

New Technique in the Management of Hip Osteoarthritis: Pericapsular Nerve Group Block and Trigger Point Injection

Kalça Osteoartriti Yönetiminde Yeni Bir Teknik: Perikapsüler Sinir Grubu Bloğu ve Tetik Nokta Enjeksiyonu

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Dear Editor

The Pericapsular Nerve Group (PENG) block is an interfascial plane block that targets the articular branches of the femoral, obturator, and accessory obturator nerves in the anterior hip capsule. Since its publication in 2018, this motor-sparing technique has gained popularity under ultrasound guidance. PENG block is used in postoperative pain control in total hip arthroplasty and in many indications, such as hip osteoarthritis.^{1,2}

Osteoarthritis is not only a joint problem but also plays a role in the pathophysiology of the surrounding soft tissues. In individuals with hip osteoarthritis, myofascial trigger points (MTrP), which reduce muscle flexibility in the muscles around the hip, trigger

pain and stiffness, and reduce physical functions, are more common than in asymptomatic individuals. MTrPs are defined as hyperirritable points in skeletal muscles that can be palpated as taut bands. In individuals with hip osteoarthritis, treatment of these trigger points is effective in reducing pain and improving function.³ Many methods are used in the treatment of MTrP, and one of them is trigger point injection. The iliopsoas is the most important flexor muscle of the hip, and iliopsoas MTrPs may cause pain in the hip and groin region.⁴ In this article, we would like to talk about the injection of MTrPs into the iliopsoas muscle detected by palpation to be added to the PENG block, which can be effective on pain and function and can be applied to hip osteoarthritis. This procedure with a single needle can be quite comfortable

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and can save time, especially for individuals with needle phobia.

Ultrasound-guided PENG block and MTrP injection are performed with the patient in the supine position, and the convex probe is placed on the anterior superior iliac spine (ASIS). Once the ASIS is visible, the probe is moved distally and medially until the anterior inferior iliac spine (AIIS) is visible. Next, rotate the probe's lateral cranially to visualize the iliopubic eminence. At this point, the musculofascial plane between the iliopsoas tendon anteriorly and the iliopubic eminence posteriorly is visualized, where the articular branches of the femoral, obturator, and axial obturator nerves pass between the AIIS and the iliopubic eminence. Here, the psoas muscle and the medial and lateral iliacus muscles superolateral to this muscle are visualized. After the PENG block is performed with the needle guided with the in-plane technique, the needle is withdrawn without removing it from the skin, and MTrP injection can be administered in the same session by guiding it into the muscle (Figure 1).^{1,2}

As a result, in cases where a PENG block is applied to individuals with hip osteoarthritis, injections can also be administered simultaneously to the identified MTrPs of the iliopsoas muscle.

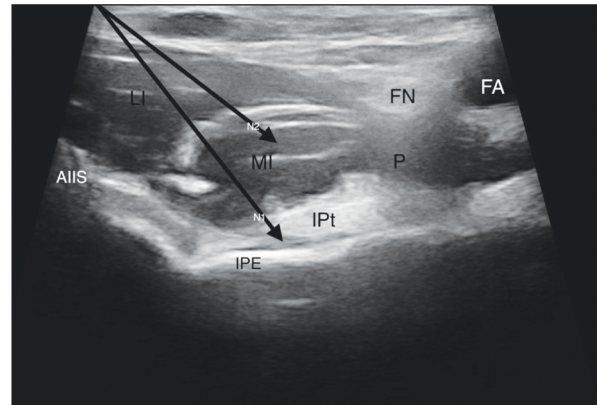


FIGURE 1: With the in-plane technique PENG block and trigger point injection in the iliopsoas muscle. AIIS; anterior inferior iliac spine, FA; femoral artery, FN; femoral nerve, IPE; iliopubic eminence, IPT; iliopsoas tendon, LI; lateral iliacus muscle, MI; medial iliacus muscle, P; psoas muscle, N1; needle guide for PENG block, N2; needle guide for trigger points in the iliopsoas muscle.

Authorship Contributions

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