ANALGESIA FOR PROXIMAL HIP FRACTURE WITH PERICAPSULAR NERVE GROUP (PENG) BLOCK – A CASE REPORT

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Figure 1

Figure 2

Figure 3

Introduction

Hip Fracture is a common orthopedic emergency in elderly people and is associated with moderate to severe pain.

Pain relief is obviously important for simple humanitarian reasons and for acute nursing care, but also improves patients' wellbeing, reduces the risk of delirium, and facilitates the return to mobility and independence.

The pain pathway from the hip joint originates from the articular branches of the femoral nerve (FN), the obturator nerve (ON) and the accessory obturator nerve (AON).

The articular branches of the FN and AON provide most of the innervation to the lateral and supero-medial hip capsule and course deep to the iliopsoas muscle between the anterior inferior iliac spine and iliopubic eminence.(fig. 1)

Fascia Iliaca block (FIB) and Femoral nerve blocks are commonly used for analgesia in hip fracture patients. However, they only provide a modest reduction in pain and opioid consumption.

These blocks are neither proximal nor deep enough to cover the articular branches consistently. Real-time ultrasound can identify the plane where the Femoral and AON articular branches are located.

Pericapsular Nerve group[PENG] block is a novel analgesic method for analgesia of proximal hip fracture

Background and aims

Pericapsular Nerve group block is a novel analgesic method explained recently for analgesia of proximal hip fracture. We report a case of analgesia for a right proximal hip fracture in a 60 year old male using PENG block.

Methods

A low frequency curvilinear probe (2-5 MHZ) was first placed over the right anterior inferior iliac spine and medial part of probe was rotated towards pubic rami to identify the relevant anatomical structures namely iliopubic eminence, psoas muscle and femoral artery (fig. 2)

A 22G 100mm short bevelled blunt needle was inserted from the lateral aspect of the probe via inplane approach to reach the target which was the plane between psoas muscle and iliopubic eminence.

After negative aspiration around 25 ml of 0.25%bupivacaine with 8mg dexamethasone was injected in the plane between iliopubic eminence and psoas muscle.A linear spread of local anaesthetic was noticed (fig.3)

Results

- Pain score was assessed using Numerical Rating Scale .
- Numerical Rating Scale prior to PENG block was 8/10.NRS was 2/10 after 15 minutes of block and 0/10 after 1 hour of block.
- Pain free for almost 24 hours after PENG block.
- No complications after the block

Conclusion

Pericapsular Nerve Group Block (PENG) is a novel analgesic technique for analgesia of proximal hip fracture.

References

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