

[2003 Fall A23] Saphenous nerve block: A novel therapy for acute gouty arthritis

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Acute gouty arthritis is an acute pain condition that usually affects the metatarsophalangeal (MTP) joint of the great toe and the medial ankle.(1) The saphenous nerve innervates both of these joints in most humans.(2) NSAIDs and opioids are typically used for pain, but no one has investigated the saphenous nerve block for gout. We will describe this novel approach using the following case study.

E.D. is a 53 y/o WM who presented to the emergency department complaining of a "gout attack" in his left ankle. He was unable to bear weight on his left foot and his pain pills were ineffective. He rated his pain 10/10 and described it as a constant ache with a frequent sharp, stabbing pain. He also noted that the skin overlying the medial ankle was very sensitive. On exam, the patient was visibly distressed, suspending his left leg in the air. Inspection of his ankle revealed a swollen, dusky red medial malleolus. His forefoot and lateral ankle were nontender. The medial ankle was very warm and exhibited hyperalgesia and allodynia. Light touch to the medial malleolus triggered sharp pain which radiated to his lower leg. The hypersensitivity prevented full examination of range of motion. Distal muscle and tendon function was intact, but movement of toes also triggered ankle pain.

Morphine 10 mg IM and ketorolac 60 mg IM were given after initial evaluation. After 30 min, the patient rated his pain 9/10, and was still unable to ambulate. A saphenous nerve block was then performed for analgesia of the ankle. Using a 22G spinal needle, bupivacaine 0.25% was injected in a horizontal subcutaneous band just inferior to the medial knee. Approximately 15 minutes after the block, the patient reported complete resolution of pain (0/10). On exam, anesthesia extended from the medial lower leg to the forefoot (including the first MTP joint). The ankle had full range of motion and was nontender. The patient was discharged after ambulating with no pain and a normal gait. The following day, he reported mild ankle pain but stated that he did not need any more oral analgesics.

NSAIDs, opioids, colchicine, and intra-articular steroid injections are the only therapies currently used in the treatment of acute gouty arthritis. However, these modalities provide only partial relief and do not shorten the course of the gout attack (typically 5-7 days).(3) In addition, the conventional approach poorly addresses hyperalgesia and allodynia which are common in gout. These shortcomings make peripheral nerve blockade especially useful in this context. We believe this therapy is superior to the current standard and warrants further investigation. For example, would chronic gouty arthritis respond to repeat saphenous nerve injections? Finally, the facile technique and low risks associated with this block may allow primary care providers to learn and apply this therapy.

References

1. Emmerson BT. The management of gout. *N Engl J Med* 1996; 334:445-54.
2. Williams PL and Warwick R. *Gray's Anatomy*, 36th Edition, W.B. Saunders, Philadelphia, 1980.
3. Rosenthal AK, Ryan LM. Treatment of refractory crystal-associated arthritis. *Rheum Dis Clin North Am* 1995; 21:151-8.

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