

Patient Positioning in the Morbidly Obese

S Shanbhag, R Akhtar

Citation

S Shanbhag, R Akhtar. *Patient Positioning in the Morbidly Obese*. The Internet Journal of Anesthesiology. 2008 Volume 19 Number 1.

Abstract

Anaesthetic management in the morbidly obese present significant challenges. Ensuring optimum patient positioning is essential to avoid potential pitfalls during the anaesthetic. Head elevated laryngoscopy position (HELP) has been recommended to facilitate airway management in the morbidly obese.

Dear Editor,

We would like to highlight the importance of patient positioning in the morbidly obese with a case scenario from the obstetric unit.

32 years old primigravida with non progress of labour presented for emergency caesarean section. She weighed 140 kgs with a body mass index (BMI) of 56. Past medical history included brittle asthma with numerous previous hospital admissions from asthmatic exacerbations and epilepsy which was well controlled. She had no previous admissions to the intensive care unit. She needed home oxygen and nebulizations in addition to a long list of medications for asthma control. She required 3-4 pillows to sleep and had very limited exercise tolerance. The airway assessment was unremarkable with normal neck mobility. Caesarean section was performed uneventfully under spinal anaesthetic with patient positioned on theatre table using 'Troop elevation pillow'. The positioning facilitated ease of spontaneous ventilation and provided stable position if any emergency airway intervention was required.

Anaesthetic management of morbidly obese patients present significant challenges. The presence of co-morbidities further increases the risk in these patients. Airway management in these patients need adequate planning and preparation. Ensuring proper patient positioning prior to induction of anaesthesia is essential to avoid potential pitfalls. Head elevated laryngoscopy position (HELP) has been recommended to facilitate airway management in the morbidly obese ¹. This position raises the patients head and neck above the chest and abdomen. The upper airway is more isolated in this position, facilitating spontaneous and

controlled ventilation. Preoxygenation in the ramped position achieves 23% higher oxygen tension, allowing clinically significant increase in desaturation safety index and greater time for intubation / airway control ². The ramped position is superior to sniff position for laryngoscopy in the morbidly obese ³. Airway management is facilitated by alignment of upper airway axes. Troop elevation pillow helps to achieve the head elevated laryngoscopy position with ease. This position also allows stable positioning in comparison to ramp position using stack of pillows or blankets. The incidence of acid reflux is also reduced in this position. This pillow is ideal for procedures under general and regional anaesthesia in the morbidly obese.

Figure 1

Figure 1: ® (Mercury Medical®)



CORRESPONDENCE TO

Sumant Shanbhag Anaesthetics Department, University Hospital of North Staffordshire, Newcastle Road, Stoke-on-Trent, England ST4 6QG Email: sumant75@hotmail.com

References

1. Collins JS, Lemmens HJM, Brodsky JB, et al. Laryngoscopy and Morbid Obesity: A comparison of "Sniff" and "Ramped" position. *Obesity Surgery* 2004, 14, 1171-1175.
2. Dixon BJ, Dixon JB, Carden JR, et al. Preoxygenation is more effective in the 25° head up position than in the supine position in the severely obese patients *Anesthesiology* 2005; 102:1110-5
3. Troop C. Obesity, the Airway and Positioning. *Bariatric Times*, May 2006, 19.

Author Information

Sumant Shanbhag, FRCA

University Hospital of North Staffordshire

Robina Akhtar, FRCA

University Hospital of North Staffordshire