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Case Report

Unilateral Spinal Anaesthesia For Toilet Mastectomy-As An Alternative To General Anaesthesia: A Case Report

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ABSTRACT

General anaesthesia is a choice of anaesthesia for surgeries of breast like modified radical mastectomy (MRM). But patients with lung disease like bronchial asthma, COPD, poor pulmonary function are at a high risk for perioperative mortality and morbidity especially because of pulmonary complications under general anaesthesia. For these patients regional anaesthesia may be a better choice. We present successful perioperative management of a known case of bronchial asthma with left lower lobe collapse under unilateral spinal anaesthesia a sole anaesthetic technique for toilet mastectomy with axillary clearance.

INTRODUCTION:

Worldwide prevalence of carcinoma of the breast is increasing at an alarming rate and prevalence of breast carcinoma in India varies from 12-31 cases per 10000 women.[1] So also the need for surgical treatment has increased. Nowadays, surgical intervention is more conversative, but in most cases, partial or total mastectomy associated is still necessary. Though general anaesthesia is currently the standard technique used for surgical treatment of breast cancer. Spinal anaesthesia a central neuraxial block technique and can be used as a sole anaesthetic for procedure involving the lower limbs, pelvic, perineum, lower abdomen as well as upper abdomen and breast. Moreover, the degree of muscle relaxation achievable without central or peripheral respiratory or circulatory depression is superior to that with general anaesthesia. We present successful perioperative management of a known case of 68 years female of bronchial asthma with left lower lobe collapse under unilateral spinal anaesthesia as a sole anaesthetic technique for toilet mastectomy with axillary clearance.

CASE REPORT:

A 68 year old housewife presented to our hospital with chief complaint of lump in right breast and axilla gradually increasing in size over last 6 months. On clinical examination, a fungating mass of size 6x5 cm over right breast with enlarged axillary lymph nodes were noted. Fine needle aspiration cytology report revealed invasive ductal carcinoma with axillary metastasis and was scheduled for right toilet mastectomy on semi-emergency basis.

She was a known case of bronchial asthma on irregular treatment with episodes of exacerbation and remissions once or twice in a year. During preoperative evaluation we found that because of compromised respiratory status patient is at high risk for procedure to be done under general anaesthesia. On clinical examination- patient was thin built with pulse rate of 98/min, blood pressure of 130/90 mm Hg and respiratory rate of 22/min. On systemic examination, respiratory system revealed bilateral wheeze and air entry was decreased in left lower zoneand cardiovascular system was within normal limits. On airway examination, she was edentulous with three finger mouth opening, thyro-mental distance was 6 cm she had normal normal neck and tympano-mandibular joint movements. Spine examination was normal. Laboratory investigations revealed- Hb: 9.3 gm with PCV: 27.3 vol % with other investigations like serum electrolytes, liver function test, renal function test, coagulation profile and blood sugar levels were within normal range. Chest radiography showed left lower lobe collapse with prominent bronchovascular markings. Electrocardiogram was within normal limits. Pateint was started on I.V antibiotics and salbutamol nebulization every 6 hrly as per physician consulation. General anaesthesia was relatively

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contraindicated so as to avoid postoperative ventilator support and complications unilateral spinal anaesthesia was planned.

Pre-operative counseling was done and informed written consent was taken and she was accepted for anaesthesia under ASA grade III. Meanwhile we tried to optimize patient's respiratory status with salbutamol nebulization, N-acetylcysteine and maintaining adequate hydration.

Patient was wheeled into the operation theatre. Monitoring included 3-lead electrocardiogram, pulseoximetry, and non-invasive blood pressure. Intravenous access was taken with 18G angiocath on opposite upper limb and intravenous fluids in the form of ringer's lactate were started. Anti-aspiration prophylaxis in the form of Inj. Ranitidine (50 mg), Inj. Ondansetron (4mg) was given. Inj. Midazolam (0.5 mg) was administered to relieve anxiety. Unilateral Sub-arachnoid block was given in right lateral position with midline approach with 25 gauge spinal needle in T9-T10 interspace with 1.6 cc of 0.5% of heavy injection bupivacaine, after confirming clear and free flow of CSFand negative aspiration of blood. Patient was kept in same position for 10 minutes. Adequate level of anaesthesia was achieved upto T2 level.Continuous watch on respiration was taken. Oxygen supplementation was given throughout the procedure. Surgery was done without any complaint of pain.

Intraoperatively, systolic BP was maintained between 110-120 mm Hg and diastolic 70-80 mm Hg. Pulse rate was between 80-90 beats/min. Duration of surgery was one hour, with blood loss of 200ml and urine output of 100 ml. 500 ml of crystalloid (ringer lactate) was infused throughout the procedure. For post-operative analgesia 100 mg Inj. Tramadol was given. Post-operatively patient was observed in post anaesthesia care unit for 6 hours.

DISCUSSION:

General anaesthesia is currently the standard technique used for surgical treatment of breast cancer. The drawback of general anaesthesia include, but not limited to, pain control due to lack of residual analgesia, high incidence of nausea and vomiting and increase the length of hospitalization.[2]

Thomas Jonnesco[3] described the use of spinal anaesthesia for surgeries in the skull, head, neck and thorax. The punctures were performed between the 1st and 2 nd thoracic vertebrae, which resulted in good analgesia for the head, neck and upper limbs. Recently thoracic spinal anaesthesia was practiced by Van Zundert et al. for laparoscopic cholecystectomy in a patient with severe obstructive lung disease using low thoracic puncture (T10) for combined spinal-epidural block.[4]

Regional anaesthesia like spinal or epidural anaesthesia has been established as a cornerstone in the perioperative management for thoracic, abdominal and lower limb surgeries with maximum clinical benefits of speedy recovery, effective analgesia and improved outcome. So also, neuraxial anaesthesia can inhibit the neuro endocrine stress response and patient who receive regional analgesia have lower opioid requirements.[5] However, it is practiced less frequently.

There are a number of advantages to deliver the spinal anaesthetic directly to the required heights in the body. Firstly, one of the most obvious advantages is that there is no blockade of the lower extremities, i.e little caudal spread. This means that a significantly larger portion of the body experiences no venal dilation, and may offer a compensatory buffer to adverse changes in blood pressure intra-operatively. This is one of the major risks identified in surgery.[6] Secondly, the dosing of the anesthetic is exceedingly low, given the highly specific block to only certain nerve functions along a section of the cord. Thirdly, the degree of muscle relaxation achievable without central or peripheral respiratory or circulatory depression is superior to that with general anaestheisa. Fourthly, the patients have motor control over their legs during the surgery, which in turn means many patients exhibit a high level of satisfaction with the technique and decreased anxiety.[7]

The COPD has been considered as an independent risk factor for postoperative morbidity and mortality because of cardiopulmonary complications. General anaesthetic agents, opiods, muscle relaxants and mechanical ventilation interfere with respiratory function. This combined effect of general anaesthesia in supine position leads to instant fall in lung volumes with atelectasis in dependent part of lungs.[8] These patients are difficult to wean from ventilator and may require postoperative prolonged ventilation. Pateints undergoing breast surgery are also normally associated with a high incidence of postoperative nausea and vomiting (PONV). Troublesome pain and PONV can prolong recovery and hospitalization, and are some of the most common causes of hospital admission following ambulatory surgery.[9] Regional block has a lower incidence of nausea and vomiting, when compared with general anaesthesia, which has been demonstrated in several procedures and studies.[10]

So, in our patient having history of asthma, we planned the procedure of unilateral spinal anaesthesia as a sole anaesthetic technique which provided safe and excellent analgesia with improved surgical conditions.

CONCLUSION:

Compared to general anaesthesia, regional anaesthesia such as unilateral thoracic spinal anaesthesia offers better option for toilet mastectomy with compromised pulmonary function. Another distinct advantage of the technique is good quality post operative analgesia which enhances pateint's compliance for chest physiotherapy and hence speedy recovery.

References:

1. Agarwal G, Ramakant P. Breast cancer care in india: The current scenario and the challenges for the future. B reast care (Basel), 2008: 3 (1): 21-7.
2. Oddby-Muhrbeck E, Jakobsson J, Anderson L, Askergren J. Postoperative nausea and vomiting. A comparison between intravenous and inhalation anaesthesia in breast surgery. Acta anaesthesiol Scand. 1994: 38:52-6.
3. Jonnesco T. Remarks on general spinal anaesthesia. Br MedJ.1909:2:1396-401.
4. Van Zundert AA, Stulteins G, Jakimowicz JJ, van der Ham WG, Wildsmith JA. Segmental spinal anaesthesia for cholecystectomy in a patient with severe lung disease. Br J anaesthesia. 2006:96:464-6.
5. Scherer R, Schmutzler M, Giebler R, Erhald J, Stocker L, Kox WJ. Complications related to thoracic epidural analgesia: A prospective study in 1071 surgical patients. Acta anaesthesia Scand. 1993:37:370-4.
6. Monk TG, Saini V, Weldon BC, Sigl JC. Anaesthetic management and one year mortality after noncardiac surgery. Anesth Analg. 2005: 100:4-10.
7. Lee RA, Van Zundert AA, Visser WA, Lataster LM, Weiringa PA. Thoracic combined spinal-Epidural Anaesthesia. Southern African J Anaesth and Analg. 2008: 14:63-9.
8. Licker M, Schweizer A, Ellenberger C, Tschopp JM, Diaper J, Clergue F. Perioperative medical management of patients with COPD. Int J Chron Obstruct Pulmon Dis 2007:2 (4):493-515.
9. Boregeat A, Ekatodramis G, Schenker C. Postoperative nausea and vomiting in regional anaesthesia: A review Anesthsiology. 2003:98:530-47.