Emergency 6.2: Pneumothorax

Diagnosis
Sudden pleuritic pain and breathlessness are the most common symptoms. A chest X-ray confirms the diagnosis (for a list of causes see p. 353)

Assessment
*A*irway
*B*reathing
Circulation

Supportive therapy
Oxygen
Analgesia

Specific therapy
Traumatic pneumothorax
All require formal drainage as there is an increased risk of tension pneumothorax

Tension pneumothorax
Rare. Clinical diagnosis in a patient with a pneumothorax with respiratory distress and cardiovascular compromise. Decompress with a 14 G needle in the second intercostal space/mid-clavicular line. Then insert a chest drain.

Other pneumothoraces
Treatment of other pneumothoraces depends upon:
- size
- symptoms of breathlessness
- whether there is underlying lung disease (secondary)

The following advice (Table A and Fig. A) is based upon the *British Thoracic Guidelines* for the treatment of a pneumothorax.

Table A Treatment of a pneumothorax

	Complete	Moderate	Small
Primary	Aspirate/chest drain	Aspirate	Observe
Secondary	Chest drain	Chest drain	Chest drain

Aspiration of a pneumothorax
Infiltrate local anaesthetic down to the pleura, in the second intercostal space in the mid-clavicular line. The cannula should be 16 G or less and at least 3 cm long. Having entered the pleural cavity, withdraw the needle. Connect a three-way tap to the cannula and a 50 ml syringe (Luer lock) and an exit tube, fed under water to ensure correct direction of airflow.

Discontinue aspiration if:
- resistance is felt
- the patient experiences excessive coughing
- more than 2.5 l (50 ml removed 50 times) have been aspirated

Repeat chest X-ray. If the pneumothorax is now only small or resolved, the procedure has been successful. (N.B. Failure to aspirate further may be because the cannula is being inadvertently withdrawn from the pleural cavity, or becoming kinked.) All patients in whom aspiration is attempted should be observed overnight.

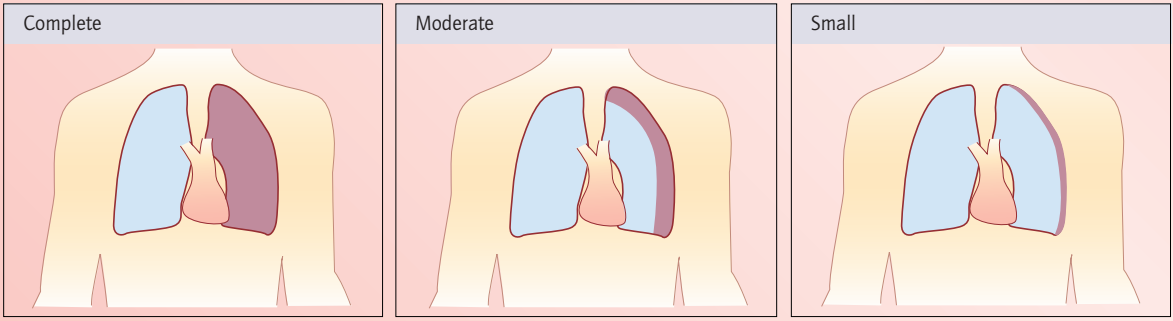

Fig. A Degree of collapse in pneumothorax.