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Ultrasonographic Findings in Femoral Nerve Entrapment Due to Compression of the Inguinal Lymphadenopathy

İnguinal Lenfadenopati Kompresyonu Nedeniyle Oluşan Femoral Sinir Tuzak Nöropatisinin Ultrasonografik Bulguları

Berke ARAS[a], Serdar KESİKBURUN[b], Yasin DEMİR[b], Ümüt GÜZELKÜÇÜK[b], Bilge YILMAZ[b]

[a]Department of Physical Medicine and Rehabilitation, Kastamonu Rehabilitation Center, Kastamonu, TURKEY
[b]University of Health Sciences Gaziler Physical Medicine and Rehabilitation Training and Research Hospital, Ankara, TURKEY

ABSTRACT Femoral entrapment neuropathy caused by compression of the femoral nerve is not a common entrapment neuropathy in the lower extremity. An inguinal lymph node enlargement may lead to femoral entrapment neuropathy. Ultrasonography and electromyography may be helpful to confirm the diagnosis. Generally, with the shrinkage of lymphadenopathy, nerve compression disappears and symptoms regress. We present a case of femoral entrapment neuropathy due to inguinal lymph node enlargement.

Keywords: Femoral neuropathy; nerve compression syndromes

ÖZET Femoral sinirin basısına bağlı oluşan tuzak nöropati, nadir görülen bir alt ekstremite tuzak nöropatisidir. İnguinal lenf nodunun büyümesi ve femoral sinire basısı ile femoral tuzak nöropatisi gelişebilir. Ultrasonografi ve elektromiyografi, tanıyı doğrulama adına yardımcıdır. Genellikle lenfadenopatinin küçülmesi ile sinir basısı ortadan kalkar ve semptomlar geriler. Bu olgu sunumunda, inguinal lenf nodu basısına bağlı oluşan femoral sinir tuzak nöropatisi olan bir vaka anlatılmaktadır.

Anahtar Kelimeler: Femoral nöropati; sinir basısı sendromları

A 21-year-old male patient presented with a left groin pain, difficulty in hip flexion and knee extension and numbness over the anterior aspect of the left thigh for 4 months. The symptoms exacerbated with sitting and squatting. Sensory examination revealed decreased sensitivity to light touch and pinprick over anteromedial part of thigh and medial portion of the right leg. Manual muscle testing showed decreased muscle power to 4/5 over the hip flexors and the knee extensors. The knee jerk was absent in the right lower limb. Palpation of the left groin in mid-inguinal line revealed a mass and elicited tenderness. Ultrasound scanning of the groin showed a lymph node with a size of 3x5 mm compressing the femoral nerve (Figure 1). Pain elicited via compression of the lymph node with the probe was suggestive of a femoral nerve entrapment. Nerve conduction studies showed absent response to stimulation on the medial femoral cutaneous nerve. Needle electromyography revealed reduced maximal motor unit recruitments over the vastus medialis and iliopsoas muscles. We could not find any possible wound or infection in the examination of lower extremities that may cause inguinal lymphadenopathy. The blood tests were normal. The patient was administered gliding exercise of femoral nerve and strengthening exercise of the quadriceps.

The femoral nerve is the largest branch of the lumbar plexus and innervates the hip flexors, anterior

Correspondence: Berke ARAS
Department of Physical Medicine and Rehabilitation, Kastamonu Rehabilitation Center, Kastamonu, TURKEY/TÜRKİYE
E-mail: drberkearas@gmail.com

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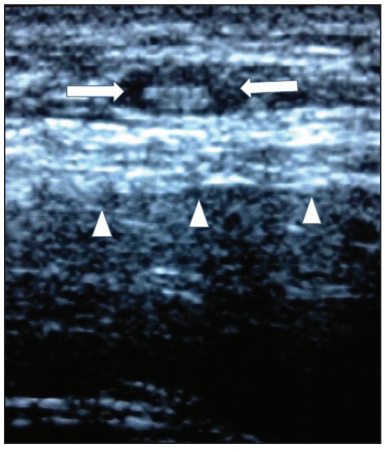

FIGURE 1: Ultrasound imaging of the lymph node (arrows) with a size of 3x5 mm compressing the femoral nerve (arrowheads).

thigh muscles, hip and knee joints, and skin on the anterior region of the thigh, medial region of the leg. It passes under the inguinal ligament lateral to the femoral artery and vein, and then runs into the femoral canal behind the inguinal ligament. This area covered by the thick and stretched iliacus fascia, which may cause nerve compression.[1] Owing to the low blood supply to the nerve in this area, the nerve does not have significant protection and any compression could easily cause ischemic damage to the nerve. Anatomically, the femoral nerve lies in close proximity to the lymphatic drainage and lymph nodes of the hip. There is a potential risk of femoral neuropathy secondary to direct compression by enlarged reactive lymph nodes.[2]

Femoral neuropathy caused by compression of the femoral nerve is not a common syndrome when compared with other compression neuropathies. However the most of reported cases was intraabdominal, in our case, the entrapment was located extraabdominally.[3] Ultrasonography may be helpful in showing femoral nerve entrapment which is compressed by the inguinal lymphadenopathy.

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