

## ENHANCED RECOVERY AFTER SURGERY (ERAS) PROTOCOL IN

## POSTMASTECTOMY PATIENTS IN A TERTIARY HOSPITAL IN MALAYSIA

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### INTRODUCTION

ERAS protocol are perioperative strategies which reduce postoperative pain, opioid usage, postoperative complications, postoperative nausea & vomiting, early mobilization and reduce length of stay. Pectoral nerve block (PEC) is a well known method to reduce postoperative pain. Our study aim is to control postoperative pain by direct intraoperative pectoral nerve block (1&11) after modified radical mastectomy in patients at Selayang Hospital.

### METHOD

A study of 80 patients who underwent unilateral modified radical mastectomy or simple mastectomy over 12 months at a single centre. Data collected include demography, type of surgery, postoperative pain control, postoperative nausea & vomiting, complications and length of stay. Excluded were patients with diagnostic excision/margin clearance, bilateral mastectomy, bleeding disorder and patient refusal. Subanalysis of intraoperative Pectoral 1 and 11 block performed in 40 patients. Pectoral 1 block is direct infiltration of bupivacaine 0.25 % or ropivacaine 0.5% 2mg/kg (10-15mls) between pectoralis major and minor muscle (Figure 1). Pectoral 11 block is infiltration of bupivacaine 0.25% or ropivacaine 0.5% 2mg/kg (10-15mls) between pectoralis minor and serratus anterior (Figure 2). Data entered and analyse using SPSS statistics 29.



Figure 1 : PEC 1 Nerve Block

### RESULTS

There were 80 patients with breast diseases who underwent mastectomy age ranging from 32 to 80 years old. 40 patients were included in the Intraoperative Pectoral nerve block after removal of mastectomy specimen. Significant difference were found in pectoral nerve block group in terms of postoperative pain on day of surgery ( $p < 0.005$ ) and postoperative day 1 ( $p < 0.005$ ) (Table 2). There is also a significant reduction in opioid usage postoperatively till discharge in pectoral block group ( $p < 0.005$ ). Noted early mobilization and full abduction of limb on postoperative day 1 in pectoral block group ( $p < 0.005$ ). No significant difference in postoperative nausea & vomiting and complications. No differences in length of stay due to logistic reasons.

Variables	Median
Age (years)	57
BMI (kg /m2)	26

Figure 3 : Distribution of Patients according to Ethnicity

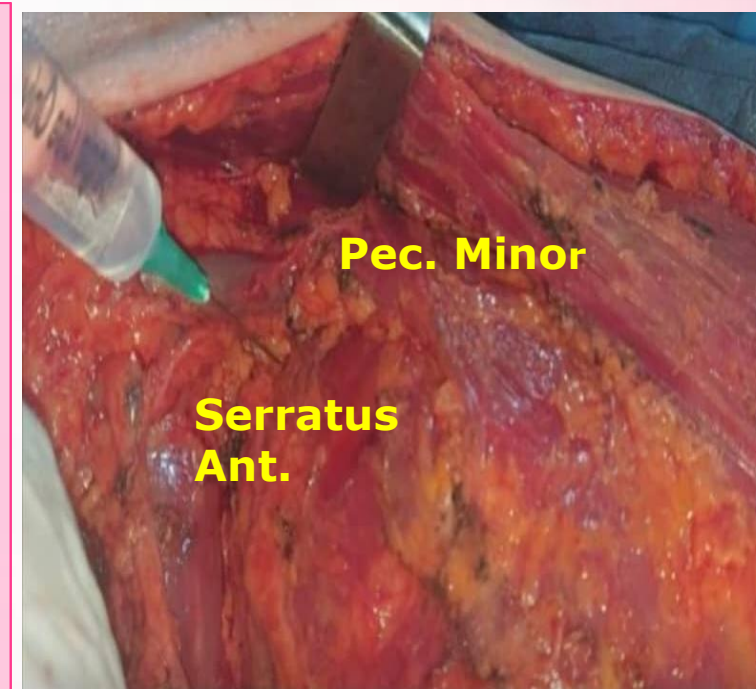
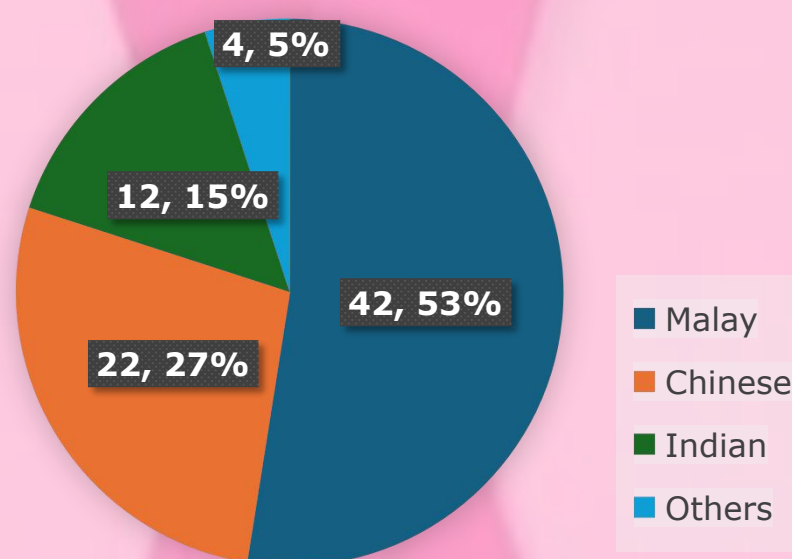


Figure 2: PEC 2 Nerve Block

Variables	No ( % of Patients )
Occupation :	
Housewife	38 (48.72%)
Retired	12 (15.38 %)
Others (worker/officials)	28 (35.90 %)
Premorbid (ASA) :	
ASA 1	28(35.0%)
ASA 2	46 (57.5%)
ASA 3	6 (7.5%)
Family history of carcinoma :	
Yes	34 (41.03%)
No	46 (58.97%)

Time (hr)	Pain score at rest (Median)		P value	Time (hr)	Pain score on abduction (Median)		P value
	Without PEC	PEC			Without PEC	PEC	
4	4(3-4)	1(0-2)	<0.005	4	5(4-5)	2(1-2)	<0.005
6	5(4-5)	1(0-2)	<0.005	6	5(4-5)	2(1-2)	<0.005
12	4(3-4)	1(1-2)	<0.005	12	4(4-5)	2(2-3)	<0.005
24	4(3-4)	2(2-3)	<0.005	24	4(3-4)	3(1-2)	<0.005
48	2(1-2)	2(1-2)	0.092	48	3(1-2)	2(1-2)	0.095
>48	2(1-2)	2(1-2)	0.092	>48	3(1-2)	2(1-2)	0.095

Table 1: Demographic characteristics

Table 2: Comparison of Numerical Pain Rating Score at rest and abduction of arm in both groups ( $p < 0.05$  significant)

### DISCUSSION

Our study shows intraoperative PEC nerve block significantly reduced postoperative pain among our patients who underwent mastectomy. There were also reduction in usage of opioids in patients who underwent PEC block. Patients who receive PEC block able to mobilize to full abduction within postoperative day 1 compare to those without PEC block. There are multiple study and meta-analysis of current literature that found the Pecs II block reduced postoperative pain scores as well as postoperative opioid use. Many nerve blocks discussed in the literature are performed under ultrasound guidance. Less data is available for nerve blocks performed under direct vision. Direct vision intraoperative PEC block method reduces the total theatre time over ultrasound guided block and avoid complications such as bleeding or pneumothorax.

### CONCLUSION

Our study concluded Pectoral block is very efficient in postoperative pain relief and early mobilization. It is the main component of ERAS protocol for breast surgery in our centre.

### REFERENCES

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