

Penetrating chest trauma by an arrow

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Arrows have considerable penetrating capacity in soft tissue and flat bones. The extraction of an arrow, especially in the thoracic injuries, requires thorough evaluation.

An 18 year old patient was admitted 26 h after the incident with normal vitals. The arrow was in situ penetrating the left thorax in fourth intercostal space in anterior axillary line (Fig. 1). Chest x-ray film showed mild pleural effusion in the left diaphragmatic recess (Fig. 2).

The arrow was retrieved under direct visual control and injured lung segments were closed directly with 3-0 prolene suture (Fig. 3).

Injuries caused by arrows are usually less destructive than those caused by bullets because of lesser velocity and energy. Barbed arrows are an exception because of the risk of extensive damage to major structures when retrieved [1]. The ballistics of arrows was described in the Karger et al. report of 1998 [2]. Investigations such as enhanced spiral computed tomography and reformatted 2D dimensional echo images should be performed to clarify the relationships between the arrow and any major structures.

Videothoracoscopy has been described as effective and safe for initial diagnosis, evaluation, and management in



Fig. 1 Preoperative photo with arrow in situ



Fig. 2 Chest X ray with arrow

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Fig. 3 Removed specimen

stable patients [3, 4]. It is controversial especially in cases of suspected cardiac and major vessel injury

In conclusion, an arrow should never be removed from a patient with stable or unstable vital signs, before

an injury to the major blood vessels or the heart has been ruled out.

References

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