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

E Garreffa¹, T Ferreo¹, E Genco¹, C De Simone¹, F Cantagalli², M Brucchi¹

¹Breast Unit and ²Unit 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)
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
- Remifentanil (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

<table>
<thead>
<tr>
<th></th>
<th>RA</th>
<th>GA</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Age</td>
</tr>
<tr>
<td>WLE + SNB</td>
<td>6</td>
<td>76.16</td>
</tr>
<tr>
<td>WLE + ANC</td>
<td>4</td>
<td>78.75</td>
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<tr>
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<td>74.33</td>
</tr>
<tr>
<td>MX + ANC</td>
<td>4</td>
<td>79.75</td>
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</table>
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!