Combined lumbar and sacral plexus block on a 110-year-old kypholordotic patient for dynamic hip screw: a case report

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ABSTRACT

A 110-year-old ambulatory female with kypholordosis, community acquired pneumonia, and chronic kidney insufficiency was scheduled for dynamic hip screw fixation, right. She underwent surgery under dual guidance lumbosacral plexus block as sole anesthetic technique with mild anxiolysis. Surgery was successful and patient was stable perioperatively that she was discharged 2 days after surgery.

INTRODUCTION

According to the National Institutes of Health, the elderly population comprised 8.5% of the entire population in 2016, mostly coming from Asia and this is expected to double in 35 years. Majority of them undergo hip surgeries for osteoporotic fractures and the management of their prevailing co-existing conditions remain a challenge. The decision to proceed takes into consideration the eminent anatomic and physiologic changes in aging which pose a degree of dilemma to all members of the surgical team. However, this subset of the population is still encouraged to undergo surgery. General and neuraxial anesthesia are commonly used for geriatric patients undergoing any type of surgery but with an increased risk of complications. In recent years, peripheral nerve blocks offered an alternative because it is both effective and safe.

There are only few literatures on the anesthetic management of an extremely old age (>100 years) and these suggests that routine anesthetic care may be neurotoxic to a vulnerable brain. This paper presents the use of lumbosacral plexus block in a 110-year-old – a rare case since there were no searchable record of this technique done at this age (the oldest was 107 years old under spinal anesthesia). Aside from her age, other issues considered in planning the anesthetic management are her impaired pulmonary and renal function as well as the kypholordotic orientation of the spine.

CASE PRESENTATION

A 110-year-old female who weighed 46.5 kg, previously capable of community ambulation and self-care, slipped and fell from a standing height, presented with a right hip fracture, and was posted for an elective hip surgery in June 2016. She was a 60-pack year smoker but quit more than 20 years ago.

ANESTHETIC TECHNIQUE

- Ultrasound and nerve stimulator-guided lumbosacral plexus block (LPB) was used as the sole anesthetic technique for dynamic hip screw.
- Patient was given mild anxiolysis.

CONCLUSION

Combined lumbar and sacral plexus block can be used as a sole anesthetic technique for hip surgery in extremely elderly patients who cannot tolerate both general and central neuraxial anesthesia because of physiologic and anatomic challenges brought about by aging. This technique is a safe alternative and offers better post-operative outcomes such as reduced opioid requirements, better pain control, and shorter hospital stay.

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