

Persistent Femoral Neuropathy Following a Fascia Iliaca Block

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Introduction: Regional anesthesia generally has a low complication rate.(1,2) Compartment and field blocks are considered simpler, and have an even lower reported complication rate than direct nerve blocks.(3) The fascia iliaca block is a compartment block, and successful sensory and motor blockade can easily be achieved without imaging or stimulation of the nerves. Local anesthetic injected into the potential space deep to the fascia lata and fascia iliaca is used to simultaneously block the femoral, obturator, genitofemoral, and lateral femoral cutaneous nerves.(4) We report a case of painful neuropathy persisting for more than eight months after an uncomplicated fascia iliaca block.

Clinical Course: A healthy, 62 kg, 15 y.o. female presented for outpatient knee arthroscopy two months after a gymnastics injury. She had a prior history of severe post-operative nausea and vomiting (PONV) after general anesthesia (GA) for repair of the contralateral knee one year previously. GA with fascia iliaca block was selected to minimize opiate requirement and PONV. GA was induced, an LMA was inserted, and the groin was prepped with betadine for regional blockade. Using classical anatomic landmarks and the "two pop" sensation, a fascia iliaca block was performed with a 22-gauge B-bevel needle, and 40mL of 0.25% bupivacaine with clonidine 100mcg was injected without resistance. An arthroscopic meniscectomy was performed uneventfully, no opiates were necessary, and the patient awakened comfortably. In the PACU, the patient's leg was numb anteriorly from the upper thigh down to her ankle; sensation was preserved on the posterior aspect of the leg. She was discharged home without complaints.

She required no pain medicine until the third post-operative day (POD#3), when she began taking Tylenol with Codeine at night. Sensation in her knee did not return until one week after surgery, at which time she noted gradual return of sensation above the knee. On POD#11, she began having shooting and stabbing pains on the anterior thigh and knee, and these progressed in frequency and severity over the next five days. On examination three weeks after surgery, the patient had normal strength in both lower extremities. She had decreased sensation to touch over the anterior thigh to the bottom of her knee, without allodynia, swelling, erythema, skin changes, or rashes. The pain was initially managed with gabapentin 600 mg three times a day. The thigh numbness continued, and she noted mild knee extensor weakness with minimal gait disturbance, although she reported several "near falls." An EMG six weeks after surgery demonstrated sensory neuropathy of the femoral and lateral femoral cutaneous nerves, as well as motor neuropathy of the femoral nerve.

Eight months post-operatively, having moved with her family to a different city, the patient continues to have exacerbations of pain in the anterolateral thigh and continues therapy with pregabalin, oxcarbazepine, and levetiracetam. Despite unremarkable MRI of the lower abdomen, pelvis, and upper legs, and normal follow-up sensory nerve conduction studies, she has required repeated hospital admission for pain management with lidocaine or ketamine infusions, or opiates.

Conclusion: We report a case of sensory and motor neuropathy following an apparently uneventful fascia iliaca block. The etiology of this neuropathy is unknown. Although nerves are not directly touched in a compartment block, this case demonstrates that nerve damage may result, causing long-term morbidity for the patient. In the absence of hypotension, and without epinephrine in the injection, we do not believe nerve ischemia was the culprit. Localized chemical neuritis could have resulted from the non-routine use of clonidine in a compartment block. Although anatomic variations may occur

among patients, it is difficult to implicate a direct nerve injury in this patient since both femoral and lateral femoral nerves were affected. However, we do recognize this etiology as a concern, since this injection was performed without imaging in an anesthetized patient. The SPA-sponsored Pediatric Regional Anesthesia Consortium, currently under development, should provide a useful database for future research into complications from regional blocks in children.(5)

References:

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