

Case Report: Femoral & Lateral Femoral Cutaneous Nerve Injuries During Kidney Transplant

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INTRODUCTION

Femoral and lateral femoral cutaneous nerve injuries are under-recognized potential complications of kidney transplant surgery that can develop due to intra-operative **ischemic compression** or **direct vascular injury**. These neuropathies may be misattributed to neuraxial or peripheral nerve blocks provided for the transplant, which can undermine surgeon and patient confidence in the safety of these techniques, delay appropriate treatment, and bring unwarranted legal liability to the anesthesia team.

CASE DESCRIPTION

PMH/PSH: A 63M (ASA III) with ESRD due to ANCA vasculitis was posted for kidney transplant, with surgical history notable for prior inguinal hernia repair.

Anesthetic Plan: CSE at L2-3 with bupivacaine 0.5% and ultrasound-guided TAP block with liposomal bupivacaine 266 mg and bupivacaine 0.5%.

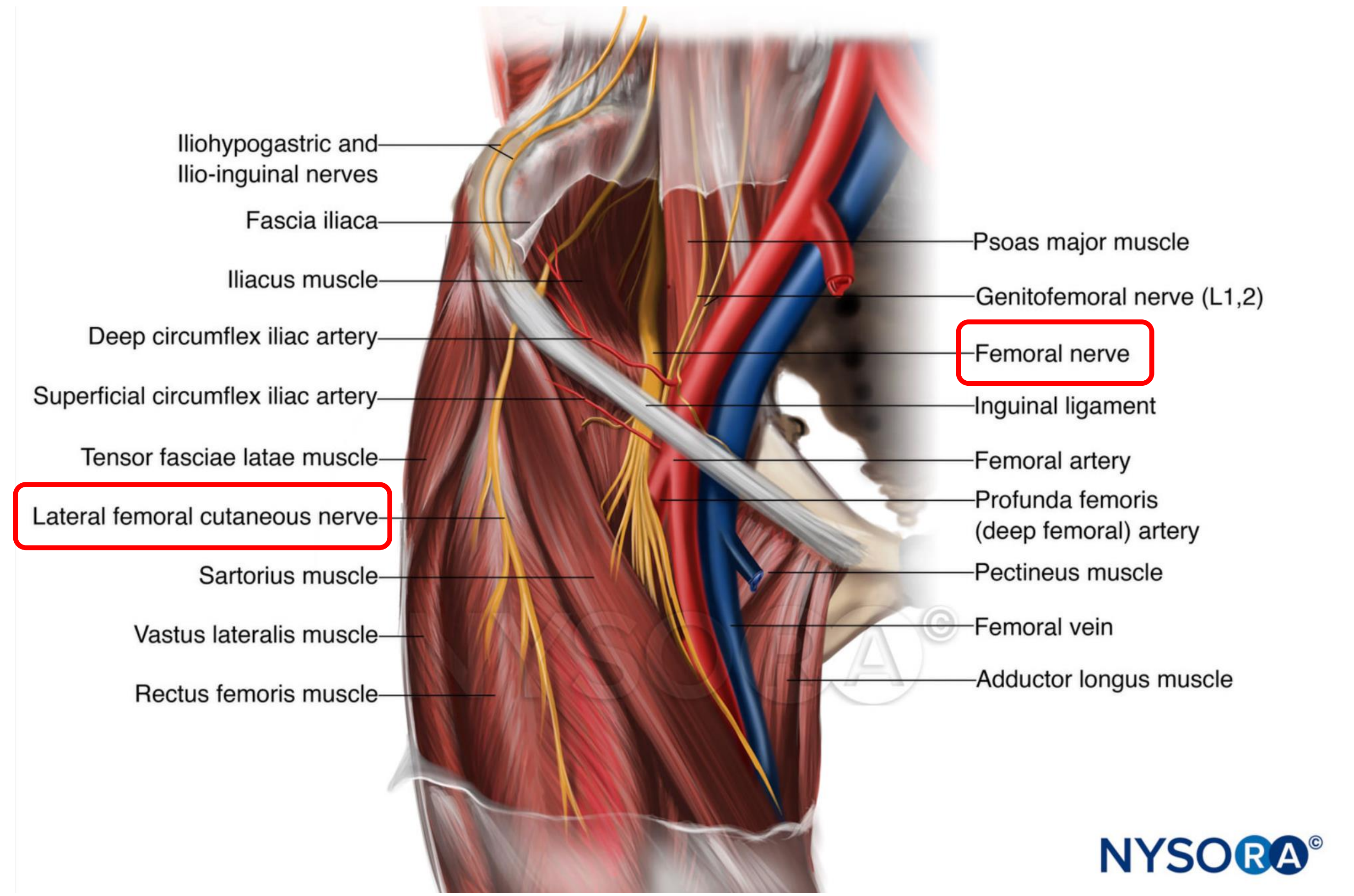
Intra-Op: The donor graft was placed in the right iliac fossa, where adhesions with mesh from prior inguinal hernia repair required aggressive peritoneal medialization and Bookwalter retraction.

Post-Op: On POD1, the patient reported significant RLE weakness and paresthesia in the femoral and lateral femoral cutaneous distributions. Initially, the differential diagnosis included possible TAP block spread to the quadratus lumborum and psoas regions, however deficits persisted. At two months, he continued to require a rollator walker. By five months, symptoms had improved

had not yet fully resolved. Outpatient notes often misattributed the patient’s symptoms to neuraxial anesthesia.



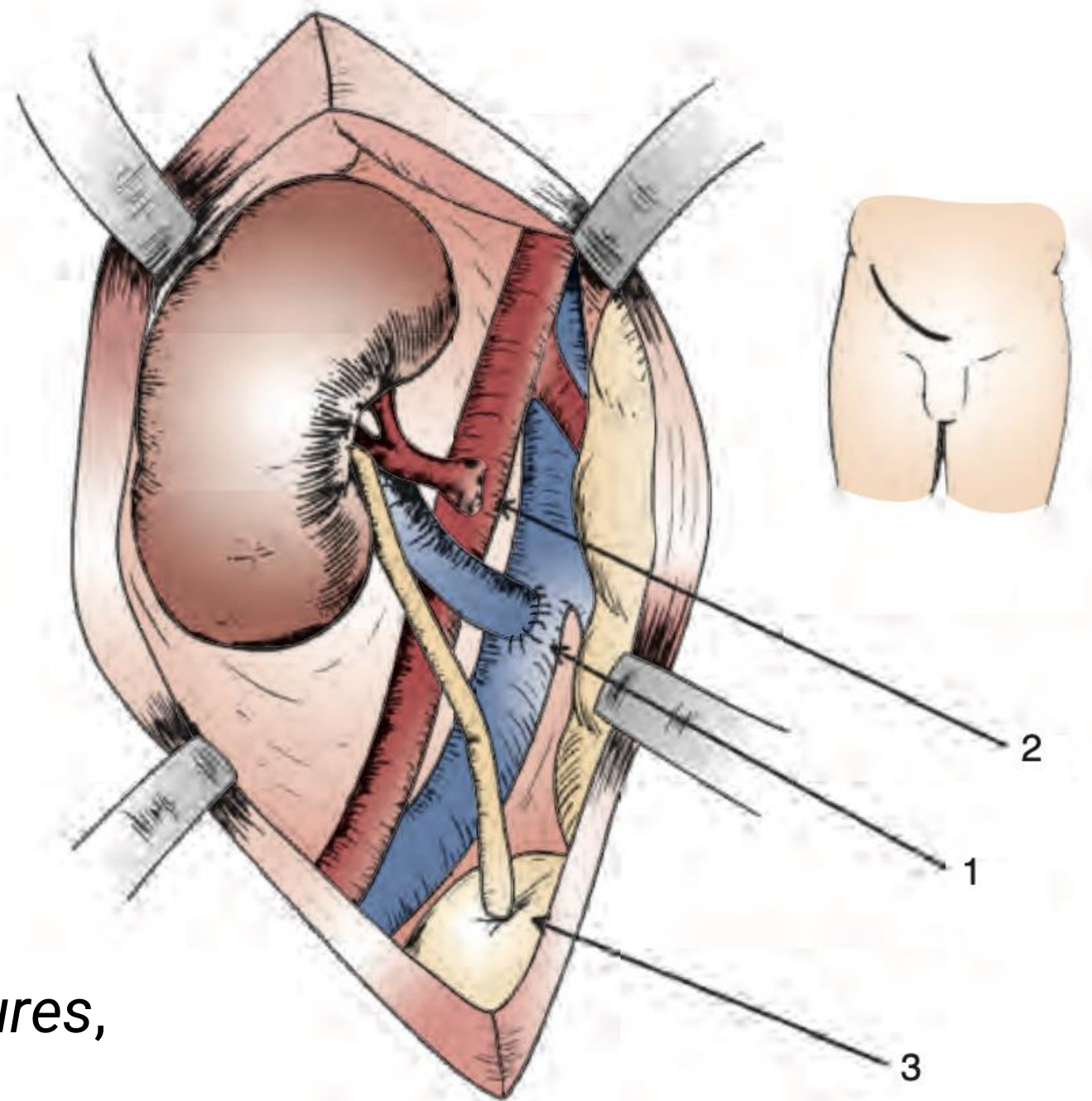
ANATOMY OF OPERATIVE SITE



INTRA-OPERATIVE RETRACTION

Retraction of tissues for placement of the graft in the iliac fossa can compress the nearby femoral and lateral femoral cutaneous nerves, thereby causing ischemic injury and related post-operative sensory and/or motor impairment.

Figure 7.12-1, reproduced from Jaffe RA, et al. *Anesthesiologist's Manual of Surgical Procedures*, 5th ed. Wolters Kluwer; 2014.



DISCUSSION

Femoral and lateral femoral cutaneous neuropathies occur in up to 8.4% and 26% of kidney transplants, respectively [1-4]. Common surgical mechanisms include nerve compression by self-retaining retractors (e.g., Bookwalter) [1,4,5] and direct vascular injury [1,2]. Retroperitoneal hematoma is also possible. In this case, aggressive retraction in the setting of adhesions likely contributed. Such injuries typically recover fully, though may require months to years. [1,2,4,5]. This patient’s symptoms have yet to fully resolve at five months.

CONCLUSION

Femoral nerve and lateral femoral cutaneous nerve injuries are relatively frequent operative complications of kidney transplant. Identifying potential operative etiologies is crucial for appropriate complication management, patient counseling, and avoidance of undue apprehension for neuraxial and regional anesthetic techniques in patients undergoing abdominal transplant surgery.

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