

A critical appraisal on whether a traumatic pneumothorax should be managed conservatively

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Aims

- > Discuss when it is appropriate to use conservative management for a traumatic pneumothorax.
- > Highlight the complications associated with conservative management.
- > Discuss when it is appropriate to intervene with a tube thoracostomy.
- > Highlight the complications associated with the use of a tube thoracostomy.

Methods

A literature search was conducted to identify the published research; a critical appraisal of the research identified was then conducted using CASP tools.

Results

Reasons to use a drain

- > If the pneumothorax is initially >1.5 cm in size, the patient needs a chest drain insertion.
- > If the patient is haemodynamically unstable or has a multitude of other injuries, the patient needs a chest drain.
- > If the patient requires IPPV (intermittent positive pressure ventilation), a chest drain is always required, due to increased risk of a tension pneumothorax developing.
- > If the patient is symptomatic from the traumatic pneumothorax, especially if they are older.
- > Only 10% of patients initially managed conservatively then go onto have a drain inserted.

Reasons not to use a drain

- > Small to moderate-sized pneumothorax.
- > Some types of pneumothorax can resolve spontaneously; Patients are very unlikely to deteriorate clinically if monitored when undergoing conservative management.
- > CT scan usage increasing; CT has become cheaper and therefore more widely utilised CT is available 24/7.
- > Shorter average hospital stay – 12.9 vs 17.6 days for conservative vs drain.

Conclusions

- > Conservative management can be the appropriate treatment in small to moderate-sized pneumothorax, with 1.5 cm being the cut-off point.
- > Size cannot be the only factor to determine the best treatment; is the patient haemodynamically stable with few symptoms?
- > Other factors which must be included are if there are other injuries present, or whether they may need IPPV, as these can increase the risk of complications such as a tension pneumothorax.
- > Clear guidelines need to be established so that junior medical staff can refer to a policy which can aid their clinical decision-making process. ■

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