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Combination of lumbar plexus with parasacral sciatic nerve block for hip fracture in elderly patient with heart disease and chronic lung disease

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The incidence of hip fractures has been increasing in the elderly. Lumbar plexus block (LPB) is an advanced nerve block technique with known advantages for the management of these patients. Because the placement of the needle is in the deep muscles, the potential for systemic toxicity is greater. Care should be taken when selecting the type, volume, and concentration of local anesthetic. The LPB provides anesthesia or analgesia to the entire distribution of the LP, including the anterolateral and medial thigh. When combined with a sciatic nerve block, anesthesia of the entire leg can be achieved. Because of the complexity of the technique, the benefits of LPB should be always being weighed against the risks. This is a case of 85 y/o elderly female patient, with a right femur fracture requested for hip arthroplasty. The patient has a diagnosed of chronic ischemic heart disease and chronic obstructive pulmonary disease, ASA III-E. The laboratory values were satisfactory. It was decided to perform the anesthetic technique based on the LPB accompanied by Sciatic Nerve Block at the Para Sacral level. We use ASA-Standard monitoring, sedation was administered with I.V Remifentanyl 0.001 mcg/Kg/min, and oxygen with facemask. The patient was placed in the left lateral decubitus position. Iliac crest, spinous processes (midline), a standard regional anesthesia tray is prepared with sterile towels and gauze. After aseptic and antisepsis procedure the skin and paravertebral muscles are anesthetized by infiltrating local anesthetic subcutaneously at site of needle insertion. The respective nerve blocks were performed using a 10 mm sterile needle connected to a peripheral nerve stimulator. Visible or palpable twitches of the quadriceps muscle at 1 mA were sought. Anesthetic mixture consists of 2% Lidocaine, 5% bupivacaine and 4 mg dexamethasone per 20 ml. The orthopedic procedure was carried out without complications and the patient remained stable and comfortable.



Recent Publications:

1. Dyer S, Crotty M and Fairhall N A (2016) Critical review of the long-term disability outcomes following hip fracture. *BMC Geriatrics* 16:158.
2. Nirav A, West J, Farmer T and Basmajian H (2017) Nerve blocks in the geriatric patient with hip fracture: a review of the current literature and relevant neuroanatomy. *SAGE* 8(4):268-275.
3. Mitragotri M V, Agrawal P I, Kulkarni V V, Adke N S and Ladhav D A (2017) The comparative study of two techniques of lumbar plexus block by anterior and posterior approach for lower limb surgery. *Indian Journal of Pain* 31:146-51.
4. Lu et al. (2018) Comparison of lumbar plexus block using the short axis in-plane method at the plane of the transverse process and at the articular process: a randomized controlled trial. *BMC Anesthesiology* 18(1):17.
5. Sultan W A, Ibrahim E S and El-Tahawy M S (2018) Continuous psoas sciatic blockade for total knee arthroplasty. *Saudi Journal of Anaesthesia* 12:426-32.

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