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IMAGES IN PAEDIATRICS

Penetrating thoracic trauma by pencil: An unusual school accident

Traumatismo torácico penetrante por lápiz: un accidente escolar inusual

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A girl aged 11 years underwent assessment in the emergency department after falling on her back. She was haemodynamically stable and carried a pencil stuck in the right posterior chest wall, with decreased chest expansion, abolition of lung sounds and tympanites.

The chest radiograph evinced pneumothorax and the presence of a foreign body in the right hemithorax (Fig. 1), and the computed tomography (CT) scan with contrast showed pneumothorax, laceration of the right lower lobe of the lung and a pencil in the posteromedial region of the right 5th intercostal space (Fig. 2) (Appendix A, Video).

The thoracoscopy allowed visualization of a penetrating injury caused by a pencil (Fig. 3), damage to the lower lobe and haemothorax. The pencil was removed, the cavity cleaned and a pleural drainage tube inserted that was subsequently withdrawn at 36 hours, followed by discharge of the patient on the same day. The outcome was favourable, and the patient resumed normal physical activity in 14 days.

Thoracic trauma is the second leading cause of death in children aged more than 1 year. Only one sixth of these lesions are penetrating injuries, with a progressive increase in incidence as the use of firearms increases.[1,2]

The chest radiograph as the primary screening test is useful for early identification of haemothorax or pneumothorax and mediastinal lesions. Thoracic CT with contrast is recommended in stable patients with inconclusive findings in the plain radiograph, as it allows detailed assessment of structures and has an extremely strong negative predictive value.[2,3]

Thoracoscopy is a technique used for diagnosis and treatment of paediatric thoracic trauma that has the advantage of being less painful and shortening recovery time and length of stay in days compared to open surgery.[1]

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Figure 1 Pencil as foreign object penetrating the right paravertebral region.

Figure 2 Thoracic CT scan: right-sided pneumothorax with laceration of the right lower lobe of the lung.

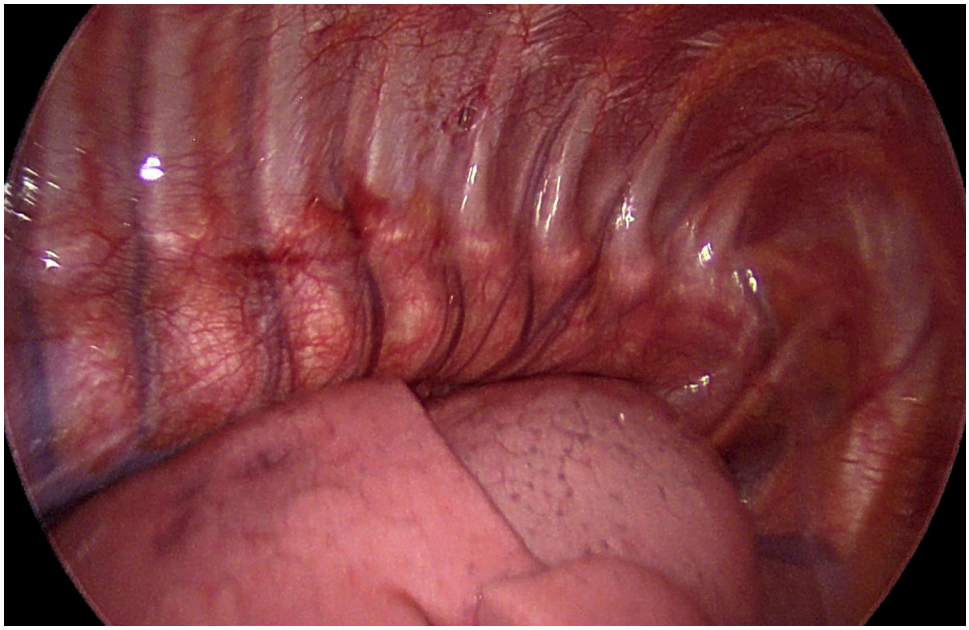

Figure 3 Intraoperative thoracoscopic image showing a round, right-sided paravertebral intercostal lesion as the entry point of the object causing penetrating trauma.

Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:https://doi.org/10.1016/j.anpede.2024.09.004.

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