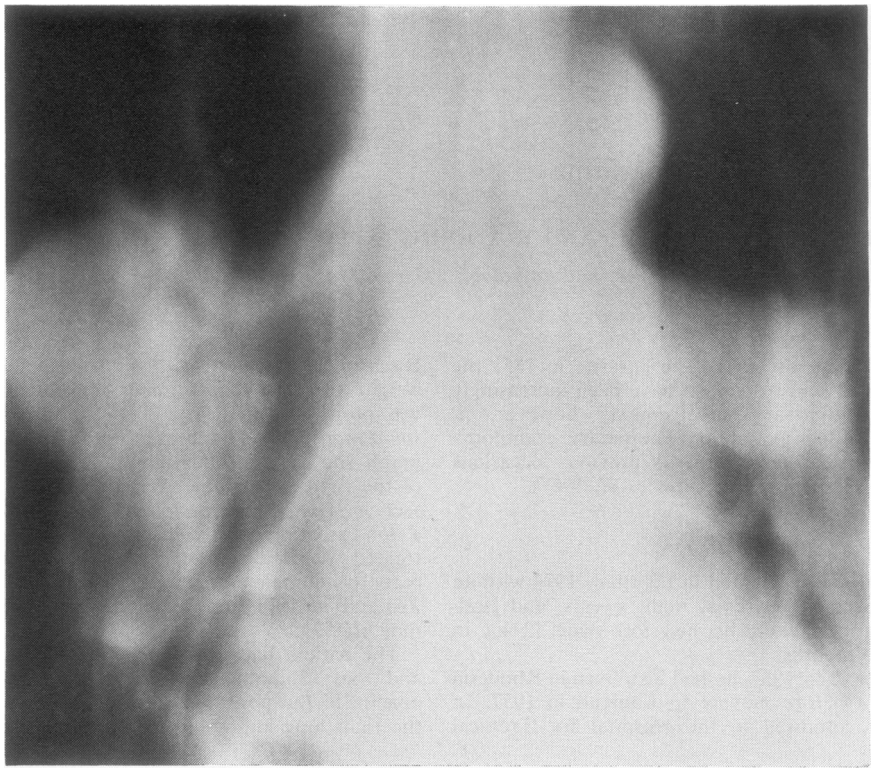

Fig 2 *A tomogram of the mediastinum shows primary lesion. Blunt carina between upper and intermediate bronchi confirms presence of hilar adenopathy.*

Bronchoscopy showed no gross abnormality, and there were no malignant cells in the bronchial secretions. Biopsy of the right upper lobe bronchus showed normal bronchial mucosa. A mediastinoscopy showed no abnormality. An aspiration needle biopsy of the lesion, however, was reported to show malignant cells of an unusual appearance.

A right upper lobectomy was performed on 14 March 1974 because a large tumour was found in the posterior segment of the lobe. Frozen sections of both hilar nodes and of the mass itself failed to show any evidence of malignancy. The patient's postoperative progress was uneventful, and he has remained well with considerable regression of his finger clubbing.

The resected specimen (fig 3) was described as showing a pronounced fibroplastic reaction with many chronic inflammatory cells. In many areas there were ill-defined granulomas containing multinucleated giant cells and large epitheloid cells, surrounded by eosinophils and plasma cells. Some bilharzia ova were found in sections close to the lesion (fig 4). Solitary bilharzioma was diagnosed.

Discussion

Pulmonary involvement in schistosomiasis mansoni may occur early in the disease when migration of schistosomules produces a toxic reaction with transitory areas of consolidation. More commonly, late in the disease, granulomatous lesions are formed around embolic ova and, more rarely, adult worms. The incidence of pulmonary involvement may be up to 64% (Koppisch, 1941). The pathological lesion is essentially a pseudotubercle that is diagnostic when it surrounds an ovum. They are usually spread diffusely throughout both lungs and may be of two types.

Obstructive vascular lesions resulting from necrotising arteritis with the formation of intra- and perivascular pseudotubercles. This is followed by recanalisation with pseudoaneurysm and arteriovenous fistula formation leading to pulmonary hypertension. If this involvement is widespread cor pulmonale may be the end result.

Parenchymatous lesions without a significant vascular involvement. These may produce various syndromes from acute pneumonia to chronic bronchitis or a state simulating fibrocaseous tuberculosis.

Solitary granulomatous lesions, which may occur in any organ, are mentioned by Garcia-Palmieri and Marcial-Rojas (1962) in their classification of the disease, but they offer no aetiological explanation. El Mallah and Hashem (1953) and Tizes *et al* (1967)

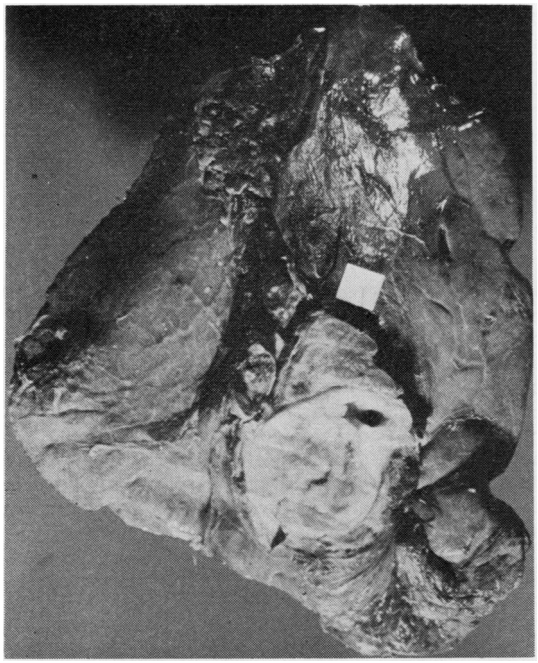

Fig 3 *Resected right upper lobe showing proximity of lesion to hilum.*

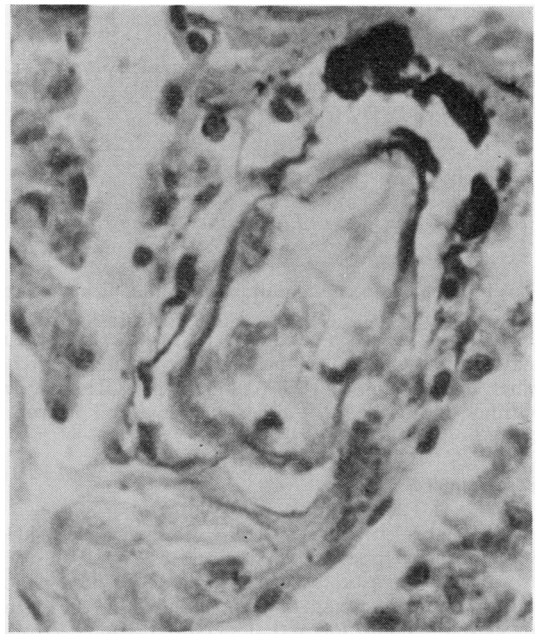

Fig 4 *Schistosoma mansoni ovum, with characteristic lateral spur, in lung tissue adjacent to the lesion (Haematoxylin and eosin ×400).*

have suggested that the cause may be a heavy localisation of embolised ova at sites of previous disease, together with local hypersensitivity to toxins that may have been liberated by antibilharzial treatment.

Although ova were found in the adjacent lung in the case just described, none were found in the actual lesion despite an intensive search.

References

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Requests for reprints to: Dr H T Thompson, Department of Cardiothoracic Surgery, Princess Margaret Hospital, Cashmere Road, Christchurch 2.