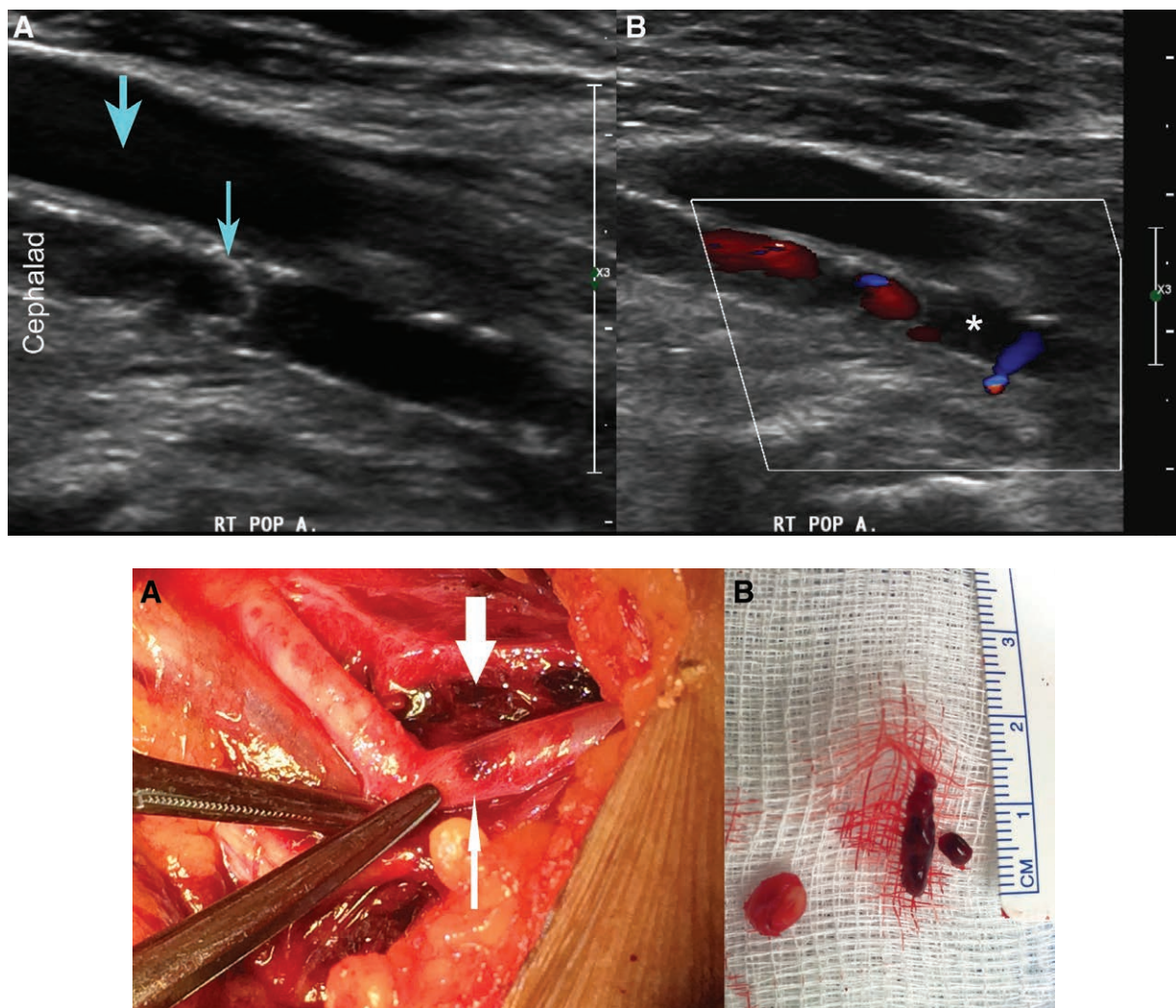


# Femoral Artery Dissection after Adductor Canal Block

Leon Vorobeichik, M.D., Faraj W. Abdallah, M.D.



After an uneventful total knee arthroplasty under spinal anesthesia and ultrasound-guided continuous adductor canal block, the absence of distal pulses was noted in the operative leg. An arterial duplex scan (*top image, panel A*) demonstrated a femoral artery dissection flap (*thin arrow*) with a false lumen (*thick arrow*). Color Doppler demonstrated an absence of arterial flow distal to the dissection (*top image, panel B; asterisk*). During emergent thrombectomy and arterial repair, a puncture site of the Tuohy needle was noted on the femoral artery (*thin arrow; bottom image, panel A*), with perivascular hematoma (*thick arrow; bottom image, panel A*) and an intravascular thrombus

(*bottom image, panel B*). The patient subsequently regained limb perfusion.

Inadvertent vascular puncture is a known complication of peripheral nerve blockade. The use of ultrasound guidance for peripheral nerve blockade improves safety and reduces the risk of vascular puncture.<sup>1</sup> The rate of vascular puncture after femoral nerve blockade is 1.1%;<sup>2</sup> ultrasound-guided adductor canal block is considered safe, and vascular complications, including hematoma and pseudoaneurysm formation, appear to be rare.<sup>3</sup>

This image shows that vascular puncture during peripheral nerve blocks may be associated with important

From the Department of Anesthesia, University of Toronto, Toronto, Ontario, Canada (L.V., F.W.A.); Department of Anesthesia, St. Michael's Hospital, Toronto, Ontario, Canada (L.V.); and Department of Anesthesiology and Pain Management, University of Ottawa, Ottawa, Ontario, Canada (F.W.A.).

Copyright © 2019, the American Society of Anesthesiologists, Inc. Wolters Kluwer Health, Inc. All Rights Reserved. Anesthesiology 2019; 130:1037–8

complications, and underscores the importance of routine surveillance for adverse vascular events.

Vascular puncture should prompt frequent assessment of limb perfusion, to avoid missing time-sensitive, limb-threatening complications, and should be considered in the differential diagnosis of limb ischemia after peripheral blocks, prompting emergent vascular consultation.

### Competing Interests

The authors declare no competing interests.

### Correspondence

Address correspondence to Dr. Vorobeichik: l.vorobeichik@mail.utoronto.ca

### References

1. Lewis SR, Price A, Walker KJ, McGrattan K, Smith AF: Ultrasound guidance for upper and lower limb blocks. *Cochrane Database Syst Rev* 2015; CD006459
2. Bomberg H, Huth A, Wagenpfeil S, Kessler P, Wulf H, Standl T, Gottschalk A, Döffert J, Hering W, Birnbaum J, Spies C, Kutter B, Winckelmann J, Burgard G, Vicent O, Koch T, Sessler DI, Volk T, Raddatz A: Psoas *Versus* femoral blocks: A registry analysis of risks and benefits. *Reg Anesth Pain Med* 2017; 42:719–24
3. Cappelleri G, Molinari P, Stanco A: Iatrogenic pseudo-aneurysm after continuous adductor canal block. *A A Case Rep* 2016; 7:200–2