



A CASE OF PHYLLODES TUMOUR DONE UNDER CONTINUOUS THORACIC EPIDURAL ANAESTHESIA IN A SIX MONTHS PREGNANT FEMALE

Anaesthesiology

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ABSTRACT

Phyllodes tumor is a rare neoplasm of female breast have its origin from the fibroepithelial cells of breast. It predominantly occur in females (0.3-0.5%). Phyllodes in pregnancy are larger in size and rapidly growing may be because of the influence of pregnancy hormones on the female breast tissues. A 22 year old female with six months of pregnancy with phyllodes tumor of right breast was posted for wide local excision and reconstruction of defect using latissimus dorsi myocutaneous flap. She had presented with swelling of approximately 24cm X 10cm X 6cm in her right breast which developed pain since last eight days. She was maintained on the intravenous injection duvidilan (isoxsuprine) 80 mg 8 hourly for three days perioperatively for tocolysis. The case was done using thoracic epidural catheterization at T6-T7 interspace using 0.75% ropivacaine with no perioperative complications. The choice of anesthetic technique for the emergency procedures in pregnancy will depend on the trimester and the type and duration of surgical procedure. Whenever possible, a regional anesthetic technique should be used.

KEYWORDS

Pregnancy, phyllodes, latissimus dorsi flap, regional anesthesia, thoracic epidural.

INTRODUCTION:

Phyllodes tumor is a fibroepithelial neoplasm of breast which arise de novo from intralobular or periductal stroma. In rare occasions it can also arise in a background of fibroadenoma. This unilateral well-circumscribed mass can grow rapidly. Phyllodes in pregnancy grow fast and are larger in size under the effect of maternal hormones leading to stretching and induration of the overlying skin and pain hence requiring urgent surgical removal of the tumor mass under anesthesia. Anesthesia for such a pregnant patient with rapidly growing phyllodes tumor of right breast can be challenging specially in the background of bad obstetric history as the patient had history of neonatal demise in her previous pregnancy two years back. Mostly, general anesthesia is used for breast surgery. In recent times, there is growing pattern of using various regional anesthesia techniques like high thoracic epidural anesthesia, thoracic spinal anesthesia, thoracic paravertebral block, blockade of brachial, intercostal nerves or direct infiltration of surgical plexus giving nerve supply to the breast tissue by the local anaesthetic solution¹. With the recent advances in the technology, various ultrasound guided blocks for breast surgeries are also gaining the attention of anaesthetists. These require the direct infiltration of the local anaesthetic solution into the interfascial plane such as pectoral nerve blocks-type 1 and type 2 (pecs1 and pecs2) and serratus anterior block. Through this article, we are presenting one such case of phyllodes tumor in pregnant female done under continuous thoracic epidural anesthesia.

CASE REPORT:

A 22 year old female with six months of pregnancy presented to the outpatient department with swelling of approximately 24cm X 10cm X 6cm in her right breast which developed pain since last eight days. Diagnosis of phyllodes tumor of right breast was confirmed by USG and histopathological examination of the lump tissue. She was posted for wide local excision and reconstruction surgery using latissimus dorsi myocutaneous flap. The patient had no history of any medical and surgical illness other than fetal demise at birth in her previous pregnancy. All her routine preoperative investigations were within normal range. BMI of the patient was 23 and ASA Grade was II. Keeping in view the history and the extend of the surgical procedure, the decision of taking the case in the thoracic epidural was taken. The anesthesia and technique was explained in detail to the patient. An informed and written consent was taken. Patient was taken on the operation theatre table and basic non invasive monitoring connections were attached. Vitals were recorded with a blood pressure of 118/78 mm of Hg, heart rate of 84 beats/min. and spo2 99% on air. Intravenous access was done using 18 G peripheral venous catheter. Prehydration was done with 500ml Ringer's Lactate. Oxygenation was done using Hudson mask at rate of 6L/min. Premedication was done using glycopyrrolate 0.004mg/kg. Fetal heart rate was auscultated 138/min by the obstetrician before the start of procedure. Regular monitoring of fetal heart rate was done by obstetrician intraoperatively and also post-

operatively. Patient was positioned in the sitting position. Sterilization of the procedural site was done by painting with povidine iodine solution and draping was done. Using 18 gauge Touhy's epidural needle, 18G epidural catheter was inserted at T6-T7 interspace using loss of resistance technique via paramedian approach and 3.5cm length of epidural catheter was left inside the epidural space. Test dose of 3ml of 1.5% lignocaine plus adrenaline was given. After 10 minutes, as no evidence of intravascular or intradural placement of catheter were seen, 7ml of 0.75% ropivacaine was given. After 20 minutes, the sensory level of block was assessed using pinprick method. A successful blockade of the segments from T3 to T10 was attained. Slight pain perception was present in the upper margins for which local infiltration of the anesthetic solution was done. Patient was sedated using 1 mg midazolam and 50 microgram of fentanyl. Continuous epidural infusion of 0.375% of ropivacaine was started at a rate of 7ml/hr. At the time of latissimus dorsi flap harvesting epidural supplementation using 6ml of 0.375% ropivacaine and 10 microgram of fentanyl was done to avoid discomfort associated with the position change. The surgery continued for two and half hours. The vitals of the patient were stable throughout the surgery with no perioperative complications. The fetal heart rate was regularly auscultated by the obstetrician throughout the surgery and also at the end of surgery.



Figure1: Phyllodes Tumor In Right Breast.



Figure2: Image After Tumor Removal And Reconstruction Using Latissimus Dorsi Flap.

DISCUSSION:

Phyllodes tumor of breast is a rare fibroepithelial neoplasm that accounts for less than 1% (0.3%- 0.5%) of all female neoplasms. It was previously known as cystosarcoma phyllodes. Very few cases of this rare breast neoplasm are reported in pregnancy⁽²⁾. It mainly presents as a hard lump in the breast. Diagnosis is confirmed using mammography,

ultrasound, ultrasound-guided core needle biopsy and histopathological examination. Surgery is the main stay of treatment. Phyllodes tumor during pregnancy is very rare and it may grow rapidly and size is also relatively large⁽³⁾. It is not certain whether the tumor in pregnant patient is hormone dependent⁽⁴⁾. Effect of Maternal hormones is attributed for its rapid growth in pregnancy although no evidence has confirmed the association between these findings. Surgery is the main stay of treatment.

Around 2% of pregnant women require surgery and anaesthetic interventions for various non-obstetric conditions each year⁵. The most common indications being acute appendicitis, cholecystitis, trauma, procedures directly related to pregnancy such as cervical cerclage and surgery for maternal malignancies. The main risks of surgery during pregnancy are fetal loss, premature labour and delivery. The most important focus in non-obstetric surgery during pregnancy is the safe and skilled anaesthetic management to minimize risk to the mother and the fetus rather than any specific agent or technique. The primary goal is always to preserve the life of the mother first, then fetus. The timing of surgery, the clinical status of patient and surgical procedure can affect the fetal outcome, and the decision should be taken after discussion with the team involving surgeons, anaesthetists, and obstetricians and perinatologists. Literature reports an overall miscarriage rate after surgery of 5.8% which increased to 10.5% during the first trimester⁶. The preferred time for surgery is second trimester as in first trimester there is danger of spontaneous abortion and teratogenicity. In third trimester the patient can go into premature labor. Whenever possible defer the elective surgery in pregnancy but emergency needs to be operated regardless of gestational age.

The main objective of any anaesthetic technique used during pregnancy is to avoid maternal hypoxia, hypercarbia, hypocapnia and hypotension in order to avoid fetal asphyxia. Of utmost importance is to maintain uteroplacental perfusion, so as to preserve maternal and fetal oxygenation. Prolonged maternal hypoxia causes uteroplacental vasoconstriction resulting in fetal hypoxemia and acidosis. Maternal hypercapnia directly causes fetal respiratory acidosis and fetal myocardial depression.

Various Regional anaesthetic techniques are attaining the preference in pregnant patients as they minimize the exposure of fetus to multiple drugs as the scenario with general anesthesia especially in the first trimester. It is very important in decreasing the problem of teratogenicity. Regional anesthesia also avoids instrumentation of airway. A high thoracic epidural is a good alternative for general anesthesia for surgeries on the thorax, chest wall and axilla. Post operative analgesia is also provided via epidural catheter. It decreases the chance of gastric aspiration and minimizes PONV, less intraoperative blood loss, earlier mobilization and shortened recovery time. Bromage, depending upon the inclination of the spinous process of thoracic vertebra, has suggested the medial approach to segments T1 to T4 and T10 to T12 since the spinal processes are less inclined, while in segments T5 to T9 paramedian approach to be preferred⁷. The various factors affecting the level and duration of thoracic epidural anesthesia (TEA) are mainly the injection site, type and concentration of the local anesthetic used, the use of various adjuvant medications like opioids, dexmedetomidine and patient characteristics like extreme weight, age, height, pregnancy and obesity⁸. But in pregnancy, as the epidural veins are engorged, there is danger of inadvertent intravascular injection. Accidental dural puncture can occur. The epidural space is reduced in pregnancy and this can increase the spread of local anesthetics. Hypotension and bradycardia can occur due to sympathetic block with epidural anaesthesia.

Intra operatively, there is no evidence that any anaesthetic technique is better than another as long as maternal oxygenation and uterine perfusion are maintained which is the prime concern during pregnancy.

CONCLUSION:

For emergency surgery, the choice of anaesthetic technique depends on the trimester and the type and duration of surgical procedure. Whenever possible, a regional anaesthetic technique should be used. The challenge for the anaesthesiologist is to balance the needs of the mother and the fetus while being flexible enough to modify the approach based on the presenting circumstance and vigilant enough to timely manage any complication.

REFERENCES:

1. RA Stevens, Stevens MM (1998) Cervical and high thoracic epidural anesthesia as the sole anesthetic for breast surgery. *Techniques in Regional Anesthesia and Pain Management* 2: 13-18.
2. Rowell MD, Perry RR, Hsiu JG, et al. Phyllodes tumors. *Am J Surg* 1993;165:376-9.
3. Blaker KM, Sahoo S, Schweichler MR, et al. Malignant phylloides tumor in pregnancy. *Am Surg* 2010;76:302-5.
4. Aranda C, Sotelo M, Torres A, et al. Phyllodes tumor and pregnancy. A report of a case. *Ginecol Obstet Mex* 2005;73:387-92.
5. Crowhurst JA. anesthesia for non-obstetric surgery during pregnancy. *Acta anaesthesiol Belg* 2002; 53: 295-7.
6. Cohen-Kerem R, Railton C, Oren D, Lishner M, Koren G. Pregnancy outcome following non-obstetric surgical intervention. *Am J Surg* 2005;190: 467-73.
7. Bromage P (1978) Epidural analgesia, Identification of the epidural space, Barcelona 133-161.
8. Visser WA, Lee RA, Gielen MJM (2008) Factors Affecting the Distribution of Neural Blockade by Local Anesthetics in Epidural Anesthesia and a Comparison of Lumbar Thoracic Epidural Anesthesia Versus. *Anesth Analg* 107: 708-721.