

Abstract

The somatic innervation of the breasts are derived from the ventral rami of the second to the fifth thoracic spinal nerves, which are continued as intercostal nerves. The muscles involved in breast surgery, such as the pectoralis major and minor derive their innervation from the lateral and medial pectoral nerves which are branches of the lateral and medial cords of the brachial plexus respectively.

The most acceptable mode of regional anaesthesia for breast surgery has been the thoracic paravertebral block (TPVB). A single shot TPVB at the T3 level or a combination of two injections-one at T2 and one at T4 have been successfully used. Surgical anaesthesia as well as postoperative analgesia have been reported with TPVB. TPVB can be performed in a landmark based approach with loss of resistance (LOR) technique, but is fraught with the possibility of pneumothorax. Ultrasound guidance has improved the safety profile of TPVB greatly.

Ultrasound guided fascial plane blocks such as the Pecs 2 and erector spinae plane block (ESPB) have been used for perioperative analgesia for breast surgery with equivalent analgesic effects. Other fascial plane blocks, albeit less often used for breast surgery are the Pecs 1 block, serratus anterior plane block and the transversus thoracis plane block.

ESPB alone or in combination with TPVB has been successfully used for perioperative analgesia for mastectomy with latissimus dorsi myocutaneous flap reconstruction.

Thoracic epidural, although feasible, is considered too invasive for breast surgery as the perceived risks of complications outweigh the benefits.