

Introduction

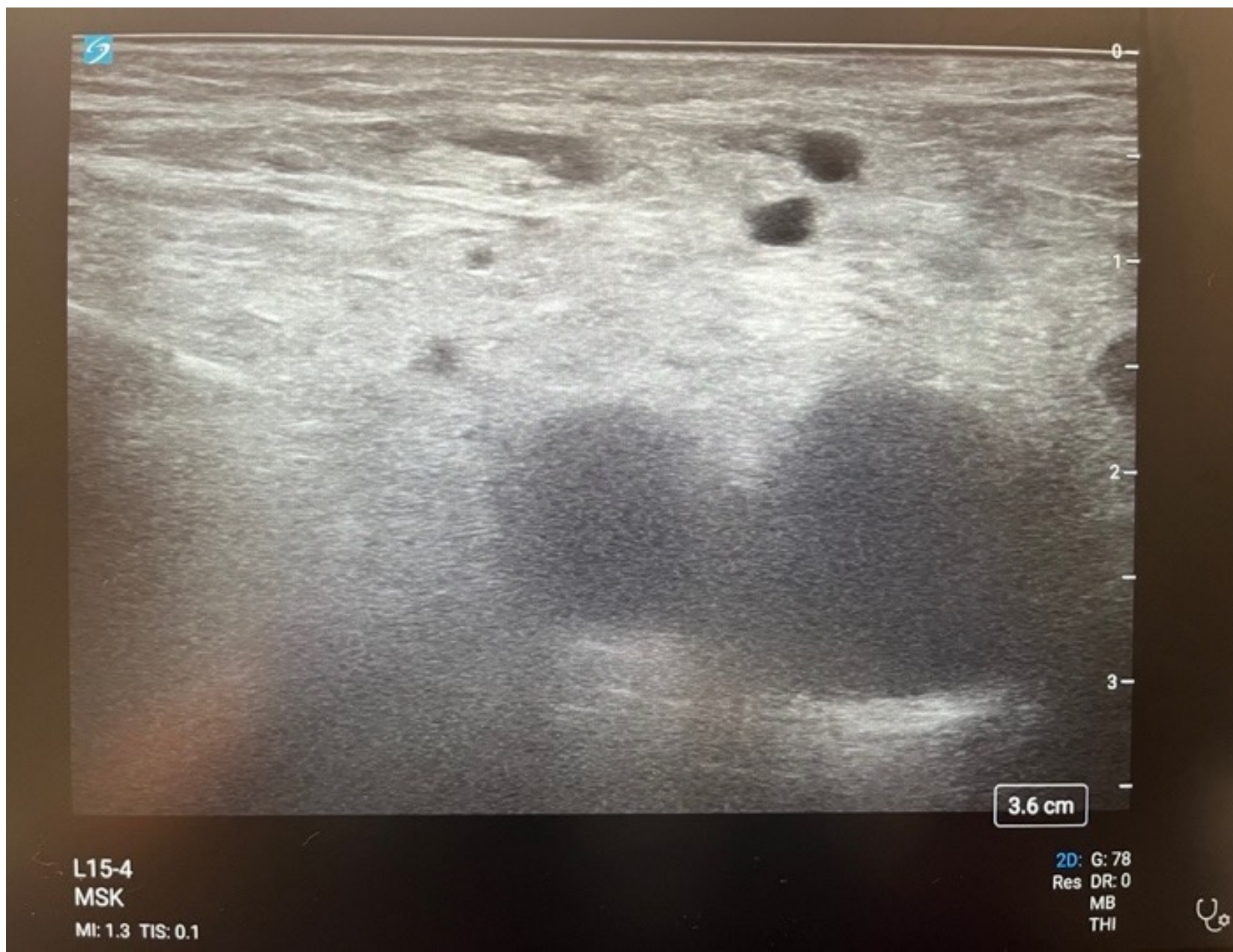
- **Femoral nerve block (FNB)** is a regional technique that is commonly used for surgeries involving the anterior aspect of the **thigh** and the medial aspect of the **leg below the knee**.
- FNB is perhaps the most widely performed lower limb block that can be done both as a **primary anesthetic** as well as **for pain control** in emergency department and intensive care units.
- Our case demonstrates successfully performing a FNB as a primary anesthetic for a patient with significant cardiopulmonary history and active polysubstance use.

Case presentation

- 56-year-old female patient presented as an emergency to the operating room with a left thigh abscess for incision and drainage.
- Past medical history **included septic endocarditis** s/p bioprosthetic valve replacement complicated by **candida sternal osteomyelitis**, chronic **heart failure** with moderately reduced global right ventricular dysfunction s/p **intraabdominal automated implantable defibrillator**, tricuspid valve vegetation, **pulmonary embolism**, **chronic obstructive pulmonary disease** on **home oxygen**, hepatitis B and C as well as **diabetes with peripheral neuropathy**.
- Patient had no numbness or tingling of lower extremities at baseline.
- In addition , patient was on buprenorphine/naloxone 8mg/2mg as replacement therapy due to her history of polysubstance use including **active use of both intravenous heroin and crack cocaine less than 12 hours** prior to presentation.
- She was dyspneic and orthopneic but afebrile and hemodynamically stable.
- Ultrasound of the left inguinal area revealed two complex fluid collections the first measuring 2.6 cm with multiple septations and a deeper collection measuring 6.1 cm with internal debris abutting the femoral artery
- Due to the patient’s higher risk of cardiopulmonary decompensation and patient’s refusal to be exposed to general anesthesia, a left single shot femoral block was performed.

Case presentation

- Increments of Fentanyl 25mcg were given to tolerate the block followed by a Propofol infusion at 50mcg/kg/min as sedation intraoperatively.
- Under US guidance, 20 mL of 1.5% Mepivacaine was injected around the left femoral nerve with pain relief within few minutes of block performance. Propofol infusion of 50mcg/kg/min was used as sedation.
- Abscess pocket was drained uneventfully. No intraoperative or postoperative complications encountered. **No hemodynamic support was required.**



Discussion

- PNBs are pivotal in postoperative pain management in multiple different settings, forming an integral component of multimodal analgesia.
- Several studies have shown that PNB has many advantages compared with general anesthesia, such as superior postoperative analgesia, improved postoperative **mortality**, intraoperative **hemodynamic stability**, and a reduced incidence of **pulmonary** complications.

Conclusion

- Performing regional anesthesia is an essential skill for an anesthesiologist especially when managing patients with multiple comorbidities including compromised cardiovascular function or active substance use.
- The selection of appropriate anesthesia technique and carefully monitoring vital signs to maintain **hemodynamic stability** during the perioperative period becomes of paramount importance.
- It remains a case-by-case discussion and evaluation of risks and benefits to ensure the best outcome for the patient.

References

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Kang C et al Journal of Orthopaedic Surgery. 2021;29(1)