Retrograde Intubation in a Patient with Stridor: An Old Technique Revisited

Sir,

Patients presenting with an acutely compromised airway require safe provision of a definite airway, often using a multidisciplinary team. The conventional orotracheal intubation is not always practical when there is critical narrowing of the airway secondary to a tumour in the upper aerodigestive tract.

A 25 years old Caucasian male with a massive malignant melanoma recurrence in his neck presented with acute biphasic stridor. He had bilateral diffuse neck swelling and was unable to lie flat due to respiratory distress. The flexible pharyngo-laryngoscopy showed a posterior pharyngeal wall mass displacing the larynx to the left, whilst the posterior aspect of the right hemi-larynx was partially covered by the mass (Figure 1). There was significant narrowing of the airway measuring 3 millimetres in diameter just below the vocal cords (Figure 2).

The options and difficulties for airway management were discussed with the patient who felt, he could not cope with tracheostomy under local anaesthetic. A plan was made to carry out retrograde intubation. The outline of the recognisable anatomical landmarks was drawn on the neck, and a 23G needle was passed transcutaneously into the trachea at the level of the 2nd tracheal ring. After easy aspiration of air, an intra-tracheal (sub-laryngeal) injection of 10 ml of 1% lidocaine was given, producing a cough to spread the lidocaine towards the larynx. The trachea was then re-punctured with an 18G needle and position confirmed by easy aspiration of air. A 60 cm guidewire was advanced cranially, and following a cough, the curved tip appeared from the patient’s mouth. A surgical clip was attached to the distal end of the guidewire to prevent it being accidentally pulled up into the trachea, and a size 4 microlaryngeal tube loaded onto the proximal (now oral) end of the guidewire. Once the tube was threaded on the guidewire (the tip lying in the oro-pharyngeal space) a sleep dose of Propofol and non-depolarising neuromuscular blocker were given. As the patient lost consciousness, the microlaryngeal tube was advanced through the larynx into the proximal trachea. Removing the surgical clip from the guidewire allowed the distal tip of the guidewire to pass into the trachea. The cuff was inflated and the position of the tube confirmed. The tracheostomy was carried out in a standard fashion. Awake fibreoptic intubation was not performed due to concerns that the fibrescope could cause complete obstruction of the narrow lumen, whilst trauma to the upper airway could provoke oedema and bleeding.

Retrograde tracheal intubation is a well described technique, with many variations on precise technique and equipment.1, 2 It is a technique that has been well practised by one of the authors (MB). Although the technique was previously popular, it has largely been superseded by awake fibreoptic intubation for the management of a difficult upper airway. Criticisms have been made on the safety of the technique,3 and with its limited indications, this technique is rarely used. This case, however, highlights the need for anaesthetists to be aware of retrograde intubation.

REFERENCES

Colin Patterson1, Muhammad Shakeel2, Bhaskar Ram2 and Mark Bloch1

Department of Anaesthesia1 / Otolaryngology-Head and Neck Surgery2, Aberdeen Royal Infirmary, Aberdeen, Scotland, AB25 2ZN, UK.

Correspondence: Dr. Muhammad Shakeel, Ward 45, Department of Otolaryngology-Head and Neck Surgery, Aberdeen Royal Infirmary, Aberdeen, Scotland, AB25 2ZN, UK.

E-mail: drshakeel@doctors.org.uk

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