

Blind Nasotracheal Intubation: Does Head Position or Cuff Inflation Make a Difference?

These authors prospectively compared the success rates of blind nasotracheal intubation (BNTI) performed with different combinations of head positions and endotracheal tube (ETT) cuff inflation in awake, spontaneously breathing patients who required intubation for a surgical procedure and had predictors for difficult orotracheal intubation.

Patients were excluded if they had a coagulopathy, cervical instability, basal skull fracture, nasal fracture or obstruction, foreign body in the airway, tumor, polyp, or laryngeal injury; 82 patients were enrolled. After patients received parenteral sedation and topical anesthesia, an ETT with a Trachlight (without the internal wire) was inserted in a nostril and advanced until there was a loss of resistance, indicating that the ETT was in the oropharynx. In each patient, the course of the ETT in the pharynx was assessed by observing the anterior neck for transillumination under 4 different conditions: head on an 8-cm pad with the ETT cuff deflated (HP-deflation), head on the pad with cuff inflated with 15 mL of air (HP-inflation), head on bed in neutral position with cuff deflated (HB-deflation), and head on bed with cuff inflated (HB-inflation). Alignment of the ETT with the glottis was classified according to transillumination at the anterior neck. BNTI was then attempted. The frequency of correct alignment was 40% in the HP-deflation group, 67% in the HP-inflation group, 63% in the HB-deflation group, and 84% in the HB-inflation group. Both the head-on-bed position and cuff inflation significantly increased the frequency of correct alignment. BNTI was successful in all 69 patients (84%) who had correct alignment under at least 1 intubating condition.

Comment: Previous studies have demonstrated that elevating the end of an ETT by inflating the cuff or using a directional-tip ETT facilitates BNTI. This study confirms those findings and shows that the head should be kept in a neutral position.

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Chung YT et al. *Blind nasotracheal intubation is facilitated by neutral head position and endotracheal tube cuff inflation in spontaneously breathing patients: [L'intubation nasotracheale a l'aveugle est facilitee par la position neutre de la tete et le gonflement du ballonnet de la sonde endotracheale chez des patients en ventilation spontanee]. Can J Anaesth 2003 May; 50:511-3.*