Case report

Recurrent Wilms tumour presenting as bilateral pneumothoraces

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Received 21 July 2002; received in revised form 7 January 2003; accepted 10 January 2003

Abstract

We report the case of a 14-year-old girl who presented with bilateral pneumothoraces secondary to recurrent Wilms’ tumour, 10 years following the initial treatment of her tumour. Recurrent Wilms’ tumour presenting as bilateral pneumothorax so long after the original diagnosis has not previously been reported.

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Keywords: Bilateral; Pneumothorax; Wilms’ tumour; Lung; Metastases; Video assisted thoracoscopy

1. Introduction

Late relapse in Wilm’s tumour is very uncommon. The most frequent site of recurrence is the lung. Common presentations for lung metastases include pulmonary nodules and pleural effusion. In this unusual case, the patient presented 10 years after her original treatment with bilateral pneumothoraces, secondary to residual disease in the lung apices.

2. Case report

A 14-year-old girl presented to casualty with sudden onset of shortness of breath. As a 4-year-old, she had undergone treatment for Stage IV Wilms’ tumour, with vincristine and actinomycin and pulmonary radiotherapy. She had been in remission for the last 10 years. On this admission, her chest X-ray revealed bilateral pneumothoraces, a large apical cyst on the right and a smaller cyst on the left (Fig. 1). Bilateral intercostal drains were inserted in the casualty department with resolution of the pneumothoraces. In view of the cystic changes at the apex of the lung, she was considered for video assisted thoracoscopy (VATS) resection of the bullae and pleurodesis.

At operation, a large cyst approximately 8 × 6 cm was found at the apex of the right lung and was stapled off. The remainder of the thoracic cavity on the right was normal and a talc pleurodesis was performed. On the left, a smaller cyst was found at the apex of the lung. This was stapled and a talc pleurodesis performed. The cysts were sent for histology. The patient had an entirely uneventful postoperative recovery. Her drains were removed on the third postoperative day and she was fit for discharge 2 days later.

Histology from the cysts revealed elements of residual Wilms’ tumour, with blastematous and smooth muscle components predominating. Occasional epithelial tubules were also identified.

3. Discussion

This case in an example of a rare cause of pneumothorax. Pneumothorax in association with pulmonary metastases in Wilms’ tumour has previously been described [1,2]. Both case reports involved children receiving chemotherapy or radiotherapy for known pulmonary metastases. The interval between initial presentation with Wilms’ tumour and the appearance of pulmonary metastases was between 4 months and 2 years. In this case, the patient had been in remission for the last 10 years. Had she not presented with bilateral pneumothoraces, her residual disease would not have been discovered, as there was no other evidence of recurrence.

Malignancy is a rare cause for pneumothorax. The tumour types most commonly associated with pneumothorax include primary lung cancer and pulmonary...
metastases from sarcomas and germ cell tumours [3–6]. Bilateral pneumothoraces occur less frequently [3,5].

Suggestions for the aetiology of the pneumothoraces in malignancy include tumour necrosis during chemotherapy [6]. In the absence of chemotherapy, other possible mechanisms include bronchial obstruction, defective repair mechanisms or invasion of pleura by tumour causing air leaks [1,2,6].

The incidence of pulmonary metastases in Wilms’ tumour is 8% at presentation; late recurrences are rare. Treatment options for pulmonary metastases in Wilms’ tumour include chemotherapy, radiotherapy or surgical excision. The dilemma in this case was whether the histological findings represented true recurrence of tumour or merely residual disease. In the former case, further chemotherapy and radiotherapy would have considered. A computed tomography (CT) scan of the patient’s chest and abdomen has failed to reveal any recurrent disease and, therefore, a watch and see policy with regular chest X-rays has been adopted.

References