Beware spontaneous bilateral pneumothorax

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SUMMARY

A previously healthy young man presented to A&E with severe dyspnoea. The cause of his distress was bilateral spontaneous pneumothoraces. Prompt insertion of chest drains relieved his distress. This rare clinical entity should be considered in an individual with severe respiratory distress. Diagnosis is difficult on clinical examination alone.

CASE REPORT

A previously fit 19-year-old man presented to A&E with a sudden onset of severe breathlessness following a paroxysm of coughing. He had been engaged in manual work prior to the onset of dyspnoea. He was unable to give a full history as he was capable of speaking one word sentences only, but he denied a previous history of asthma, drug usage or previous similar episodes. On examination the patient was pale, sweaty, centrally cyanosed and appeared in severe respiratory distress. His pulse was 120 min^{-1} , BP 150/80, respiratory rate 40, and PEFr 140. The trachea was in the midline. The lung fields were bilaterally hyperresonant and breath sounds were diminished equally on both sides with added expiratory wheeze.

The patient was immediately placed on high flow oxygen and attached to a pulse oximeter which read Sat O_2 of 88%. He was given a solution of nebulized salbutamol driven by oxygen, and hydrocortisone and aminophylline by intravenous infusion. A portable X-ray was ordered and arterial blood gases were taken which revealed hypoxia and CO_2 retention (Po_2 9.77 kPa; Pco_2 6.4 kPa; pH 7.28; HCO_3 21.9; ABE -4.8). His condition failed to improve and a further nebulizer was given whilst awaiting arrival of a chest X-ray film. This showed bilateral pneumothoraces (See Fig. 1). After insertion of bilateral chest drains the breath-

Fig. 1. X-ray showing bilateral pneumothoraces.

lessness quickly resolved. To prevent further recurrence the patient underwent bilateral parietal pleurectomies during the same admission.

DISCUSSION

This case demonstrates that the diagnosis of pneumothorax should always be considered as a possible cause of severe breathlessness. Unilateral tension pneumothorax is not rare and the diagnosis is made clinically by asymmetrical chest signs and mediastinal shift. It is generally agreed that tension pneumothorax should be relieved before obtaining radiological confirmation. Unilateral pneumothorax without tension may be difficult to diagnose without X-ray, particularly in the overexpanded quiet chest of patients with severe bronchospasm.

Bilateral pneumothorax encountered in A&E departments is generally secondary to chest trauma, and in this situation clinical suspicion is high. Bilateral spontaneous pneumothorax in the absence of other disease is rare (Donovan, 1987; cites only two cases in 10 years) and the diagnosis is not easy to make clinically as the physical signs are not easily interpreted. In this case physical signs suggested severe acute asthma as the working diagnosis. Fortunately our departmental guidelines stress the importance of obtaining urgent chest X-rays in asthmatics who fail to respond quickly to standard treatment; this is not emphasized in the guidelines issued by the British Thoracic Society. In patients with potentially life

threatening chest conditions treatment based on clinical assessment alone may be insufficient (Dunlop *et al.*, 1989). The wise practice of using radiography early in the assessment of patients presenting with acute breathlessness is well illustrated by this case. Bilateral pneumothoraces or unilateral pneumothorax without tension are easy to miss clinically even for experienced clinicians. Departmental guidelines for managing asthmatics or bronchitics must encourage the SHO to consider an urgent chest X-ray.

REFERENCES

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