ESRA8-0353 SINGLE SHOT ERECTOR SPINAE PLANE BLOCK (ESPB) VERSUS CATHETER FOR ONCOPLASTIC RECONSTRUCTIVE BREAST SURGERY WITH LATISSIMUS DORSI FLAP

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Introduction

- Erector spinae plane block (ESPB) has emerged as a simple, suitable alternative for analgesia of the entire hemi thorax.(1)
- ESPB, introduced for neuropathic thoracic pain, has expanded its role as an effective part of multimodal analgesia (MMA) in breast surgeries, thoracotomies, upper abdominal surgeries, nephrectomies etc

Aim

- Evaluate the effectiveness of single shot ESPB (SSESPB) versus catheter (CESPB) for oncoplastic breast surgery with latissimus dorsi flap

Materials and methods:

- Prospective, randomized study
- Study period Jul 2017 to Jan 2018 at Ruby Hall Clinic Wanowrie, Pune
- 5 Patients ASA 1/2 posted for unilateral mastectomy + reconstruction with latissimus dorsi flaps - after consent received GA and pre extubation an SSESPB or CESPB
- GA Inj Fentanyl 2mcg/kg, propofol 2mg/kg, 0.6mg/kg rocuronium, Dexta 8mg iv, Maintained with O2 + air + sevo
- Catheter (2 patients) or single shot ESPB block (3 patients) at thoracic level 5, postoperatively. 0.375 % Ropivacaine 20ml instilled under USG guidance both grps and catheters inserted in 2 patients. Needle- caudal to cephalad. Catheter 3 cms in space.
- Inj. Paracetamol 1gm + Inj. Tramadol 50mg i.v. administered to all.
- Inj. Diclofenac was the rescue analgesic.
- Post operative sensation - confirmed with reduced to ice pack from T 2 to T 9 dermatome
- CESPB given a bolus dose at 24 hours of 15 ml 0.2% ropivacaine.
- VAS scores, time to request of first analgesic, number of rescue analgesics and hospital stay noted.

Results

- Pain relief over 36 hours was comparable.
- One in group C and 2 patients in group S reported a dragging sensation in the back despite good pain relief.

Fig below: marking prior to block , normal sonoanatomy

Fig above: LA below ESP, performing block, catheter in ESPB fixed

Results

Parameter	SSESPB	CESPB	Time (hours)	Post Op Mean VAS SSES	Post Op Mean VAS CESP
Age	47.3	50	0	0	0
Weight	63.6	57	3	0	0
Duration hrs	3.95	4.6	6	0	0
BMI	23.4	20.38	12	1.3	0
S/E	None	PONV(1)	18	1	1
Rescue analgesia	0	0	24	1	1
Hospital stay days	3.2	3	36	1.3	1
Follow up 6 months	No pain	No pain			

- Rescue analgesics were not required in any patient in either group.
- Catheter group received a single top up after 24 hours

Discussion:

- Chronic post operative pain after breast cancer surgeries-25-60%.
- Largely due to inadequate pain relief immediate post operative period.(2)
- PEC I, PECII, Serratus plane blocks provide analgesia in anterior hemithorax but fail to cover the posterior aspect(3,4)
- ESPB has a simple sonoanatomy, easy to perform, fewer side effects, effective analgesia, long duration
- Stretching and pulling sensation could be attributed to the pedicle although no pain
- Catheters enable prolonging the analgesic effect especially in major surgery
- Follow up of six months- no pain in both groups

Limitations

- Study limited by number of cases

Keywords:

- Erector Spinae Block, Reconstructive breast surgery
- Latissimus dorsi flap, Postoperative analgesia

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Conclusions

Erector spinae plane blocks whether single shot or catheter provide similar post operative pain relief and fitness for discharge in oncoplastic reconstructive breast surgery with latissimus dorsi flap

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