

Case Report

Anaesthetic challenges in a Super Morbidly Obese patient for non bariatric surgery – A Case Report

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ABSTRACT:

The prevalence of obesity is on the upward trend world-wide. In the United States of America, the incidence of obesity has doubled over the past 20 years. The extent of obesity is usually quantified through the body mass index (BMI), which is defined as the relationship between height and weight. The use of regional anaesthetic techniques for obese patients is increasing in popularity as this offers distinct advantages over general anaesthesia for these patients. Anaesthetists must completely assess the patients before the surgery to identify anaesthesia-related potential risk factors and prepare for management.

Key words: Anaesthetic, Bariatric, Surgery

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INTRODUCTION

Supermorbid Obesity (BMI > 55) is a special condition that poses various challenges to the anaesthesiologist in regards to Airway, Anaesthetic management and practical difficulties in terms of patient mobilisation and positioning. The following case report hopes to address the troubleshooting of such challenges we encountered perioperatively while handling such a case. A 55 years old female patient of 180 kg weight, 175 cm height and BMI 58.1 posted for elective Open Reduction and Internal Fixation with Plating of a Post Traumatic Left sided Proximal 1/3 Tibia fracture. Patient was known case of Type 2 Diabetes Mellitus, Hypertension and Hypothyroidism since 6 years, all three of which were well controlled with medication. Patient was evaluated as part of routine pre anaesthetic check and plan of anaesthesia was formulated.

METHODS

Pre operative preparation: Patient related Routine pre operative evaluation was done. Additional investigations like 2D echo and Pulmonary Function Tests, HRCT chest, USG Abdomen, Thyroid Function

tests were performed to assess the cardiopulmonary status of the patient. Detailed assessment of Airway and OSA was performed and a difficulty in both Bag Mask Ventilation and Intubation were anticipated and the Difficult Airway Cart with Macoy's Blade, Stubby handle, Videolaryngoscope, SGA, Fiber-optic bronchoscope, rescue and surgical airways was made available. Special consults from Department of Cardiology and Pulmonary medicine were obtained for evaluation of cardiopulmonary status and severe symptomatic OSA with STOPBANG – 6/8 and fitness for anaesthesia and surgery. After counselling the patients and relatives and having explained possibility and need for post operative ventilation and ICU stay, high risk consent was obtained from patient and relatives. Patient was kept adequate NBM, given pre op antacids, Deep Breathing exercises, and started on maintenance fluids based on Ideal Body weight.

PRE-OPERATIVE PREPARATION: OR RELATED

Practical difficulties arose as patient had fractures and casts on two limbs on opposite sides. Enough trained and experienced staff including support personnel in

the theatre were made available readily to assist should it become necessary during induction. Two theatre tables were joined together to give an appropriate maximum weight allowance. A correct-sized blood pressure cuff was specially obtained for the patient. Extra pillows for RAMP positioning procured. Particular care and padding was given to pressure areas to prevent sores and nerve injury.



Drug dosing charts were made to calculate drugs according to Ideal and Total Body weight. Warm fluids blankets and warmers were made available. USG machine, longer needles for Neuraxial block, Extra strapping equipment were arranged.



PLAN AND INDUCTION OF ANAESTHESIA

After careful consideration of all patient parameters, plan was formulated to administer Regional Anaesthesia : Ultrasonography guided Neuraxial Blockade (Epidural +Spinal Anaesthesia) Patient taken on table and all standard ASA monitors attached, in addition to O₂ supplementation via a Hudson's Facemask at 6L/min. In sitting position with adequate support, under USG guidance using a curvilinear probe the L2- 3 and L3-4 interspaces were identified and depth was marked at 7.8 cm.



Under all aseptic precautions and a Toughy's 16G needle, epidural space reached, confirmed with Loss of Resistance to saline and air, catheter threaded and fixed at 13 cm after a positive meniscus sign. Spinal anaesthesia, using 23 G Quincke's needle and 2.8 cc of 0.5% Bupivacaine Heavy administered after free flow of CSF was confirmed.



Patient given supine position after 5 minutes and oxygen supplementation. Careful watch was maintained over the ascent and settling of spinal anaesthesia. Positioning of patient appropriately with pillows under the shoulder and neck given to prevent undue higher levels of neuraxial blockade.

INTRAOPERATIVELY

Level of spinal anaesthesia 20 minutes after administration of drug was found to be T₈ and adequate. Patient hemodynamically stable and surgery was started. Anaesthesia supplemented with an epidural infusion of 0.125% Bupivacaine at 5 ml/hr. Patient was drowsy without any sedatives due to a Severe Obstructive Sleep Apnoea and her Etco₂ Levels were monitored throughout in addition to standard ASA monitoring. However, after about 2 hours of surgery, patient became restless and started complaining of difficulty in breathing in supine position despite oxygen supplementation at 6 litres of o₂ per minute.



She also had complaints of pain over her upper back and arms from prolonged positioning which was managed with IV Paracetamol to avoid other sedatives and opioids. Surgical period was otherwise uneventful and patient remained hemodynamically stable throughout the procedure.

POSTOPERATIVELY

Patient was carefully monitored in the PACU for about 2 hours and after adequate recovery, shifted to wards. Post operative analgesia managed with a continuous monitored LA epidural infusion of 0.0625% Bupivacaine via a Baxter™ Pump and round the clock IV Paracetamol. Epidural catheter removed after 24 hours in view of starting anti-coagulants for routine immobility prophylaxis for DVT.

CONCLUSION

The rising prevalence of sedentary lifestyles amongst the populus directly translates into more obese patients presenting for surgery. This necessitates an awareness for not just the disease process and associated risks but also logistical management of practical obstacles in the handling of such patients. To provide safe and successful anaesthesia to high-risk obese patients with multisystem disease, the entire perioperative team has to be aware of the inherent risks of surgery and anaesthesia in addition to a preparedness for adverse events, and strive to work together toward to optimise patients condition in every step.

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