



## Airway in the Airway

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Dear Editor,

The nasopharyngeal airway (NPA) is one of the devices used to keep the upper airway unobstructed. However, its use is not entirely free of complications. Here we describe one of the rare situations requiring the use of NPA, which we encountered in our operation theatre.

A 55-year-old man weighing 70 kg had undergone wide local excision with right modified radical neck dissection and pectoralis major myocutaneous flap for right buccal carcinoma 1 month ago and was posted for forehead flap repair (pedicle release). In pre-operative assessment, the patient showed mouth opening of 1 finger breadth with the presence of Ryle's tube *in situ* in the left nostril.

The patient was carried inside the operating room, and all the standard monitors (electrocardiogram and monitors for non-invasive blood pressure and oxygen saturation measurement) were connected. An intravenous line (18-gauge) was secured into the upper limb. Because it was a potentially difficult airway, we kept a difficult airway cart ready and planned for fibre optic intubation via right nasal route. Routine anaesthesia was performed with fentanyl (2 µg kg<sup>-1</sup>) and propofol (2 mg kg<sup>-1</sup>) administered intravenously. After checking bag mask ventilation, 100 mg succinylcholine was administered intravenously. Meanwhile, fibre optic bronchoscope (FOB) was prepared for nasotracheal intubation.

We routinely use NPA as a conduit to guide the fiberscope to visualise the glottis in our operation theatre. Therefore, an NPA of size 8 was taken, and once the glottis was visualised, a longitudinal slit was made in the NPA for its removal (Figure 1). This NPA was introduced in the right nostril after the application of lignocaine jelly. Thereafter, the insertion cord of FOB was passed over the NPA. Once the glottis was visualised with the scope, an endotracheal tube (ETT) of size 7.0 mm was pushed over the fiberscope into the trachea; bilateral air entry was checked, and the ETT was fixed at 20 cm.

Suddenly, one of the authors realised that the NPA was missing from the right nostril. It was searched thoroughly using direct laryngoscopy in the vicinity, but we were unable to find it. Hence, we removed the ETT and started bag and mask ventilation. Meanwhile, surgeons were called for immediate help. The otorhinolaryngologist retrieved the NPA from below the vocal cords by performing rigid bronchoscopy (Figure 2). This NPA was slipped into the trachea during fibre optic bronchoscopy. The surgery was commenced, and perioperative period remained uneventful. The patient was successfully extubated after full awakening from anaesthesia and post-operatively observed for 2-3 hours.

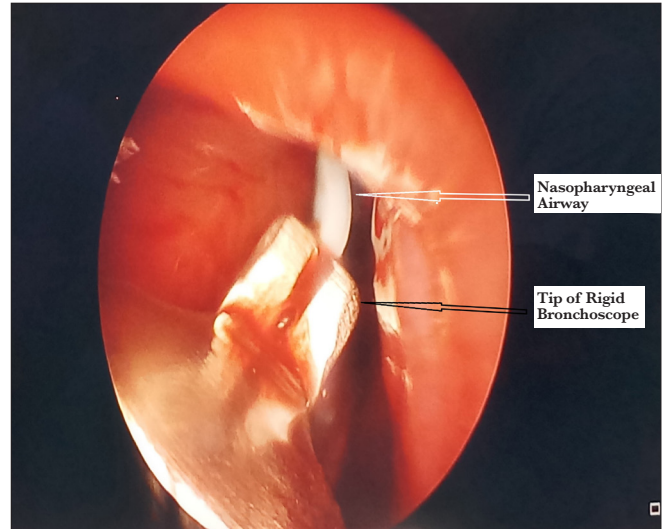
Ahmad et al. (1) in their study found that split NPA is safe and effective in reducing the time to visualise the larynx and intubate the trachea. In this case, slipped NPA did not cause airway obstruction, because after splitting, the NPA became more pliable and we were able to ventilate. Aspiration of NPA into the distal airways can cause sub-mucosal tunnelling, vomiting, airway obstruction, laryngospasm, atelectasis, infection, airway



**Figure 1. A nasopharyngeal airway with a longitudinal slit**

trauma/bleeding in addition to associated increased work of breathing, hypoxemia, and death. This complication can be reduced by choosing an appropriately sized NPA and securing it in a position to prevent dislodging. It has been suggested to use either a safety pin inserted through the NPA flange or a 15-mm tracheal tube connector placed into the proximal part of the NPA, or tapes can be attached to the flange to prevent its distal migration (2).

Aspiration of NPA in distal airway has been reported in hospital wards in patients with lower Glasgow Coma Scale (GCS) (3). However, in this case, the NPA was slipped into the trachea during fibre optic intubation in an anaesthetised patient,



**Figure 2. Rigid bronchoscope with the flange of a nasopharyngeal airway**

which has not been reported yet. It could have led to a catastrophic situation, if remained undiagnosed.

**Informed Consent:** Written informed consent was obtained from patient who participated in this study.

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