

ORIGINAL ARTICLE

Airway difficulty in Mallampati 'class zero' patients: a prospective double-blind observational study.

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CONTEXT:

Assessment of Mallampati class is an integral part of preoperative airway evaluation. Increasing Mallampati class is known to be associated with greater difficulty with intubation, but some cases of airway difficulty in Mallampati 'class zero' patients have been reported.

OBJECTIVE(S):

We undertook this study to evaluate intubation difficulty and to correlate this with indirect laryngoscopy findings in Mallampati class zero patients. The incidence of Mallampati class zero airway in Indian patients and the difficulty in mask ventilation were also evaluated.

DESIGN:

Prospective double-blind observational study.

SETTING:

A tertiary care medical college hospital in Karnataka, India.

STUDY PERIOD:

September 2010 to April 2011.

PATIENTS:

Patients of either sex, 18 years and older, presenting for preanaesthetic examination for elective surgery were evaluated. All patients with Mallampati class zero airway undergoing general anaesthesia with tracheal intubation were included. Exclusion criteria were upper airway disorder, unstable cervical spine, increased risk for aspiration, ischaemic heart disease, increased intracranial pressure, respiratory

distress, those unable to sit upright, or infected with hepatitis B, hepatitis C, HIV or pulmonary tuberculosis, or requiring emergency surgery. All underwent indirect laryngoscopy performed by the otorhinolaryngologist and subsequently, direct laryngoscopy performed by the anaesthesiologist. Intubation difficulty was assessed by the Cormack & Lehane grades.

MAIN OUTCOME MEASURES:

Evaluation of intubation difficulty and correlation with indirect laryngoscopy findings in Mallampati class zero patients. Estimation of the incidence of Mallampati class zero airway in Indian patients and the difficulty in mask ventilation.

RESULTS:

Twenty women and thirteen men, aged 18-65 years, of Mallampati class zero were identified out of 1937 (incidence, 1.7%). The data of 27 patients were analysed. Two patients had 'difficult' mask ventilation. All had a 'predicted easy' airway on indirect laryngoscopy and 'easy' (Cormack & Lehane grade 1 or 2) tracheal intubation. Upon direct laryngoscopy, the epiglottis was described as 'large' in 10 (37%) patients.

CONCLUSION:

A Mallampati class zero per se is not associated with difficult airway unless other airway characteristics contribute to the difficulty. Even though the epiglottis may be large and overhanging, it rarely causes airway difficulty in Mallampati class zero airway.

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Keywords: airway management; endotracheal; epiglottis; intubation; laryngoscopy