



# Ultrasound-guided median and ulnar nerve blocks in the forearm to facilitate onabotulinum toxin A injection for palmar hyperhidrosis

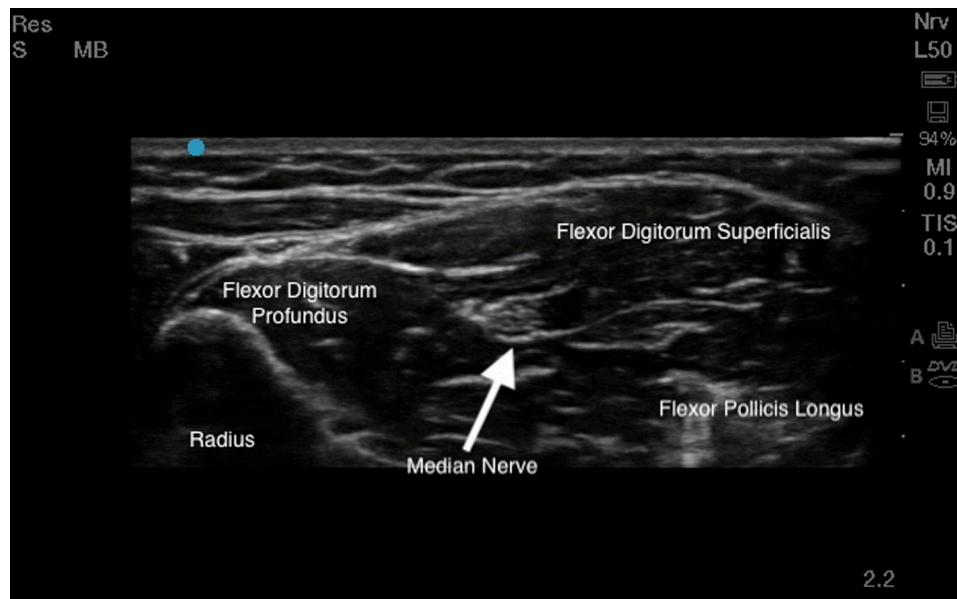
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**Key words:** hyperhidrosis; median nerve; nerve block; onabotulinum toxin A; ulnar nerve; ultrasound.

## THERAPEUTIC CHALLENGE

Onabotulinum toxin A injections are used to treat palmar hyperhidrosis and often result in intolerable pain when multiple injections are administered. Cold packs, local anesthetic, ethyl chloride spray, and anesthetic cream are not effective modalities to minimize the pain of the injections.<sup>1</sup>

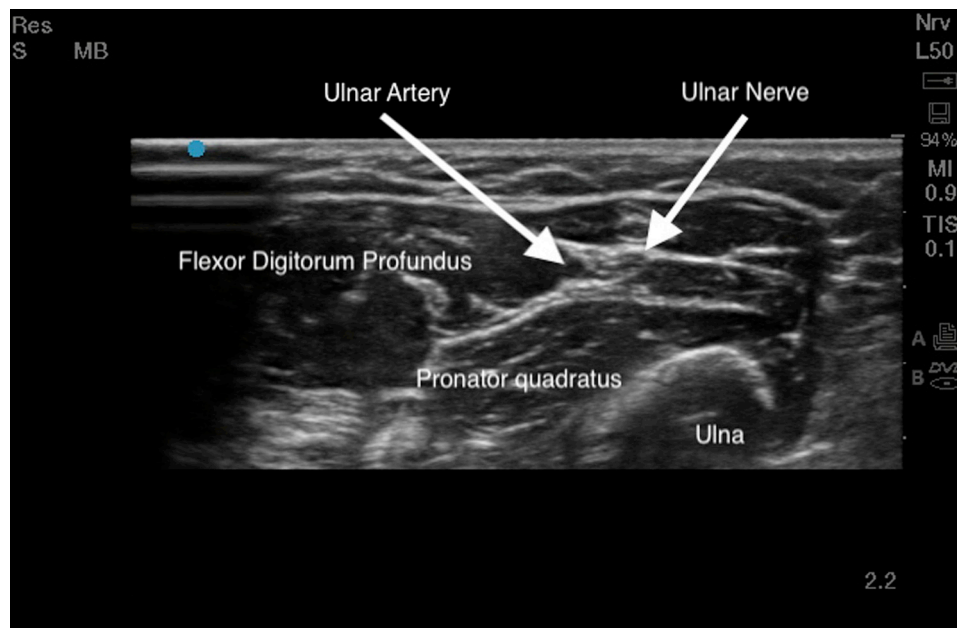
Performing median and ulnar nerve blocks before onabotulinum toxin A injections are an excellent technique to reduce pain but have the risk of nerve injury and mechanical damage when performed without imaging.<sup>2</sup> We propose ultrasound-guided median (Fig 1) and ulnar nerve (Fig 2) blocks in the forearm to reduce the risk of mechanical and neural damage.



**Fig 1.** Ultrasound imaging of median nerve before performing the nerve block in the forearm.

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**Fig 2.** Ultrasound imaging of ulnar nerve before performing nerve block in the forearm.

### THE SOLUTION

After the forearm of the patient is sterilely prepared with ChlorPrep (Becton, Dickinson and Company, Franklin Lakes, NJ) (2% chlorhexidine gluconate and 70% isopropyl alcohol), a 27-gauge hypodermic needle is inserted out-of-plane or in-plane under ultrasound guidance using a sterile technique. A total of 5 to 7 mL of 1% lidocaine solution is incrementally injected around each nerve (ie, median and ulnar nerves) after confirming negative aspiration of blood. We recommend performing the nerve blocks 5 to 10 minutes before administering the onabotulinum toxin A injection to allow sufficient time for nerve blocks to take effect.

In our experience, this provided a good level of analgesia while performing onabotulinum toxin A injections. The analgesic effect lasted 3 hours, and patient reported no complications. We recommend the use of ultrasound guidance for median and ulnar nerve blocks as a safe therapeutic solution to minimize the pain from multiple injections of onabotulinum toxin A.

### REFERENCES

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