

# Upside Down Mask Ventilation (UDMV) for Paediatric Patients: A Pilot Study

Su Sandar Lwin SHAINAAZ DOOPLY, Asim ESEN, Kursat GUL, Hayrettin DASKAYA, Muhittin CALIM

**Background and Goal of Study:** Oropharyngeal intubation or laryngeal mask insertion is not necessary for anesthesia practice at some short periorbital surgical procedures. Usage of face mask instead of these, with classical holding method (CHM), can block the surgical area and it can be too hard – sometimes impossible – for the surgeons to work at surgical area (For example: nasolacrimal duct probing, corneal suture removal, chalazion surgery etc.). To overcome this problem, we defined a new method for face mask holding and planned this pilot study.

**Materials and Methods:** Between October-December 2016 we included 46 patients to the study (23 in UDMV group and 23 in CHM Group). We recorded demographic details, ASA status, surgical procedures, surgery time, anesthesia time, surgeons' satisfaction.

For UDMV technique anesthetist stands behind the head and the opposite side of the surgical procedure. Oral airway should be placed after induction of anesthesia, a face mask with a cuff should be up-sided down and placed as covering only the mouth. By the way nose side closes the chin totally and prevents air leakage. Mask's cuff at the mandible side, totally blocks nares and prevents air leakage (Figure 1). Thus, ventilation is provided only by oral airway. It is held with one hand against the face, applying downward pressure on the mask body exerted by the thumb and the index finger (the thumb and the index finger have a "C" shape) while the other fingers grasp the mandible to facilitate extension of the neck (Figure 2).

**Results and Discussion:** There were no difference for demographic details, ASA status, surgical procedures, surgery time, anesthesia time, between the groups.

The only significant parameter was the satisfaction of the surgeon ( $p < 0,001$ ). During 21 operations, surgeons were very satisfied in group UDMV it was 3 for CHM group.

Holding the face mask with classical method can be a disrupting factor for surgeons during face mask ventilation, by this UDMV surgeons' satisfaction can be increased.

**Conclusion:** The new technique is feasible for short periorbital surgical procedures.



Figure I



Figure II

References:

1. Stone DJ, Gal TJ – Airway management. In: Miller RD, ed. Anesthesia, 5th edition, Philadelphia: Churchill Livingstone Inc; 2000. pp. 1414-1451.
2. Bakan M, Topuz U, Basaranoglu G, Ozturk E. Sidewise mask ventilation for pediatric anesthesia. Rev Bras Anesthesiol. 2012 Nov-Dec;62(6):889-91.