

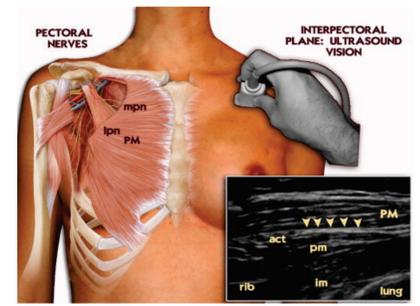
"Pain Score 0/10?"

A Novel Approach for Pain-Free Breast Surgery :

Modified PECS 2 Block

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Breast Surgery is becoming more and more common. Patients are often middle aged women and with public awareness high around issues of Breast Cancer the numbers are increasing [1]. This group are prone to PONV [2], post-operative pain and chronic post-surgical pain [3]. Analgesia normally takes a multi-modal route with the use of opiates [4]. Blanco et al [5,6] have published work demonstrating the use of the PECS 2 Block (which blocks the Long thoracic nerve, Thoracic intercostal nerves from T2-T6 & Thoracodorsal nerve) to provide analgesia for Breast Surgery.

We have recently implemented the use of this block at our hospital for Breast Surgery. We wished to audit our Pain Scores once we had started the use of this.

What is the PECS 2

Pecs block (Pec-1)

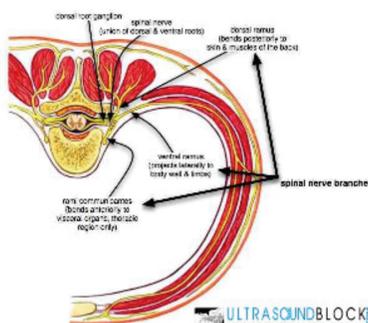
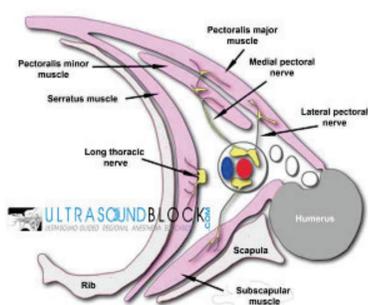
- Median pectoral nerve(C8,T1)
- Lateral pectoral nerve(C5,C6,C7).

Blocked between pectoralis major and pectoralis minor (interpectoral plane)

Modified pecs block(Pec-2)

- Long thoracic nerve (nerve to serratus anterior)
- Thoracic intercostal nerves from T2-T6.
- Thoracodorsal nerve (nerve to latissimus dorsi).

Blocked between pectoralis minor and serratus anterior.

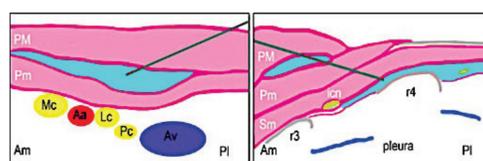
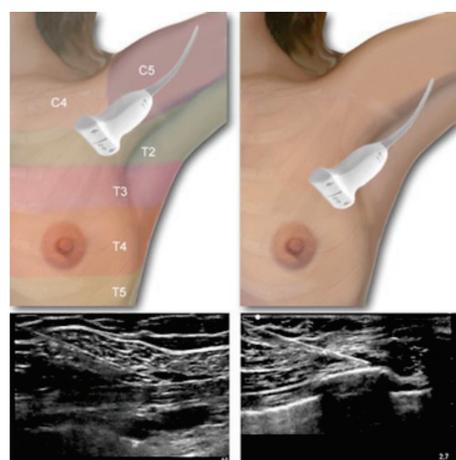


Technique

- Verbal consent during pre-assesment
- Block done under GA
- Needle: 22g, 50/80mm Pajunk needles.
- Probe Positioning: Parallel to an imaginary line that connects the AC joint and the ipsilateral nipple if possible (Similar to Vertical Infra-clavicular Block)
- USS Image: Establish anatomy, aim to image the Pectoralis Major. Check the location of the pectoral branch of the thoraco-acromial artery between the pectoralis muscles with colour Doppler. The lateral pectoral nerve is consistently located adjacent to the thoroac acromial artery.
- LA: 0.25% levobupivacaine
- Pec 1 block: 10 ml of LA between Pec Major and Pec Minor.
- Pec 2 block: 20ml of LA between Pec minor and Serratus anterior.
- Other Analgesia: Fentanyl 100 - 150 mcg iv + Paracetamol +/- NSAIDS

Methods

We undertook a retrospective audit of patients who had undergone breast surgery at the Friarage Hospital who had had the PECS 2 Block from July to September 2013. All of these blocks were done with Ultrasound guidance. There are two main operators of the block at the Friarage. We then looked at the Pain Scores of these patients in Recovery and the Pain Scores of these patients up to 24hrs post-operatively on the ward. Those patients who required IV morphine in recovery was also observed as this was used as a surrogate marker for a failed block



Surgery	Pain score 0	pain score 1-4	pain score 5-10
Mastectomies +/- Axillary clearance	10	3	3(morphine in recovery)
WLE	8	1	1
Axillary clearance	3	0	0

Results

A total of 29 patients had the PECS 2 block. 16 of these had Mastectomies +/- Axillary Node Clearance, 10 had Wide Local Excisions and 3 had Axillary Node Clearances only. Of the Mastectomies, 10 had a pain score of 0 in recovery, 3 had a pain score of 1-4, and 3 had a pain score of 5 or more requiring IV Morphine. As regards Wide Local Excisions, 8 had a pain score of 0, 1 had a pain score of 1-4 and only 1 had a pain score of 5 or more requiring IV Morphine. Of the 3 Axillary Node Clearances, all had a pain score of 0.

On the ward, all the patients had a pain score of under 3 for the first 24 hours including those who had required IV morphine in recovery.

Discussion

In general the results are very encouraging, with 25 (86%) having a successful block with 21 (84%) of patients in this group (and a total of 72% of all the patients) having a pain score of 0. There was a higher incidence of mild pain in those who have the Mastectomies (3 out of 16) then for the Wide Local Excisions (1 out of 10) but these were still very low. Also encouraging was the fact that all the patients had low pain scores up to 24hr post-operatively. This did however include the 4 failed blocks.

There were only two operators of this block at the Friarage, this meant that the anaesthetic technique in general was very similar and all cases did not have intraoperative morphine. In light of that we deduce that the majority of the analgesia produced was due to the block

References

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