
Pectoralis block for breast surgeries: More than postoperative analgesic

Sir

There is growing interest in the pectoralis nerve (PECS) blocks as an analgesic technique during breast surgeries to reduce postoperative pain.^[1] We share our experience in two patients in whom PECS block was used as the main anaesthetic technique.

Case 1

A 58-year-old 50-kg female, diabetic and hypertensive, with interstitial pulmonary fibrosis requiring home oxygen was planned for right mastectomy with axillary clearance. The pulmonary function test revealed severely reduced diffusion capacity (DLCO = 29.1 mL/min/mm Hg). In view of poor respiratory reserve, under ultrasound guidance (M-Turbo Ultrasound system; SonoSite, Bothell, WA), 15 mL of 0.25% bupivacaine plus 0.5% lignocaine in PEC 1 plane (between pectoralis major and minor muscles) and 25 ml of 0.25% bupivacaine plus 0.5% lignocaine in the plane between pectoralis minor and

serratus anterior muscle were administered using a 25 G Quincke's spinal needle with an "in-plane" approach using linear probe (38× [13–6 MHz]). Ten minutes later, the anaesthetic area was confirmed by pin prick. She was lightly sedated with titrated doses of midazolam and fentanyl (total dose of 2.5-mg midazolam and 50-µm fentanyl). She maintained an oxygen saturation of >95% with the aid of supplemental oxygen delivered through Hudson mask.

During dissection at the axillary apex, the patient required rescue analgesia with three boluses of 25-mg ketamine and nitrous oxide (50%) in oxygen using a semiclosed circuit. The surgery lasted for 75 min. She had an uneventful recovery. She was pain free in the recovery; the rest of postoperative course and discharge was uneventful.

Case 2

An 83-year-old 50-kg female with Parkinsonism, diabetes, and hypertension on medications with normal cardiac function was planned for modified radical mastectomy. Since the patient refused an awake surgery, anaesthesia was induced with injection propofol 100 mg and airway secured using an LMA Supreme™ No 3. Anaesthesia was maintained using 50% nitrous oxide and 1% sevoflurane in oxygen. The PECS block was administered under ultrasound guidance as described in the first case. The surgery proceeded uneventfully. No opioids or muscle relaxants were required.

Traditionally, epidural anaesthesia^[2] and paravertebral blocks^[2] have been the techniques of choice for anaesthesia for breast surgery in high-risk patients. These techniques have a higher risk of undesirable side effects. Epidural anaesthesia is a blind procedure and has its own set of complications including failure.^[3] Sparing of the axillary region which is supplied by cervical roots^[2] is often seen with the neuraxial blocks. PECS block targets the lateral and median pectoral nerves, as well long thoracic nerve, thoracic intercostal nerves from T2–T6, and thoracodorsal nerve.^[3] With growing confidence in performance of field blocks for postoperative pain,^[1] using these blocks as the main anaesthetic technique is the next step. The recommended doses for PEC block is 10 and 20 mL of 0.25% bupivacaine for PEC1 and PEC 2 planes, respectively.^[3] As the block was the main anaesthetic technique, a higher volume of 15 and 25, respectively, was used; lignocaine was added for faster onset with due care to adhere to maximum

recommended doses. In the first case described above, we needed small doses of ketamine and nitrous oxide. Ketamine in low doses has good analgesic effect with minimal respiratory depressant effects and causes bronchodilation. Hence, ketamine was preferred in the first patient with high respiratory risk.^[4] In the second patient, as ketamine and opioids were not a suitable option in view of Parkinsonism, we used inhalational agent through a supraglottic device. Use of dexmedetomidine for sedation with PECS block for breast surgery in a similar technique had been reported.^[3] However, the surgeons should be consulted as the use of field blocks can interfere in the surgical dissection.^[5]

In conclusion, PECS in addition to providing opioid sparing general anaesthesia can, with minimal analgesic supplementation, be a suitable alternative to general anaesthesia in high-risk patients for breast surgeries.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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