

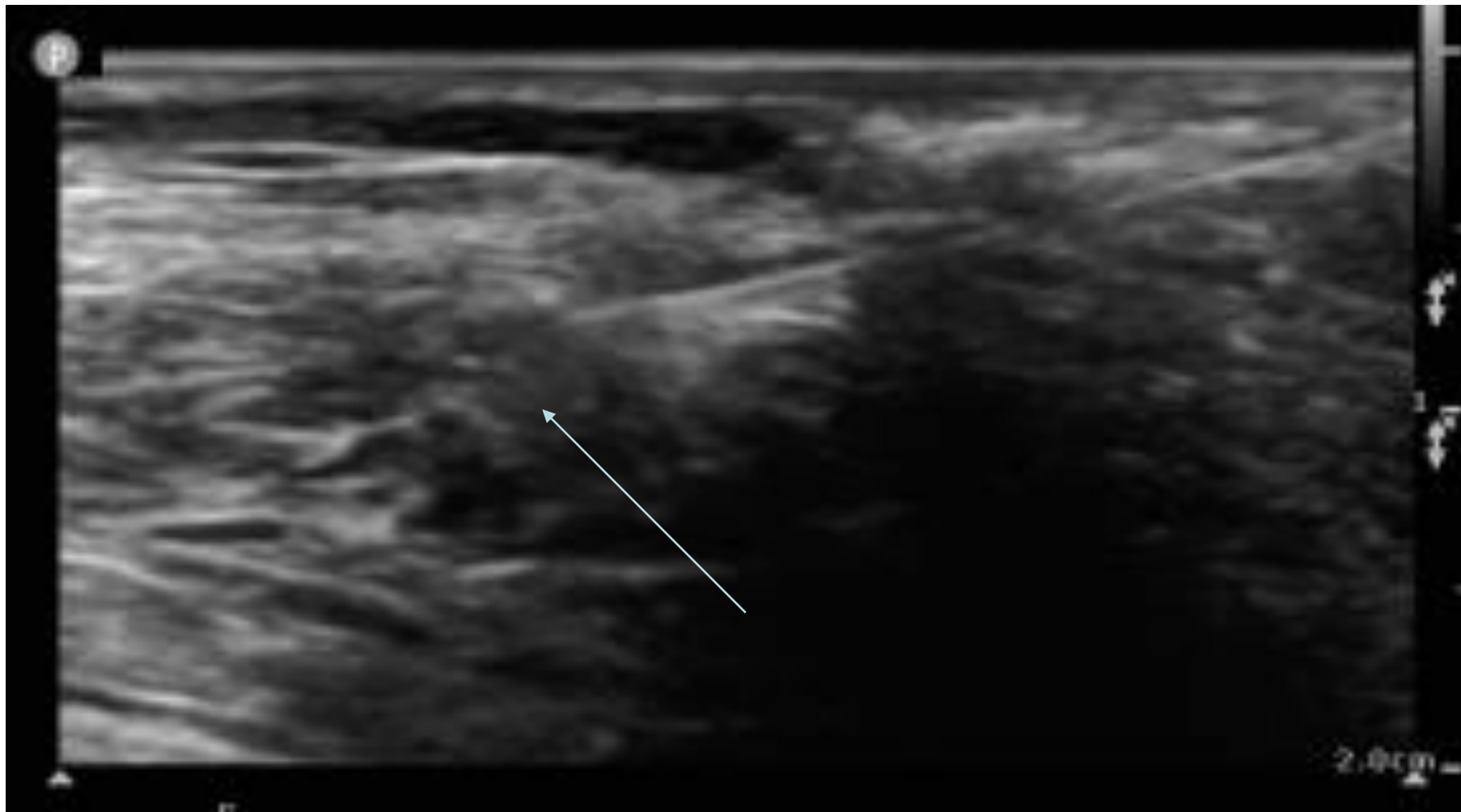
PATIENT CASE

A 72 year old woman with a history of hip replacement with an anterior approach presented to the pain clinic with complaints of left sided lateral thigh pain for 3 years. She was found to have a positive left sided Tinel's at the LFCN just inferior to the ASIS. A diagnosis of meralgia paresthetica was made. A left lateral femoral cutaneous nerve (LFCN) block provided 100% relief for four hours. Due to continued pain despite medical therapy, decompression of the left LFCN was scheduled with neurosurgery.

The regional anesthesia team helped locate the LFCN both pre-incision and intraoperatively. Preoperatively the point of maximal Tinel's sign was located and marked by surgery overlying the prior surgical site close to anterior superior iliac spine. Prior to incision, the regional anesthesia team located the LFCN through US just lateral and superficial to the border of the Sartorius. Her Tinel's (which overlaid the scar of her prior hip replacement) was more lateral. A 22 gauge, 5 cm long, 10 mm active tip RFA needle was inserted through the skin and advanced until near what looked like a neuroma (Figure 1). Sensory stimulation was conducted at 0.2V and 50Hz, after which the patient reported paresthesias over the area of her pain. The needle was then completely removed and surgical incision was made at the location. Neither the LFCN nor the neuroma could be visualized on surgical exposure.

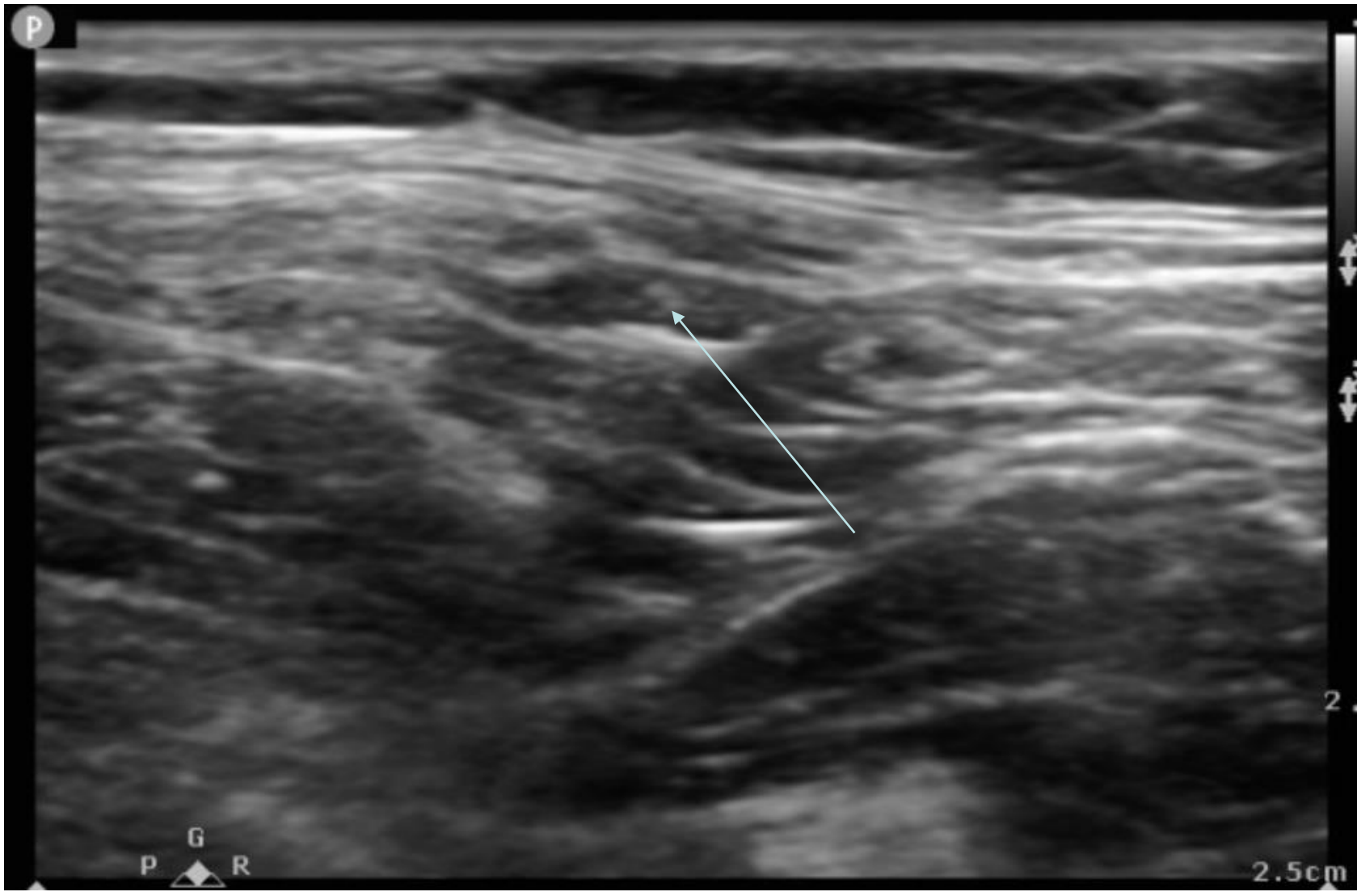
The regional anesthesia team scrubbed in and (using completely sterile techniques) used US to locate the LFCN (Figure 2) lateral to Sartorius and traced it cephalad where its trajectory was more lateral, appearing to lie a little more cephalad and medial to the original incision. The surgical team extended their incision and were able to successfully locate the nerve (Figure 3) wherein dissection of thick scar tissue that was entrapping the nerve was performed, decompressing the nerve. The patient tolerated the procedure well and reported complete relief of her meralgia paresthesia in the postoperative period. Follow-up 2 months later showed continued complete relief of her pain.

FIGURE 1



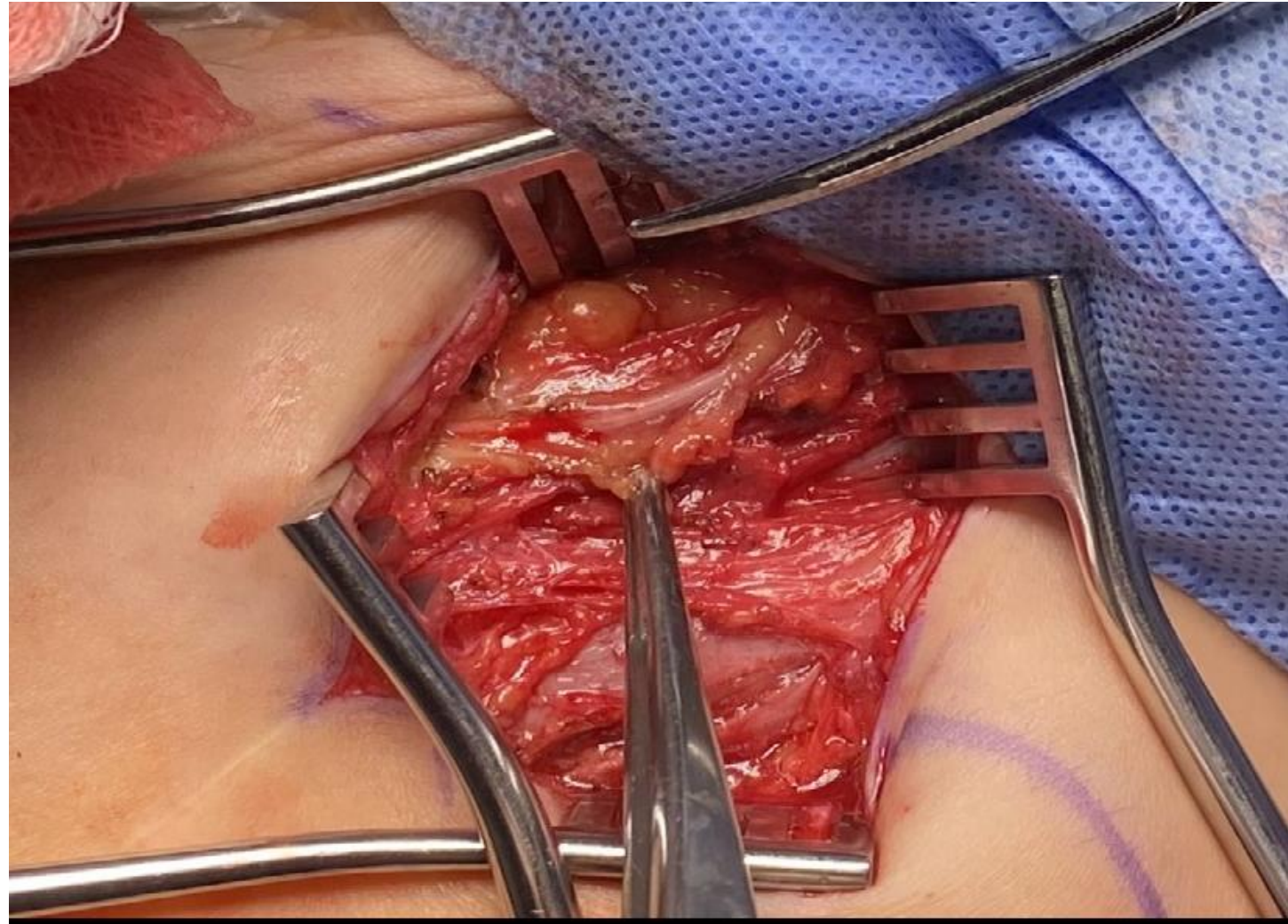
Ultrasound imaging of insertion of RFA needle near neuroma (blue arrow), used for identification of proper surgical site for decompression of LFCN

FIGURE 2



Ultrasound imaging identifying the lateral femoral cutaneous nerve (blue arrow)

FIGURE 3



Lateral femoral cutaneous nerve identified during decompression

CONCLUSIONS

Ultrasonography has increasingly been used for peripheral nerve localization¹, particularly for sensory only nerves such as the lateral femoral cutaneous nerve (which cannot be located with intraoperative motor stimulation in patients under general anesthesia). Given the variable course of the LFCN², our case highlights the expanding role regional anesthesiologists may take in peripheral nerve decompressions given their expertise in ultrasound identification of peripheral nerves.

BIBLIOGRAPHY

1. Ultrasound-guided treatment of meralgia paresthetica (lateral femoral cutaneous neuropathy): technical description and results of treatment in 20 consecutive patients. Tagliafico A, Serafini G, Lacelli F, Perrone N, Valsania V, Martinoli C. <http://www.ncbi.nlm.nih.gov/pubmed/21968484>. J Ultrasound Med. 2011;30:1341–1346.
2. Aszmann OC, Dellon ES, Dellon AL. Anatomical course of the lateral femoral cutaneous nerve and its susceptibility to compression and injury. Plast Reconstr Surg. 1997;100:600–604. doi: 10.1097/00006534-199709000-00008.\