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An iron rod restricting access to airway: an unusual presentation

Ankur Khandelwal[1], Gyaninder Pal Singh[1], Ramesh Kumar Kharwar[2], Mangilal Deganwa[2]

[1]Department of Neuroanaesthesiology and Critical Care, All India Institute of Medical Sciences (AIIMS), New Delhi, India
[2]Department of Anaesthesiology, All India Institute of Medical Sciences (AIIMS), New Delhi, India

Sir,

Anaesthesiologists commonly encounter difficult airway scenarios, both anticipated and unanticipated. Securing the airway and ensuring optimum ventilation and oxygenation is one of the most important aspects of perioperative management. Standard guidelines have been designed for the management of difficult airway situations. The incorporation of such guidelines into clinical practice aims to reduce the incidence of complications pertaining to mask ventilation, laryngoscopy and intubation, either individually or in combination. However, certain situations are beyond the scope of guidelines. Management in such cases depends on the level of expertise, the facilities available and the urgency of securing the airway.

We encountered a similar situation whereby a 7-year-old male child was scheduled for emergency surgery following a penetrating rod injury. The entry point of the rod was approximately 3cms above the inguinal ligament on the right side, sparing the abdominal viscera, bladder, as well as the contents of the femoral canal. The exit point was the mid-aspect of the right thigh posteriorly (Fig. 1A). However, as the length of the rod was approximately 5 feet, the proximal end of the rod extended beyond the head passing over the face in the midline in such a way that it restricted access to the oral cavity (Fig. 1A). As the rod abutted against the chin and nose (Fig. 1B), the neck movement was also restricted. In the operating room, standard monitors were applied. The patient was positioned with his head beyond the proximal edge of the table and resting on a horseshoe head rest at a slightly lower level (with respect to the table). This manoeuvre created some space between the face and the rod which allowed the anaesthesiologist to slightly rotate the neck and place the mask over the face to ventilate the patient. Following this, the induction of general anaesthesia and tracheal intubation using conventional laryngoscopy with the head rotated to right could be performed. The rod was removed by surgical exploration. The rest of the surgery and the anaesthetic course remained uneventful.

In our case, since the child was haemodynamically stable and had no respiratory embarrassment, we planned our technique well ahead of its execution. There was a similar technique used by Singh *et al.* [1] for the airway management of a giant occipital meningocele. We could perform the mask ventilation and tracheal intubation, which initially seemed difficult, by allowing the head to slightly hang and rest on a horseshoe head rest placed at a lower level than the table. This created some space between rod and face to allow gentle rotation of the neck and place the mask over the face. This manoeuvre also ensured head stability during ventilation and tracheal intubation. In our case, no additional injury was inflicted on the child due to the rod, either at the site of its insertion or in the orofacial region.

Thus, meticulous planning, good communication and awareness of an alternative modified technique of airway management helped us to successfully deal with this unusual presentation of a difficult airway.

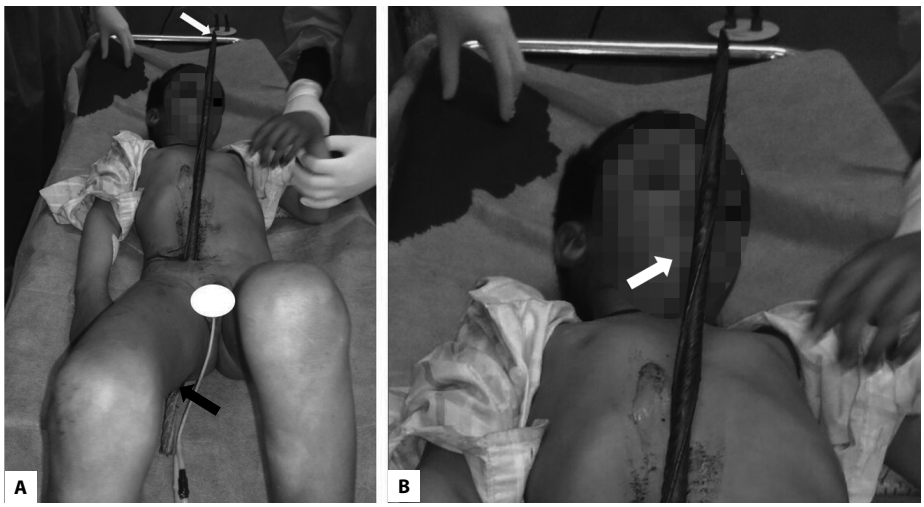

Figure 1. Penetrating rod injury. **A** — Rod entered above the right inguinal ligament and exits through the posterior aspect of thigh at mid-thigh level (black arrow). The upper (proximal) end of the rod lies above the patient's head (white arrow) with the rod lying in front of the face in midline; **B** — Rod lies over the face (oral cavity), abutting the chin and nose (white arrow) thus restricting neck movements and access to oral cavity