

An iron rod restricting access to airway: an unusual presentation

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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.

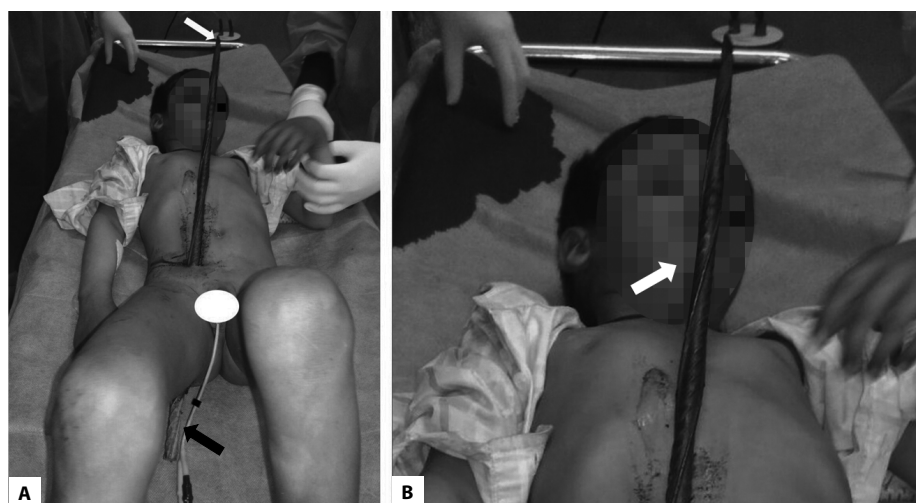


Figure 1. Penetrating rod injury. **A** — Rod entered above the right inguinal ligament and exits through the posterior aspect of thigh at mid-thigh level (black arrow). The upper (proximal) end of the rod lies above the patient's head (white arrow) with the rod lying in front of the face in midline;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

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Tramadol addict: a rare but real challenge for the anaesthesiologist

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Sir,

Tramadol has long been considered as a substance of very low abuse potential. Although tramadol addiction is very rare, such patients always present an array of challenges to the anaesthesiologist, as well as to the surgeon. We describe one such case in a relatively young, otherwise healthy adult patient.

A 46-year-old pharmacist presented to our hospital with a history of tramadol drug addiction for the past 5 years. Initially, he used to take 8–10 tramadol tablets but for the past 2 years he had the habit of taking it via an intravenous route also. The frequency of usage increased from 8 to 20 tablets daily over a period of 5 years. The route of administration varied from an oral to an intravenous route. The patient presented to our gastro-surgery department with painful abdomen and bilious vomiting for 15 days. The patient was started on conservative treatment and later diagnosed to have an intestinal obstruction. The patient was planned to undergo exploratory laparotomy surgery and was accepted under ASA grade II. Strict orders were given to avoid all opioid analgesics until the day of surgery. Rest all drugs were continued up to the day of surgery and non-opioid anaesthesia was planned. Premedication consisted of midazolam 2 mg i.v., glycopyrrolate 0.2 mg i.v., and paracetamol 1 g i.v. Intra-operatively, a right internal jugular vein cannulation was performed as no patent peripheral veins were present due to multiple attempts at drug abuse. Non-invasive monitoring with electrocardiography (ECG), non-invasive blood pressure (NIBP), end-tidal carbon dioxide (EtCO₂), pulse oximetry (SpO₂), Central Venous Pressure (CVP) and temperature monitoring were done. Moreover, an

18 G epidural catheter was inserted at the L4-5 interspace and was inserted up to 12 cm.

Anaesthesia was induced with ketamine 100 mg i.v., Inj. vecuronium 6 mg i.v. and O₂ 100%. Bag-mask ventilation was carried out for 3 mins followed by oral endotracheal intubation. Anaesthesia, maintained with isoflurane 1 vol% (titrated), O₂ to air ratio 1: 1 and vecuronium 1 mg i.v., was given as a supplemental dose. Analgesia was supplemented via paracetamol 1 g i.v. infusion and an epidural infusion of 0.25% bupivacaine at the rate of 5 mL h⁻¹. Intraoperative fluid management was performed with Ringer's lactate using the Holliday-Segar equation and titrated according to CVP.

The intraoperative vital signs were stable throughout the operation. Surgery was uneventful and at its conclusion the neuromuscular blockade was reversed with intravenous neostigmine 3.5 mg and glycopyrrolate 0.6 mg. The patient had a smooth recovery, an extubated trachea and was shifted to a post-anaesthesia care unit for further management. The surgery lasted for 2 hrs.

In the postoperative care unit, patient demanded analgesia within half an hour of surgery. Indeed, the patient's heart rate and blood pressure had increased by almost 40%, suggestive of pain. He was given first a rescue analgesic in the form of Inj. diclofenac 75 mg infusion. A supplemental dose of an analgesic (paracetamol 1 g i.v.) was repeated after 1 h. The patient was started on epidural infusion using 0.125% bupivacaine. This was followed by intravenous diclofenac 75 mg after every 6 h for a further 48 h.

Tramadol is a synthetic analogue of codeine with a central effect [1]. It is neither an opioid derivative nor a non-steroidal anti-inflammatory (NSAID) medication. Tramadol is a racemic mixture of two enantiomers with a synergistic analgesic effect [2]. The (+) and (–) enantiomers weakly connect to mu opioid receptors [3]. Although tramadol has fewer side effects, its addictive capacity in comparison to other opioids has been reported, resulting in many cases of dependency, abuse, intentional overdose

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