

Intubation in a Patient with Ice-Pick in the Spine: Molar Approach of Direct Laryngoscopy to our Rescue

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Abstract

Keywords

- ice-pick
- spine injury
- airway management
- intubation

Intubation in patients with spine injury is difficult due to several reasons. In patients with retained foreign body in the spine, difficulty is aggravated by imperfect position and risk of neurologic deterioration. We overcome this difficulty with a simple alternative method of intubation.

Tracheal intubation is most often performed in supine position. Intubation in the lateral position is unfamiliar and is technically more difficult than in supine position.¹ We came across a patient where intubation in lateral position was the dictum.

A 35-year-old male patient came to the emergency department with ice-pick in lumbar spine owing to assault sustained 4 hours back (►Fig. 1A, B). There was no associated injury; he was fully conscious and oriented, but irritable and anxious. His vitals were as follows: pulse 110 per minutes, blood pressure 110/60 mm Hg, and SpO₂ on air 100%. Neurologically he was intact, and airway examination was also normal. There was no history of drug abuse, and past medical history was unremarkable. Routine investigations were within normal limits. Fasting was inadequate, and after obtaining informed risk-explained consent, he was taken for surgical exploration and removal of the foreign body.

On the operating table, he laid in left lateral position with a pillow below his head to bring it in line with the torso. Monitors applied were electrocardiograph, noninvasive blood pressure, pulse oximetry, and capnometry. Injections of ranitidine 150 mg and metoclopramide 10 mg were administered and preoxygenation was performed with 100% oxygen for 3 minutes. Induction of anesthesia was done by injecting thiopentone 300 mg and suxamethonium 100 mg, and modified rapid sequence induction was performed. Cricoid pressure was applied by an assistant with one hand supporting the back of the neck and the other hand at the cricoid. Direct

laryngoscopy with Macintosh no. 4 blade through midline approach revealed grade III Cormack-Lehane view. The blade was adjusted to right molar approach (the blade entered lateral to tongue just behind the molars till epiglottis is visualized and then the tip of the blade is kept in vallecula), which improved the grade to IIb. However, there was little space available in the oral cavity to negotiate the tube; hence, a gum elastic bougie was placed in trachea and polyvinyl chloride tube of size 7.5 mm was railroaded over it. Rest of the perioperative period was uneventful.

Our patient could not lie in supine position; therefore, it was prudent to intubate his trachea in lateral position. The various options included awake fiberoptic intubation (FOB),² intubating laryngeal mask airway (ILMA),³ lightwand,² and videolaryngoscope.⁴ He was irritable and he refused to cooperate for awake FOB intubation. Intubation through ILMA is a blind procedure, takes a longer time, and its role in emergency scenarios still remains undefined. The latter two devices had availability issues. Direct laryngoscopy is the technique in which anesthesiologists have more expertise, but in lateral position, poor glottis visualization occurs in 35% of patients.¹ Molar approach improves laryngoscopic view, but the difficulties in intubation persists due to little room available in oral cavity.⁵ We used bougie to aid intubation, though use of stylet has also been described.⁵ Right molar approach was used since position maintained was left lateral as it prevents laryngeal structures from collapsing.²

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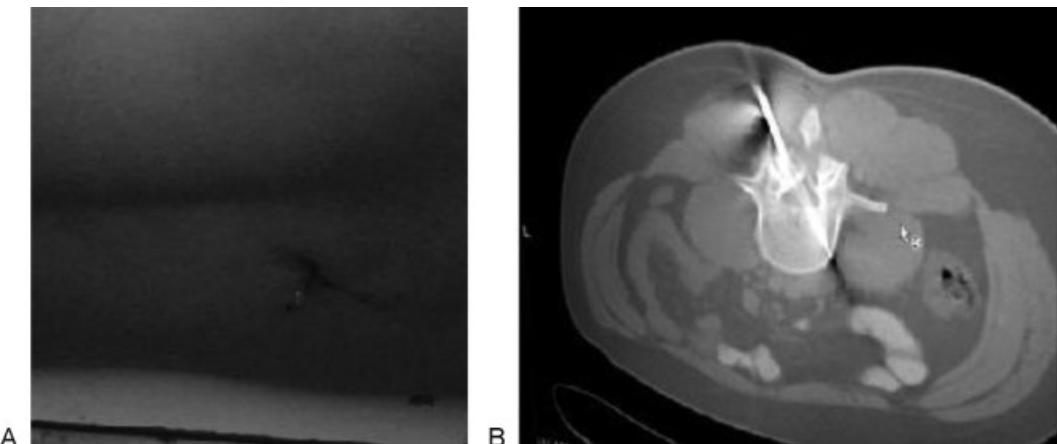


Fig. 1 (A) Clinical picture of ice-pick in the spine. (B) Computed tomography scan showing ice-pick traversing the spinal canal.

The present case emphasizes the importance of attaining proficiency in an alternate technique of intubation, which can be ventured upon confidently whenever required. Molar approach being similar to conventional midline direct laryngoscopy is easier to learn, no additional equipment is required, and intubation can be accomplished swiftly under vision.

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