

## CASE REPORT

# Why Not Thoracic Epidural Anesthesia in Modified Radical Mastectomy?! A Case Report

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## ABSTRACT

Thoracic epidural anesthesia (TEA) is a forthcoming alternative to general anesthesia for modified radical mastectomy. A 49-year-old female who is a known case of chronic obstructive pulmonary disease/diabetes mellitus/hypertension and body mass index of 35.8—OBESE II (which makes regional anesthesia challenging) with a diagnosis of right CA breast posted for modified radical mastectomy (MRM). The case was planned only under TEA. The patient was induced with a loading dose of 15 mL of 0.5% ropivacaine at the T4–T5 level. The patient was comfortable throughout the procedure and uneventful. The patient was discharged on the 5th postoperative day. TEA provides advantages of superior postoperative analgesia without adverse effects of general anesthesia (GA) like nausea and vomiting. TEA enhanced patients' compliance with chest physiotherapy.

**Keywords:** Epidural analgesia, Modified radical mastectomy, Ropivacaine, Thoracic epidural anesthesia.

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## INTRODUCTION

A woman's lifetime risk of breast cancer is one in nine. Surgery is the central component of the treatment.<sup>1</sup> Ordinarily, modified radical mastectomy (MRM) is done under general anesthesia (GA). However, general anesthesia is not a practicable choice in patients with chronic obstructive pulmonary disease (COPD) and other comorbidities who are at high risk of perioperative complications. TEA imparts superior analgesia without pulmonary complications. In our patient, hence we have opted for regional anesthesia over general anesthesia for successful perioperative management in a diagnosed case of CA breast with compromised pulmonary function because of COPD.<sup>2,3</sup>

## CASE REPORT

A 49-year-old female who is a known case of COPD for 5 years with a history of frequent exacerbations. She is a known case of diabetes mellitus (DM) for 15 years and hypertension (HTN) for 1 year with a diagnosis of CA breast right, posted for modified radical mastectomy. During preanesthetic evaluation, the patient was planned for central neuraxial blockade because of the presence of comorbidities (Fig. 1). Airway examination did not reveal any difficulties and routine investigations ECG, chest X-ray, and vitals were found to be normal. BMI of 35.8 kg/m<sup>2</sup> OBESE II. The patient was fit under American Society of Anaesthesiologists (ASA) III. The patient was shifted to OT; ASA standard monitors were connected and made a record of baseline vitals. The patient was made to sit and the thoracic region was painted and draped under aseptic precautions.

18G Tuohy's epidural needle was inserted in T4–T5 space with the bevel facing upwards (Fig. 2). Epidural space was identified at 7.5 cm using the loss of resistance (LOR) to air technique. Catheter inserted, threaded, and fixed at 12 cm after the negative test dose.

A loading dose of 15 mL of 0.5% ropivacaine was given slowly in 7 mL aliquots at 5-minute intervals. A sensory block height of T1–T7 was achieved bilaterally which allowed surgery to commence. Maintenance of 7 mL of 0.5% ropivacaine was given

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per hour. Blood loss was 600 mL. The surgical time was 2:30 hours. The patient remained hemodynamically stable throughout the surgery. Postoperatively, pain management was done with an epidural infusion of 0.1% ropivacaine at 5 mL/hour and intravenous paracetamol at 1 g 8th hourly.

## DISCUSSION

Usually, in our institution, MRM is done under general anesthesia. Likewise, we initially planned to operate on this patient also under general anesthesia. But we were well aware of the problems we could face if we subject the patient to general anesthesia. The patient's pulmonary function tests (PFT) showed severe obstruction with just a 17% reversal with bronchodilators. Though the patient was on bronchodilator therapy and incentive spirometry there was always the risk of the airway becoming hyperreactive when subject to endotracheal intubation. With the patient being obese we predicted that we could face a problem with ventilation and mobilization in the immediate postoperative period as we had to depend on opioids to alleviate pain. With these complications in place, we decided to operate on the patient under sole thoracic epidural anesthesia. The patient was informed about the procedure and also consent for postoperative ventilation was also obtained if we were not able



Fig. 1: Patients position during the procedure



Fig. 2: Insertion of the epidural needle

to secure a thoracic epidural and had to go for general anesthesia. Eventually, the thoracic epidural was placed in T4–T5 space at a depth of 7.5 cm. A catheter with the length of 4.5 cm was kept inside and 3 mL of 2% lignocaine with adrenaline test dose was given. Fifteen milliliters of 0.5% ropivacaine bolus was given. With

ropivacaine, there was not much fall in BP as well. After checking for blockade between T1 and T8, surgery was started. The surgery was uneventful. The patient breathing was normal throughout the procedure. To avoid abdomen content falling over the diaphragm we gave a slight head up to the patient as well. The patient was shifted to SICU and postoperative analgesia was maintained with 0.1% ropivacaine infusion at 5 mL/hour and Inj. Paracetamol 1 g IV TDS given. The patient started on orals immediately and incentive spirometry started the same evening. The patient ambulated the next day and was discharged to ward on POD3 and discharged on POD5 without any complications.

## CONCLUSION

Thoracic epidural anesthesia is a safe alternative to general anesthesia for patients with multiple comorbidities.

The patient had greater satisfaction, early anesthetic recovery, good postoperative pain relief, and postoperative period had no adverse effects of general anesthesia.

Thoracic epidural anesthesia outperforms general anesthesia in postoperative analgesia, perioperative complications, polypharmacy, speedy recovery, enhances patient's compliance for chest physiotherapy.

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