



ANAESTHETIC MANAGEMENT OF MORBID OBESE PATIENT FOR DEBRIDEMENT OF RIGHT THIGH ABSCESS UNDER GA USING LMA

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ABSTRACT

Obesity is defined as a body weight that exceeds the expected or ideal weight by more than 10%, taking into account height, age, body built, and sex. Patient is said to be obese when more than 25% of the body weight in males or 30% in females is attributable to fat. Morbid obesity is defined as actual weight exceeding twice the ideal body weight. We present a case of morbid obese patient who had been operated for debridement of right thigh abscess under general anaesthesia. We describe the anaesthetic management of morbid obese patient for debridement of right thigh abscess under general anaesthesia using LMA.

KEYWORDS: Morbid obese, general anaesthesia, laryngeal mask airway.

INTRODUCTION

The obese patient presents many challenges to both anaesthesiologist and surgeon. Patient with morbid obesity have long list of co-morbidities which are of concern to the anaesthesiologist for example-hypertension, atherosclerosis, sleep apnea, obesity hypoventilation syndrome, diabetes. A good understanding of the pathophysiological effects of obesity and its anaesthetic implications in the surgical setting is critical. The anaesthesiologist must recognize increased risks and co-morbidities inherent to the obese patient and manage accordingly. Obesity is associated with increased incidence of difficult mask ventilation and difficult intubation. Commonly used anaesthetic agents like propofol, thiopentone, narcotics, benzodiazepines, muscle relaxants can all lead to pharyngeal collapse. Obese patient therefore should be carefully evaluated for difficult airway. History of sleep apnea, limited neck movement, limited mouth opening, large tongue and short thyromental distance all increase risk for difficult airway. Management of morbid obese patient is a challenge to the whole health care team requiring multi-disciplinary approach & meticulous preparation. We report successful management of such a case with general anaesthesia using LMA.

CASE HISTORY

A 36 year old morbidly obese male patient with total body weight 140kg, presented with a complaint of swelling over right thigh since 10 days. Pt had no history of any trauma or other significant history for swelling

over thigh. It was increasing in size over past 10 days. Patient had history of alcoholic liver disease about 3 months back for which he was admitted and treated with medical management. Patient also had operative history of right side femur fracture 9 months back under spinal anaesthesia. No other significant medical or surgical history was present. No history of obstructive sleep apnea. On examination patient was fully conscious, following verbal command. His pulse rate was 107/min and blood pressure was 140/84 mmHg. Patient was afebrile and his respiratory system was normal with bilateral air entry present and clear. Cardiovascular system examination was normal. On airway examination, malampatti grade 2 was found & Back & spine examination was normal. On air saturation was 99%. Investigation showed Hemoglobin 7.17, Total leucocyte count 10,400, serum urea 26, serum creatinine 1.1, random blood sugar 141, serum sodium 129, serum potassium 4.2, chest x-ray showed cardiomegaly with otherwise normal lung field, electrocardiogram showed normal sinus rhythm within normal limit, total bilirubin 4.7, Prothrombin time 28.9, INR 2.79. Written & informed high risk consent of ASA grade IV with ventilator support was taken. Anaesthesia work station was checked and difficult airway cart was kept ready. In the operating room the patient continued to receive oxygen by facemask; ECG lead II and pulse oximeter were attached for continuous monitoring. Intravenous access was secured in peripheral vein. Pre-op vitals were PR-107/min, BP- 130/90 mmHg, RR – 16/min. ECG, NIBP, SPO2 monitors were attached. Inj Glycopyrolate 0.004

mg/kg iv & Inj Emset 0.1 mg/kg iv was given as premedication. Preoxygenation with 100% oxygen was given via bain's circuit at flow 8 liter for 5 minutes. Induction was done with inj propofol 200 mg iv & check ventilation was done. After confirming check ventilation neuromuscular blocker inj scoline was given 150 mg iv. LMA no 4 was inserted & cuff was inflated. Air entry was checked & LMA was fixed & Etco2 onitoring attached. Pt was maintained on O₂ + N₂O + SEVOFLURANE with spontaneous ventilation. Intra op fluids- 1000 ml RL; 500 ml DNS were given. Intra-op patient was given inj diclofenac 100mg i.v. Intra-op vitals were within normal limits. After completion of surgical procedure-incision & drainage, N₂O & sevoflurane discontinued & pt was ventilated with 100% oxygen till became conscious. After thorough oral suction LMA was removed. Post op patient was fully conscious & following verbal command. Bilateral air entry was present and clear. S1,S2 heart sound normal.. PR: 94 /min, BP: 130/80 mm Hg, Spo₂ -99%. Pt was shifted to post-anaesthesia care unit, monitors were applied & head up position with oxygen was given.



DISCUSSION

This patient can be managed under regional anaesthesia or general anaesthesia. As patient has altered PT/INR so we prefer GA over regional anaesthesia. Morbidly obese (MO) patients have a higher potential for difficult mask ventilation, laryngoscopy, and intubation. Factors such

as a higher Mallampati grading, large tongue, atlantoaxial joint limitation, cervical fat pad and short neck are predictive of a difficult intubation. In this patients where the airway looks highly unfavourable and in which both ventilation and intubation are difficult. In this situation, the laryngeal mask airway (LMA) remains appropriate rescue device. Also the duration of surgery is in favour of using LMA. The patient's head position will need to be optimized by HELP (head-elevated laryngoscopy position) position. It is very important to preoxygenate the patient in preparation for the unavoidable period of apnea and potential oxygen desaturation prior to securing the airway. To optimize the respiratory system we provide head up position, positive end expiratory pressure (PEEP), larger tidal volumes, and high fraction of inspiratory oxygen as such patients have decreased FRC and decreased lung compliance.

CONCLUSION

Anaesthetic management of these patients requires meticulous preparation, multi-disciplinary approach. LMA provides many advantages over endotracheal intubation particular for outpatient anaesthesia. Advantages include lower doses of anaesthetic required, avoidance of muscle relaxants, faster recovery and early discharge of patients.

Therefore, for morbid obese patients undergoing minor operations, an LMA may be preferable to tracheal intubation.

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