

# Evaluation of the effectiveness of the supraclavicular block associated with a Pecs Blocks I to ensure analgesia when placing a pacemaker

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**Introduction.** Pacemaker are currently being placed at the Erasmus Hospital under local anaesthesia performed by the surgeon, and the doses of local anaesthetic agents sometimes reach the maximum permitted doses. When doses administered are excessive, the risk of systemic toxicity becomes significant. Moreover, these patients usually have cardiac conduction blocks. We hypothesized that a Pecs Block I associated with a block of the supraclavicular nerve guided by ultrasound would require a smaller volume of local anaesthetic.

**End point.** The end point was the total volume of local anaesthetics used.

**Secondary points.** To evaluate the postoperative pain intensity at H+1, H+6, H+12, and H+24, using an 11-point numerical rating scale (NRS; 0 = no pain, 10 = worst pain possible) and to evaluate the amount of intravenous paracetamol.

**Materials and methods.** Single centre, prospective, controlled, randomized, single blinded study. Thirty-one patients were randomized and divided in two groups: 15 patients for the regional anaesthesia group (RA) (Pecs1 + SCL) and 16 patients for local anaesthesia by the surgeon (LA). All patients received MZD 1 mg iv, and a volume of 15 ml of ropivacaina 0.375% was used in both groups. If required, an extra dose of 10 ml lidocaine 2% was allowed for local infiltration. Data were analysed with the Mann-Whitney test and by two-way analysis of variance for repeated measures.

**Inclusion criteria.** Women and men > 18 years of age, ASA 1, 2 or 3. Scheduled for a pacemaker implantation.

**Exclusion criteria.** Minors, CI to LA, pregnant women.

**Results.** The RA group received a statistically significantly greater volume of local anaesthetics than the LA group: mean volume of 27.5 ml versus 19.9 ml (p= 0.0003).

There was no significant difference between the two groups for the numerical rating scale for pain (p= 0.12) and the amounts of paracetamol (p=0.67).

**Conclusion.** There is a significant increase in consumption of local anaesthetics in the RA group. A supraclavicular nerve block associated with a PECS BLOCK I offers no advantage over local anaesthesia for implantation of a pacemaker.

## Data are given as mean ± SD

	LA (N=16)	RA (N=15)	p-value
Supp LA volume (ml)	4.9 ± 3.9	12.1 ± 7.1	0.0003
Total anesthetic volume (ml)	19.9 ± 3.9	27.5 ± 7.8	0.0003
Paracetamol doses	0,75 ± 1.12	0.53 ± 0,91	0.67

## Visual analogue scale for pain (0 to 10)

### Data are given as mean ± SD

	Arrival PACU	Leaving PACU	H6	H12	H24
LA N=16	1.37 ± 1.08	1.37 ± 0.95	2.87 ± 1.96	2.56 ± 1.50	2.37 ± 1.02
RA N=15	1.32 ± 2.32	1.06 ± 2.05	1.66 ± 1.67	1.60 ± 1.54	1.33 ± 0.97

Two-way analyses of variance for repeated measures.

Between groups comparison: p=0.12

