

# Pectoral Nerve Blocks (PECS) and sedation: a way to avoid General Anaesthesia in Breast Surgery. Our early experience with Elderly patients.

E Garreffa<sup>1</sup>, T Ferreo<sup>1</sup>, E Genco<sup>1</sup>, C De Simone<sup>1</sup>, F Cantagalli<sup>2</sup>, M Brucchi<sup>1</sup>

<sup>1</sup>Breast Unit and <sup>2</sup>Unit of Anaesthesia and Intensive Care – Ospedale Civile  
“Mazzini” AUSL4 TE – Teramo ITALY





# Our Breast Unit

- 200-250 cancers/year
- 2 Breast surgeons
- 1 Plastic Surgeon
- 4 Radiologists
- 3 Pathologists
- 2 Clinical Oncologists
- 2 Radiation Oncologists
- 3 BCNs
- 2 Psychologists



# Introduction

- RA techniques in breast cancer surgery are limited to postoperative pain management and not as the primary anaesthesia
- The use of PECS blocks in breast surgery was firstly described in Spain in 2012 (Blanco et al.)
- Only few cases of PECS without GA are reported in literature (1 lumpectomy and 1 mastectomy without axillary surgery; 1 WLE + axillary clearance; 2 mastectomy + axillary surgery)

**ASTR**

CASE REPORT

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<https://doi.org/10.4174/ast.2017.93.3.166>  
Annals of Surgical Treatment and Research**Pectoral nerve block (Pecs block) with sedation for breast conserving surgery without general anesthesia**Eun-Jin Moon, Seung-Beom Kim, Jun-Young Chung, Jeong-Yoon Song<sup>1</sup>, Jae-Woo YiJ Anesth (2015) 29:644  
DOI 10.1007/s00540-015-1992-1

LETTER TO THE EDITOR

**Pecs block for anesthesia in breast surgery of the elderly**

Hiroaki Murata • Taiga Ichinomiya • Tetsuya Hara

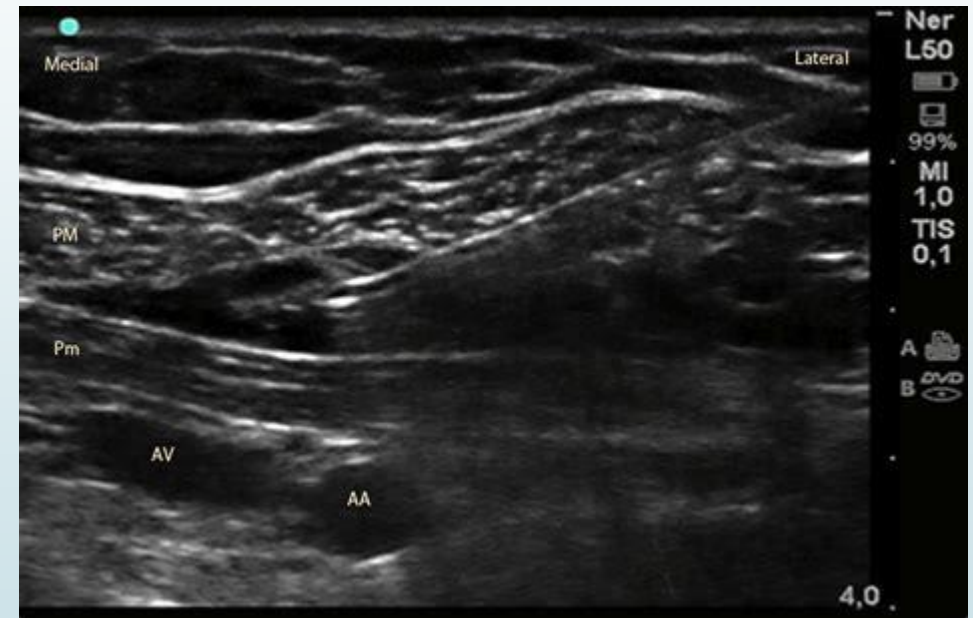
Galán Gutiérrez JC, et al. Combination of thoracic blocks as a main anesthetic technique in modified radical mastectomy for patients with severe respiratory disease. Rev Esp Anesthesiol Reanim. 2018 Nov 29. pii: S0034-9356(18)30190-7. doi: 10.1016/j.redar.2018.10.003. [Epub ahead of print]

# Methods

- RA with PECS block and sedation is compared with GA in breast surgery for elderly patients
- Women affected by unilateral breast cancer undergoing simple Wide Local Excision or Mastectomy +/- axillary surgery
- Postoperative pain (NRS) was recorded in recovery room and the morning after surgery
- Opioid consumption, NSAID rescue doses
- PONV, Agitation/Confusion

# PECS blocks

- **PECS1:** Lateral pectoral nerve block (between pec major and pec minor) 15 ml of local anesthetic (7,5 ml of mepivacaine 2% + 7,5 ml of levobupivacaine 0,5%) are injected under US guidance near the thoracoacromial artery. The injection produce the dissection between the two muscles (pectoral major and minor).

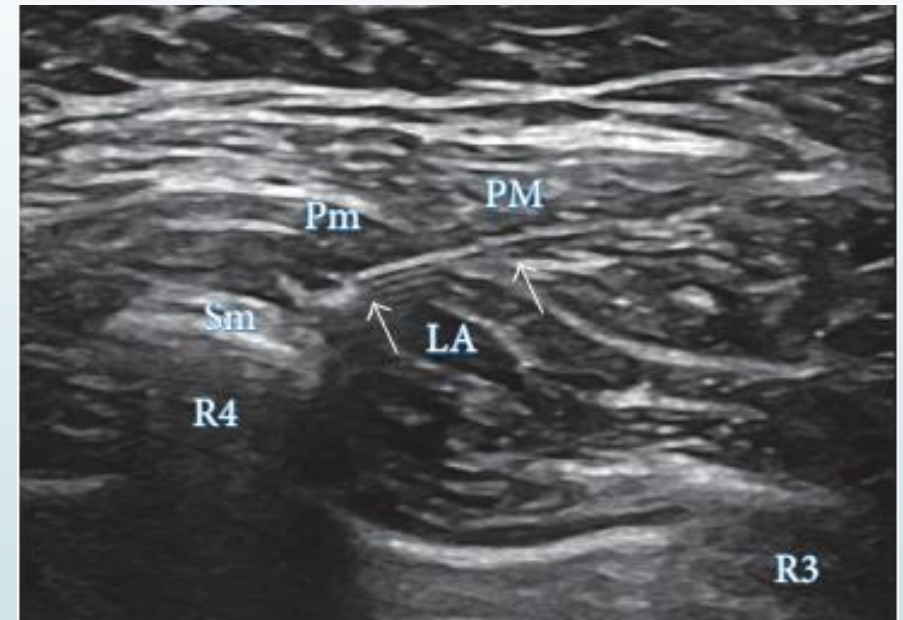




# PECS blocks

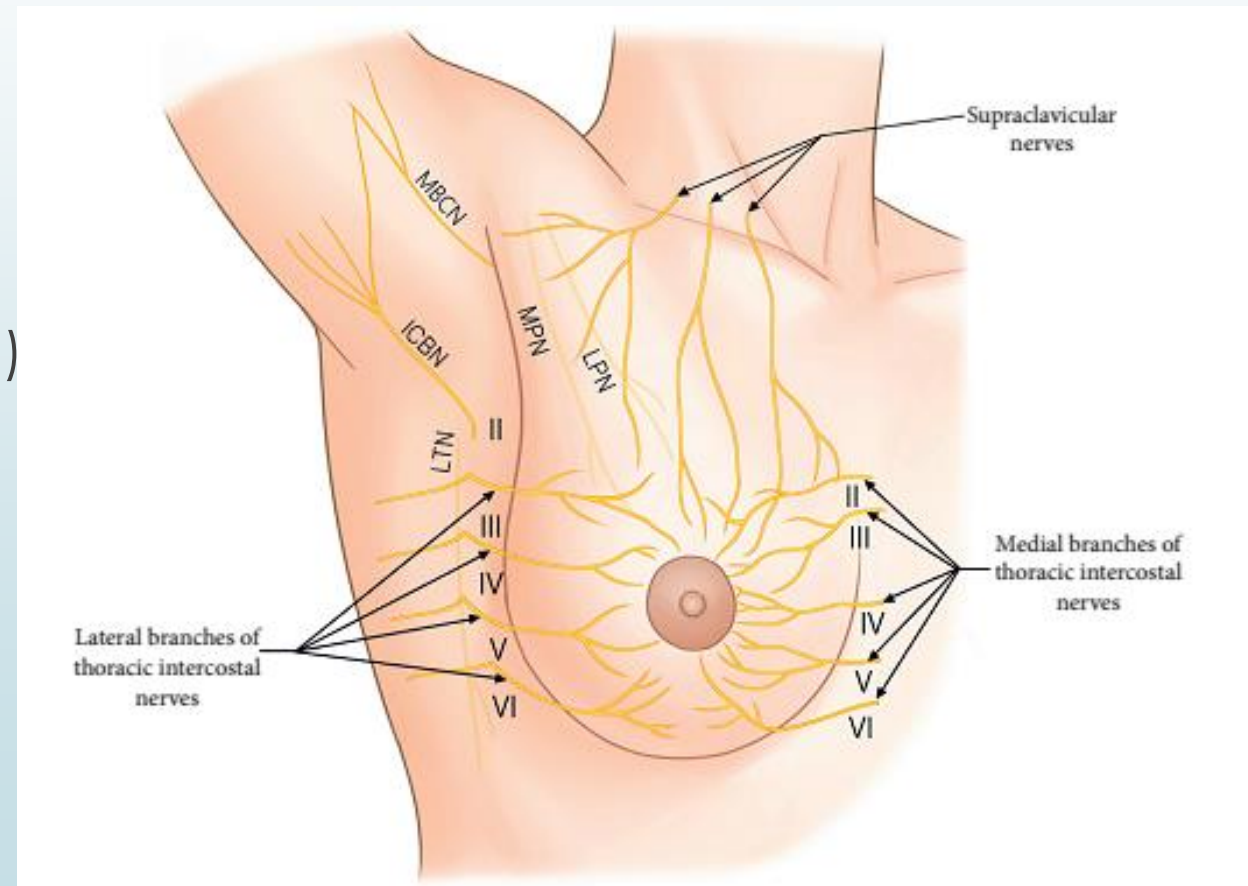
## ► Modified PECS2:

- 1) 10 ml of local anesthetic (5 ml of mepivacaine 2% + 5 ml of levobupivacaine 0,5%) over the 3rd rib (at the level of the serratus anterior).
- 2) 10 ml of local anesthetic (5 ml of mepivacaine 2% + 5 ml of levobupivacaine 0,5%) over the 4th rib (at the level of the serratus anterior).



# PECS blocks

- Parasternal infiltration is required for mastectomy or very medial tumours
- Sufficient analgesia in 30 minutes
- Remifentanyl (0,1 mcg/kg/min) + propofol (1 to 3 mg/kg/h) were infused during surgery (deep sedation)
- Initial discomfort during skin incision is possible





# Results

- From January 2018 to November 2018, 38 women aged between 70 and 90 received unilateral breast surgery
- 20 treated with RA: mean age 76.8 (70-90), pain in recovery 3.6, pain day after 2.7
- 18 treated with GA: mean age 79.5 (70-89), pain in recovery 3.7, pain day after 2.9
- Paracetamol 1g every 8hrs for RA
- IV morphine bolus (0.1 mg/kg) at the end of general anesthesia + 2ml/h elastomeric infusion (tramadol + ketorolac + ondansetron)
- Rescue dose (NRS >4) ketorolac 10 mg (RA 5; GA 6)

# Results

	RA					GA				
	N	Age	Rec.	Morn.	Events	N	Age	Rec.	Morn.	Events
WLE + SNB	6	76.16	2.83	2.66		4	77	3.75	3	1 PONV
WLE + ANC	4	78.75	2.5	2.5		2	77.5	4.5	2.5	1 PONV
MX + SNB	6	74.33	3.16	2.66		6	82.66	3.5	3	1 conf.
MX + ANC	4	79.75	3.5	3.25		6	78,66	3.83	3	1 conf. 1 PONV

# Conclusions

- RA with sedation is a safe and effective alternative to GA in breast surgery with no significant difference regarding pain control and less side effects (no post-op opioids)
- First patient in our hospital Apr 2017. 80+ patients treated so far
- Not suitable for bilateral surgery (LA toxicity)
- Approx. 15 min for the block + 30 min of wait (delayed theatre start)
- However, reduced wait between cases
- Emotional stress for the patient?





THANK YOU!