Case Report

Anaesthetic management in resection of huge ovarian tumour

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Abstract

Giant ovarian tumours are rare in this era of contemporary medical practice and awareness among patients to seek the medical care at the earliest. Mucinous tumours are among the largest known tumours found in the human body, about 80% of which are benign, 10% borderline and 10% malignant. They are usually common between third and fifth decade of life. We describe the anaesthetic management of a giant ovarian mucinous cystadenocarcinoma in a 55 year old female.

Keywords: Mucinous cystadenocarcinoma, pleural effusion, intra-abdominal tumour

1. Introduction

Large intra-abdominal tumours change the anatomy, physiology and psychology of the patient. With the increase in the size of the tumour, the musculature of the abdominal wall becomes stretched beyond the limits of rapid recovery and the patient may be rendered immobile. With improvement in patient’s awareness towards health, medical care, improved access to hospitals and good imaging modalities, huge abdominal tumours are rarely seen in modern day clinical practice. Challenges faced by anaesthesiologists are many like, compromised cardiorespiratory system, difficulty in positioning for regional as well as general anesthesia, life threatening cardiovascular and pulmonary complications intraoperatively. The incidences of mortality and morbidity are usually high. The consequences of surgery are mainly attributable to the size of the mass rather than to its distinctive pathology.

2. Case report

A 55 year old female presented with progressive abdominal distension of two years duration. She also had marked difficulty in walking because of her huge abdomen. She developed breathlessness seven days prior to the admission in the hospital. Her cardiovascular examination was unremarkable and respiratory system examination revealed dull note on percussion over bilateral lower lung regions. She had lordosis and waddling gait because of abdominal mass. Her weight was 81 kg and abdominal girth measured 126 cm. She had short neck with adequate mouth opening and normal neck movements. Airway was graded as mallampatti class II. Spine was lordotic over lumbosacral area.

Her investigations revealed Hb of 11.5 gm/dl with normal renal and liver function tests. Her coagulation profile was normal. Electrocardiogram (ECG) showed normal sinus rhythm and echocardiography revealed ejection fraction of 58%. Chest x ray revealed bilateral mild pleural effusion. Ultrasonography identified the mass as benign, arising from right ovary and solid to cystic in nature. Computerised tomography of abdomen confirmed the USG findings, but malignant nature could not be ruled out. She was scheduled for laparotomy under the combination of general and epidural anaesthesia.

Patient was given tab ranitidine 150 mg, tab alprazolam 0.5 mg orally and the informed consent was taken. Monitoring included pulse oximetry (SPO2), non-invasive blood pressure (NIBP), ECG, end tidal carbon dioxide (ETCO2) and central venous pressure (CVP). Intravenous (IV) line was secured with 18 gauge cannula and right internal jugular vein was cannulated. With the patient in sitting position epidural space was located at T12-L1 interspace using loss of resistance to normal saline technique with 18 G Tuohy’s needle and catheter was introduced. The position of the catheter was confirmed using lignocaine test dose. Later patient was preoxygenated with 100% oxygen and induced with intravenous fentanyl 2 µg/kg, propofol 2 mg/kg and intubated under suxamethonium 2 mg/kg IV. Anaesthesia was maintained with oxygen, nitrous oxide, propofol infusion and vecuronium. Intraoperatively her mean blood pressure was around 55-60 mmHg and CVP 6-8 cm of water. On opening the abdomen, around 500 ml of haemorrhagic ascitic fluid was aspirated. Blood loss was estimated to be around 1000 ml and surgery lasted for two hours. She was reversed with neostigmine and glycopyrrolate and extubated at the end of surgery. She was given 10 cc of 0.125% bupivacaine with 25 micrograms of fentanyl epidurally 30 minutes before extubation and then every 8th hourly for 5 days postoperatively. She was transferred to intensive care unit for 24 hours where in her vitals were stable with adequate urine output. Histopathology report confirmed the mass as mucinous cystadenocarcinoma of ovary. She was discharged on 8th post operative day uneventfully.
3. Discussion

Mucinous tumours are the second most common type of epithelial ovarian tumours accounting for approximately 10-20% of these neoplasia. About 75 - 85% of mucinous tumours are benign. They are the largest tumour found in the human body. Katherine et al, have reported a case of giant ovarian tumour weighing 134.7 kg in 1994 and in 2013, Madhu et al, reported a ovarian mass of 57 kg.

Most common presentation of OC (ovarian carcinoma) is increasing abdominal girth and difficulty in breathing owing to ascites formation and/or pleural effusion. Malignant pleural effusions in OC usually result from the pleural invasion from contiguous structures such as the diaphragm, the transdiaphragmatic migration of malignant cells thorough pleuropерitoneal communications and metastases to the parietal pleura via a haematogenous route.

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. Large abdominal tumours cause supine hypotension syndrome due to aortocaval compression.

We obtained a central venous line under local anaesthesia in anticipation of hypotension due to supine position, splanchnic shock with the removal of mass and surgical blood loss. In these patients, the blood pressure is maintained because of balance between the reduced cardiac output and peripheral vasoconstriction. Sympathetic blockades caused by central neuraxial blocks can abolish this protective mechanism, thus resulting in severe hypotension, and hence we opted for general anaesthesia, avoiding epidural drug administration intraoperatively. Some patients may require elective ventilation post operatively because of pain and altered respiratory mechanics. We opted for extubation at the end of the surgery as respiratory efforts were adequate; patient was normothermic and hemodynamically stable. In ICU and wards, along with nasogastric aspiration, serum electrolytes were serially monitored to avoid ileus and respiratory muscle weakness.

Patient was given elastic stockings along with encouragement for early mobilization.

4. Conclusion

Large abdominal tumours have become rare in this era of accessible medical facilities, awareness about health due to improving literacy in women. It is likely that many clinicians may not have come across such situations. Anesthesiologists must be aware to anticipate and combat the challenges that are seen in these cases. We reported anaesthetic management of a case of surgical removal of large ovarian mass by meticulous preoperative evaluation and rational intraoperative management with pain free postoperative period.

References