

CASE REPORT

Anaesthetic Management for Intraoperative Arrhythmia in a Giant Ovarian Dermoid Cyst

Meera Pandey, Jueeli Tambulkar

ABSTRACT

Giant ovarian tumours are becoming very rare with the improvement in healthcare facilities. Most cysts are benign and very few turn out to be malignant. Such tumours are associated with considerable mortality. They present a challenge to the anaesthesiologist in terms of difficult intubation, maintenance of hemodynamic parameters heart rate and blood pressure and to avoid life threatening cardiac and pulmonary complications. We report such a case where patient had a large ovarian tumour which was sudden in onset and was carefully managed by thorough preoperative assessment, intraoperative fluid and hemodynamic management and thorough postoperative care.

Keywords: Abdomen, Cyst, Ovary, Healthcare.

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INTRODUCTION

In modern day surgical practice giant abdominal tumours are rarely seen as with improvement in health care and accessibility to hospitals and better imaging modalities. Giant ovarian cysts are often misdiagnosed as ascitis so a detailed ultrasound scan is important and rule out the differentials.¹⁻⁴ Most of these cysts are benign and carry only rare chances of malignancy,¹⁻² 7-13% premenopausal women and 8-45% in postmenopausal women.³⁻⁵ These tumours can be associated with considerable mortality.²⁻⁴ This case report describes the gradual and subsequent excision of an ovarian cyst weighing 8 kg. These cases present many challenges to anaesthesiologist and patient may land up in life-threatening complications.³⁻⁵ Preoperative counselling, intraoperative monitoring and postoperative management are very important in managing such cases.

CASE REPORT

A 78-year-old female was admitted with chief complaints of breathlessness NYHA-Grade-3, abdominal distension and shortness of breath. There was a sudden increase in the size of the mass and increase in the breathlessness. During pre-anaesthesia checkup she was found to have bradycardia which was confirmed on ECG findings, so she was started on medication tab orbicest 10 mg OD. On examination patient's vitals were pulse- 50/min; blood pressure- 110/62 mmHg, SpO₂- 96% RA. On auscultation chest was clear. Airway examination was normal.

CT abdomen revealed a large well defined peripherally enhancing lesion in the lower abdomen and pelvis extending superiorly up to D11 vertebral body causing mass effect on pancreas and stomach. Mass effect seen on the urinary bladder and uterus as well. Both ovaries were included in the lesion and not seen separately. As it was an emergency surgery owing to the sudden increase in the size of the mass,

Department of Anaesthesiology, SMBT Institute of Medical Science and Research Centre, Nashik, Maharashtra, India

Corresponding Author: Meera Pandey
(Email: meerapandey8184@gmail.com)

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she was planned for surgery. On the day of surgery, she was continued with tab orbicest in the morning.

Inside the operating room all standard monitors were attached to the patient. Central venous cannulation was done before induction using triple lumen catheter with seldinger's technique. Rapid sequence induction was done with midazolam, loxicard (1 mg/kg), fentanyl (2 mcg/kg), etomidate [0.2 mg/kg] and succinylcholine. Patient was intubated with 6.5 mm cuffed ETT, fixed at 18 cm after confirming bilateral entry and connected to ventilator volume control mode. As left lateral tilt was being initiated ECG rhythm on monitor changed to ventricular bigeminy followed by ventricular arrhythmias.



Figure 1: Preoperative ECG of the patient.

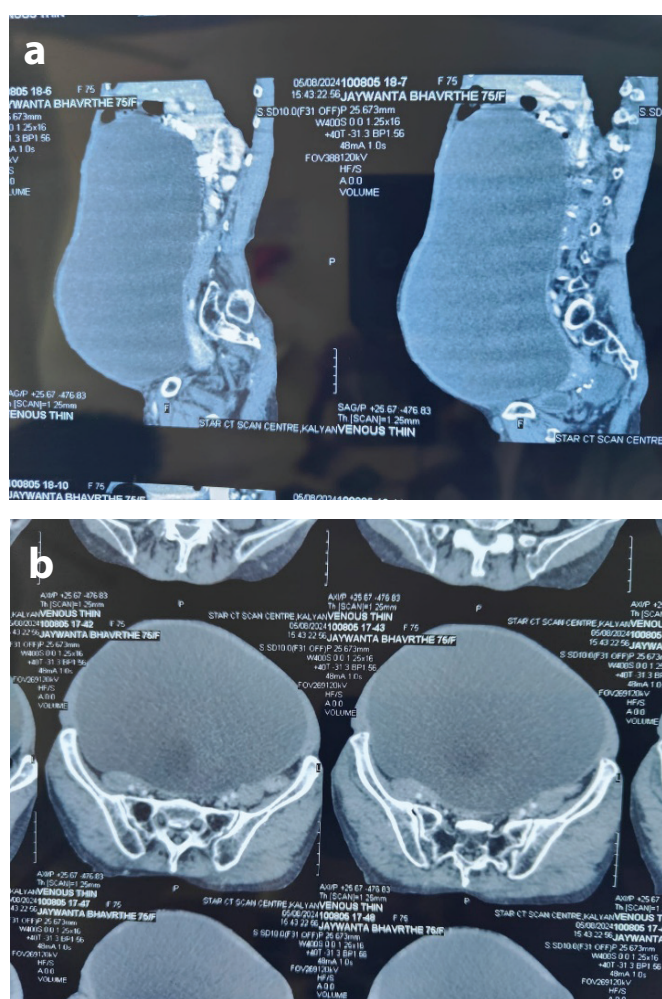


Figure 2 (a & b): CT scan abdomen – preoperative showing cyst in the abdomen.

Left lateral position was given with wedge on right side. loxicard bolus (1.5 mg/kg) followed by infusion at 1 mg/kg/hr. Patient's heart rhythm normalized within few seconds. After painting, draping done – incision was given, as soon as incision was made the ECG rhythm on monitor changed to ventricular tachycardia, immediately lateral position was exaggerated, loxicard bolus was given in the dose of 1.5 mg/kg. In the meantime, defibrillator was made ready for cardioversion. Surgical team was alerted for immediate decompression from surgical side. The abdomen was opened, and mass was lifted out. With the lifting up of the mass the ECG rhythm changed to sinus rhythm as the pressure from the inferior vena cava and aorta was released. Maintenance done with controlled ventilation, ETCO₂ monitoring, 0.5% FiO₂ and sevoflurane and atracurium bolus. Rest of the surgery was uneventful, and patient was extubated on table and shifted to ICU.

DISCUSSION

Now a days, as such large ovarian abdominal tumours rarely present in this era, due to greater health awareness and access to medical care.⁶ The potential complications of these cysts

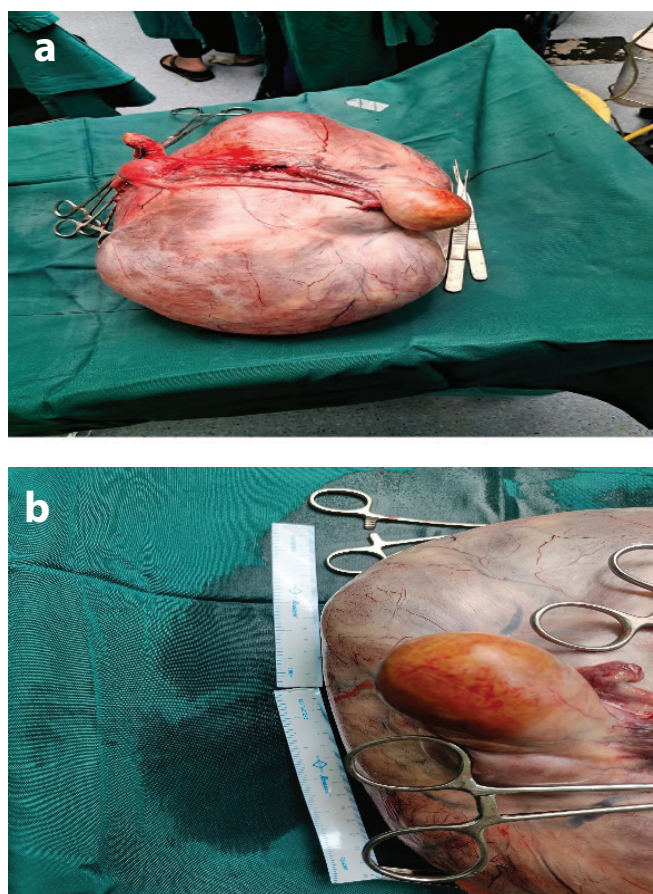


Figure 3 (a & b): Ovarian cyst after removal.

are torsion, haemorrhage and rupture. Surgical management of cysts is done by laparotomy or laparoscopic cyst excision. Huge abdominal tumours interfere with respiratory function by producing elevation and splinting of the diaphragm with flaring of rib cage. This leads to marked dyspnoea and patients are unable to lie supine. Such tumours cause supine hypotension syndrome due to aortocaval compression. To prevent supine hypotension syndrome left lateral tilt was done by putting a wedge on the right side.⁷ In this case, patient's blood pressure is kept stable by maintaining a balance between reduced cardiac output and peripheral vasoconstriction. There was onset of ventricular arrhythmias owing to the compression of aorta and inferior vena cava. Immediate excision of cyst was done. Central venous cannulation was done prior to induction expecting such complications. As closure was started patients arterial blood gas was sent. As patient was normotensive and normothermic and good respiratory efforts with a normal looking arterial blood gas, patient was extubated immediately after surgery.⁸ The patient was then shifted to ICU. She was mobilised after around 10-12 hours of surgery. Sympathetic blockades caused by central neuraxial blocks can abolish this protective mechanism, thus causing severe hypotension and hence spinal or epidural anaesthesia is preferably avoided. Delayed extubation may be expected in such patients, some may require reintubation for ventilatory failure. Postoperative

there are chances of haemorrhage, hypothermia, pedal edema. Hence, elective ventilation is done in such patients.

Early mobilisation helps to prevent the risk of deep venous thrombosis and pulmonary embolism. Postoperative patients also have chances of having intestinal ileus which was managed by putting elastic abdominal binders and maintaining the electrolyte balance.⁷

CONCLUSION

Thus, by providing meticulous perioperative anaesthetic management and closed loop communication between surgeon and anaesthesia team the management of such cases can be done successfully.

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