Anesthetic management of a known case of serotonin syndrome undergoing renal transplant

Sir,

Serotonin syndrome is an iatrogenic condition characterized by alteration in the autonomic, neuromotor and behavioral functions. It is not a drug reaction per se but a state as a result of the presence of excessive serotonin at the receptor site.

A 39-year-old man presented for renal transplant surgery. He had developed serotonin syndrome 2 years prior to the transplant. He had catatonia with stimulus sensitive myoclonus and brisk reflexes including ankle clonus. He was treated with benzodiazepines and supportive care and made a gradual recovery. For his transplant surgery, anesthetic medication included midazolam 1 mg, propofol 120 mg, atracurium (0.5 mg/kg) and sevoflurane (0.5-1%) in the air/oxygen mixture. Immediately after induction the patient was given an ultrasound guided transversus abdominis plane (TAP) block with 20 mL of 0.25% bupivacaine on the right side. 0.9% sodium chloride was used as intravenous fluid. Intravenous paracetamol 1 g was given towards the end of surgery. The transplanted kidney functioned well immediately, and the patient was extubated at the end of surgery. Features of serotonin syndrome-like rigidity of limbs and nystagmus were sought for but were negative. The patient was comfortable after extubation, did not ask for additional pain killers or complain of nausea and had an uneventful postoperative course.

Opioids especially the phenylpiperidine group which includes pethidine, tramadol, methadone, dextromethorphan, fentanyl and its congeners are weak serotonin reuptake inhibitors and are known to precipitate serotonin syndrome when used with other drugs especially monoamine oxidase inhibitors.\(^1\) Morphine and its analogues are not serotonin reuptake inhibitors. However, serotonin syndrome was found in 0.5% of people who reported side-effects when taking morphine.\(^2\) Ondansetron is known to block 5HT3 receptors hence should be avoided. Keeping in view the serious nature of manifestation of symptoms of serotonin syndrome in our patient we decided to avoid all opioids. The intraoperative and postoperative pain relief was provided by TAP block.

Transversus abdominis plane block is reported to be effective in reducing opioid requirement in abdominal surgeries.\(^3\) Our patient showed good pain relief with TAP block. The postoperative period was uneventful, and the patient was discharged from the hospital in due course of time.
Hence, while the phenylpiperidine group of opioids and ondansetron is known to produce serotonin syndrome, there is anecdotal evidence of all other anesthetic agents causing the syndrome. Therefore, anesthesia for patients susceptible to serotonin syndrome has to be tailored depending on the patient’s condition, till more data on interactions of anesthetic drugs causing serotonin syndrome is published.

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Large gastric wood bezoar: Anesthesia implications

Sir,

Bezoars are collections or concretions of indigestible foreign material that accumulate and coalesce in the gastrointestinal tract, most commonly in the stomach. Gastric bezoar formation occurs in patients with altered gastric physiology, impaired gastric emptying and other co-existing illness affecting gastrointestinal motility. It is also commonly seen in patients with psychiatric illnesses and history of pica. In the pediatric population, common types of bezoar seen are lactobezoars, phytobezoars, and trichobezoars. We report the case of a 7-year-old child with a large gastric wood bezoar.

A 7-year-old male child weighing 20 kg presented with a history of pica, mostly wooden scrapings since 2½ years, pain in abdomen and vomiting. Upper gastrointestinal (UGI) endoscopy revealed a large gastric bezoar. The patient underwent endoscopy twice during which general endotracheal anesthesia was given but the attempts to remove the bezoar piecemeal were unsuccessful. Five days following the third endoscopy, the patient developed constipation, abdominal tenderness and guarding, and was scheduled for a laparotomy. The biochemical investigations of the patient were normal, except for hemoglobin level of 92 g%. Preoperative optimization of fluid status was done.

Rapid sequence induction (RSI) was done using 40 mg of propofol and 20 mg of rocuronium intravenously, and the patient was intubated using 5.5 mm ID cuffed endotracheal tube. A 24 G lumbar epidural catheter was inserted postinduction for analgesia. Gastric perforation was seen on laparotomy caused either by the bezoar itself or the attempted endoscopic removal. After extending the incision, a phytobezoar measuring 13 cm × 11 cm (200 g) was removed, and the gastric perforation was closed [Figure 1]. Anesthesia was reversed, and recovery was uneventful.

The anesthesiologist must be aware of the perioperative complications of a large gastric bezoar. The complication rate of endoscopy is 0.1% for UGI procedures with cardiopulmonary events predominating (50%) which include dysrhythmias, hypoxemia from respiratory depression, and cardiac arrest. Bleeding, aspiration, and perforation are other complications. There is a reported case of respiratory arrest due to airway obstruction following the endoscopic removal of trichobezoar. Certain co-morbid conditions such as cystic...