Case Report

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A Case Report of Ca. Breast Patient with Metastasis, DVT and Hypoalbuminemia Posted for Modified Radical Mastectomy Under Thoracic Epidural Anaesthesia: A Challenge for Anaesthesiologist

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Abstract

Modified Radical Mastectomy, the surgical procedure for carcinoma of breast is routinely performed under general anaesthesia. Patient with lung metastasis and low serum albumin are at increased risk of perioperative morbidity and mortality. We report a case of carcinoma of breast with lung metastasis, right axillary vein thrombosis and low serum albumin (1.7 gm% with A/G ratio 0.61) managed successfully under sole thoracic epidural anaesthesia.

Keywords: Thoracic Epidural Anaesthesia; Modified Radical Mastectomy; Low Serum Albumin; DVT.

Introduction

Breast cancer is the commonest cancer in women and its incidence is increasing at an alarming rate. Modified radical mastectomy (MRM) is the standard surgical procedure for these patients, in which the entire breast is removed including the skin, areola, nipple and most axillary lymph nodes. MRM is usually performed under general anaesthesia. There may be delayed recovery and patient may require ventilatory support postoperatively in patients with lung metastasis and low serum albumin. There were studies reporting the use of thoracic and cervical epidural anaesthesia for MRM in patients of carcinoma of breast [1,2,3]. But these techniques are not practiced routinely. We report a case of carcinoma of breast with lung metastasis, right axillary vein thrombosis, low serum albumin, minimum ascites and mild bilateral pleural effusion managed successfully under sole thoracic epidural anaesthesia.

Case Report

35 years old female weighing 50 kg was admitted at Dhiraj hospital in the month of September with a complaint of lump in right side breast with pus discharge from it. Lump grew slowly and gradually over a period of 1 year and was painful. She also complained of weakness and dizziness. She had undergone a surgery for excision of small cyst in axilla 1 year back which was uneventful. There was history of deep vein thrombosis in right upper and lower limbs for last 3 months and was on heparin 500 units which were discontinued on the next day of admission. She had received transfusion of 8 PCV during the last 3 months. She had taken 6 cycles of chemotherapy, last was 10 days before the hospital admission.

On clinical examination patient was pale, oedema present on right upper and lower limbs. She was afebrile, pulse 108/minute and BP 90/60mm Hg. The size of the axillary lump was about 12 × 5 cms, which was necrosed with slough and bleeding. On examination of respiratory system air entry was reduced in right upper lobe. Rests of the systemic examinations were normal.

Laboratory investigations carried out were; Hb estimation 10.6 gm% on the day of operation. Total protein 4.5 gm%, Albumin 1.7 gm%, globulin 2.8 gm%, A/G ratio 0.61. INR on the day of admission was 4.9; it came to 1.25 on the day of operation. Blood urea, Serum creatinine, serum electrolytes, ECG and 2D echo were normal. X-ray chest showed ill defined soft tissue opacity in right axillary region suggestive of? metastasis. CECT showed ill defined heterogeneously enhancing soft tissue density mass lesion measuring approximately 12 × 5.4 cm involving right axillary region of breast, possibility of malignant mass lesion. There were multiple enhancing metastatic nodes

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in right lateral aspect of chest wall. Partial thrombosis involving IVC. Minimal ascites and mild bilateral pleural effusion (Rt > Lt). Pet CT showed hypertrophic large nodal mass in the Rt. axilla with multiple discrete axillary and subpectoral nodes. Multiple lung nodules noted suggestive of likely metastasis. Right upper limb doppler showed right axillary vein thrombosis and right lower limb doppler showed DVT in right superficial femoral vein, profunda femoral and popliteal vein.

Patient was explained about the procedure of anaesthesia and informed written consent was obtained under ASA IV.

Fig. 1:

Fig. 2:

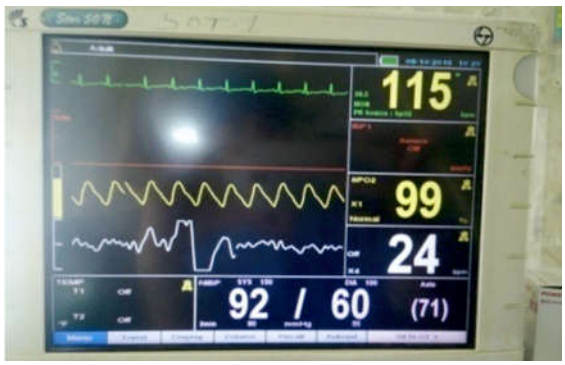

Fig. 3:

Anaesthesia Technique

On the day of surgery in the operation theatre femoral venous line was taken as peripheral line was not accessible and RL infusion started. L & T multipara monitor attached. Pulse - 150/ minute, BP - 110/70 mmHg and SpO_2 100%. Surgery planned under thoracic epidural anaesthesia. Patient was premedicated with 0.2 mg inj. glycopyrrolate and inj. ondansetron 4 mg intravenously. Patient was kept in sitting position. After aseptic and antiseptic precautions 18 no. tuohy needle was introduced at T_{6-7} level, after local anesthesia. Epidural space was identified by using loss of resistance with saline technique. 20 G epidural catheter was inserted 4 cm. into the epidural space through the needle in cephalad direction. The catheter was fixed and patient was made to supine. 9 ml of 0.75% inj. Ropivacaine and 50 µg of inj. Clonidine injected through the catheter(5cc+5cc). Anaesthesia was achieved in the area from C_7 to T_7 level in 15 minutes. After adequate sensory block patient was handed over to surgeon. At the time of axillary node dissection Inj. Ketamine 20 mg was given twice. Under local infiltration thin thickness skin graft taken and put over wound area. Duration of Surgery lasted for 2 hours. One PCV was given intra-operatively. Patient was hemody-namically stable. Because of the DVT of right upper limb, surgeon gave bandage encircling the chest wall and was to keep it for 6 -7 days and also if the surgeon wants to start heparin, at the end of surgery inj. Ropivacine 0.1% 10 cc was given by epidural catheter and catheter was removed .

Discussion

Thoracic epidural anaesthesia has been practiced in the perioperative management for thoracic, abdominal surgeries with advantage of rapid recovery, adequate analgesia and improved outcome [1]. However, it is not used frequently. We planned anaesthetic technique of sole thoracic epidural anaesthesia as there was lung metastasis, serum albumin only 1.7 gm%, minimal ascites and mild bilateral pleural effusion. The analgesia was adequate and surgical field was relatively blood less. O′ Connor et al gave thoracic epidural anaesthesia for bilateral mammoplasty in a patient with Klippel-Feil syndrome with difficult airway and found to be successful [2]. Ashok Jadon highlighted the usefulness of cervical epidural analgesia in managing a complex situation of carcinoma breast

with associated periarthritis of shoulder joint and chronic regional pain syndrome of right upper limb [3]. Some retrospective studies reported improved survival with reduced prevalence of tumour recurrence after thoracic epidural anaesthesia or paravertebral block in cancer patients [4,5]. Snyder et al (2010) commented that anaesthetic technique and other perioperative factors had the potential to effect long term outcome after cancer surgery. Anaesthetic technique and drug choice can interact with the cellular immune system and effect long term outcome. The potential effect of intravenous anaesthetics, volatile agents, local anaesthetic agents, opiates and NSAID were reviewed and found that regional anaesthesia appeared to be beneficial.[5]

Successful use of high thoracic epidural anaesthesia avoids tracheal intubation hence also minimizes postoperative pulmonary complications [6]. The level should not exceed beyond C_5 as blockade of phrenic nerve might lead to horner's syndrome and stoppage of respiration might require ventilator support.

The only problem in our patient is hypotension and that was treated by 6 mg ephedrine and IV fluids.

While using thoracic epidural anaesthesia one has to assess risk and benefit ratio. Common complications are dural puncture, epidural haematoma and neurological injury. But these complications are rare with experienced anaesthetists.

Conclusion

Thoracic epidural anaesthesia is safe and better technique in patients of carcinoma of breast with lung metastasis, low serum albumin, minimal ascites and mild pleural effusion undergoing Modified Radical Mastectomy.

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