

Conservative Care of a Saphenous Nerve Entrapment in a Female Ultra-Marathon Runner

Roy Settergren, MS, DC

National University of Health Sciences; Student MS-Advanced Clinical Practice Program.

Instructor, College of Allied Health Sciences; 200 E. Roosevelt Rd., Lombard IL 60148

University of Illinois at Chicago Athletic Department; 839 W. Roosevelt Rd., Chicago, IL 60608

Owner, Midwest Sport and Spine; 730 N. Franklin St. Ste. 602, Chicago, IL 60654

Phone: 888-391-9868 Fax: 312-253-4453 Email: rdsettergren@gmail.com

BACKGROUND Saphenous nerve entrapment is a commonly overlooked cause of knee pain, as it mimics more common causes of knee pain such as meniscal injury or patellofemoral pain [1]. This entrapment can occur spontaneously as the saphenous nerve exits the subsartorial canal by way of piercing the vastoadductor membrane. At this location, repetitive friction causes local inflammation to produce adhesions between the fascial membrane and the saphenous nerve [2]. Currently, the only treatments discussed in the literature are surgical intervention or bupivacaine injection with visualization of the entrapment being accomplished during surgical intervention[2]. The purpose of this report is to describe a case of a spontaneous saphenous nerve entrapment in a 29 year old competitive ultra-marathon runner who was training for a 100 mile race.

METHODS The patient's initial clinical findings were a vague anteromedial knee pain described as 6/10 intensity, with intermittent paresthesia. Palpation over the subsartorial canal 10 cm proximal to the medial femoral condyle, an area consistent with the saphenous nerve piercing the vastoadductor membrane, produced an increase in painful response. Repeated palpation over the medial thigh produced a Tinel sign, radiating pain distally. Active Release Technique® was performed to the distal vastoadductor membrane 10 cm proximal to the medial femoral condyle.

RESULTS During the first ART® session, an audible and palpable release was appreciated coinciding with an acute but brief increase in the patient's pain as the fascial entrapment released. Following the release, the patient's pain decreased to 2/10 in intensity. One week later a second session was performed which resolved the patient's symptoms completely.

CONCLUSIONS Initial exam for nerve entrapments should include ultrasound imaging, as it is low cost and can provide detailed imaging of fascial and nervous changes seen pre and post intervention to assess treatment efficacy. Ultrasound was not performed in this case, however, fascial changes would present as thickened and hypoechoic appearance of the distal vastoadductor membrane. Slightly proximal to the entrapment site the nerve would appear swollen in a fusiform manner which transitions into a sudden flattening with focal reduction in the nerve's cross sectional area at the entrapment site [3]. Further research utilizing musculoskeletal ultrasound could provide detailed visual evidence of pre and post procedure tissue conditioning.

REFERENCES

- [1]Morganti, C. M., McFarland, E. G., & Cosgarea, A. J. (2002). Saphenous Neuritis: A Poorly Understood Cause of Medial Knee Pain. *Journal of the American Academy of Orthopaedic Surgeons* , 10, 130-137.
- [2]Kalenak, A. (1996). Saphenous Nerve Entrapment. *Operative Techniques in Sports Medicine* , 4, 40-45.
- [3]Valle, M. and Zamorani, M. Nerve and Blood Vessels. In Bianchi and Martinoli. *Ultrasound of the Musculoskeletal System*. Berlin Heidelberg: Springer-Verlag, 2007, p 105-108.