The "Pecs Block" - a novel technique for pediatric patients undergoing subcutaneous mastectomy for gynecomastia

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**INTRODUCTION**

The “pecs block” was first described by Blanco in a 2011 correspondence in Anaesthesia. The block was presented as an alternative regional technique to paravertebral or epidural blockade for patients scheduled for elective breast surgery in the ambulatory setting. The block is a fascial plane block where local anesthetic is deposited between the pectoralis major and pectoralis minor muscles.

We have started to offer this block to patients undergoing subcutaneous mastectomy for gynecomastia and more recently for port removal. To date eight “pecs blocks” have been performed (six for gynecomastia surgery and 2 for port removal). One in an obese patient failed. The first four patients are described here.

**DESCRIPTION OF TECHNIQUE**

After induction of anesthesia and airway management we perform a sterile prep of the upper chest on the surgical side with the patient supine. A linear ultrasound probe is placed inferior and parallel to the clavicle just lateral to the pectoral groove. Using ultrasound localization the fascial plane between the pectoralis major and pectoralis minor muscles is identified. The pulsation from the pectoral branch of the thoracoacromial artery that runs adjacent to the lateral pectoral nerve in this plane is sought. Using an in-plane technique a 5 cm 27 gauge short bevel needle is advanced into the fascial plane (figure 1). Correct needle placement in the fascial plane between the pectoralis muscles is confirmed by ultrasound observation of smooth separation of the muscles during injection of local anesthetic (figure 2). All blocks were performed with bupivacaine 0.5% containing epinephrine 1:200,000.

As the proceduralist maintained needle location and ultrasound image an assistant administered local anesthetic via a 10 milliliter (ml) luer lock syringe connected to the needle via extension tubing.

**CASE REPORT**

**Case 1:** A 16-year-old 85 kg male, admitted to hospital for a right subcutaneous mastectomy with gynecomastia only. The “pecs block” was technically challenging due to obesity.

**Case 2:** A 16-year-old 62 kg male with BMI of 20 kg/m² presented with a BMI of 20 kg/m² and left unilateral gynecomastia for left subcutaneous mastectomy and excision of left axillary lesion. He was discharged home without opioid but received only received fentanyl at induction. His pain score at discharge was 0 out of 10.

**Case 3:** A 15-year-old 74 kg male with BMI of 23 kg/m² presented with a BMI of 23 kg/m² and right breast gynecomastia for right subcutaneous mastectomy. He received 9 ml of local anesthetic for his right axillary lesion. He received opioids at induction and one 25 mcg dose of fentanyl in the post-anesthesia recovery unit (PACU). He was discharged shortly thereafter reporting a pain score of 3 out of 10 and stated that he was comfortable.

**Case 4:** A 17-year-old 95 kg male with BMI of 31 kg/m² presented for right-sided subcutaneous mastectomy for gynecomastia. He received 15 ml of local anesthetic. He required opioid intraoperatively and in PACU. This block was unsuccessful.

**DISCUSSION**

Of the eight pectoral fascial plane blocks performed on four patients undergoing of subcutaneous mastectomy for gynecomastia only one failed. This block was technically challenging due to obesity.

**CONCLUSION**

In our limited experience the “pecs block” has provided good post-operative analgesia for this procedure and offers a low-risk valuable alternative to thoracic epidural and paravertebral block.

**REFERENCES**