

Percutaneous Radiofrequency Denervation of Hip Arthritis with Contraindications for Total Hip Arthroplasty: How I do it step by step?

INTRODUCTION:

Despite total hip arthroplasty (THA) becoming the most common surgical method for the treatment of arthritis pain of the hip joint, the presence of multiple co-morbidities sometimes represents a contraindication for THA. To eliminate pain in patients with several contraindications for THA, we performed a study regarding percutaneous radiofrequency (PRF) of the sensory branches of the obturator and femoral nerves.

MATERIALS & METHODS:

All patients underwent a common protocol designed for this study: inclusion criteria were contraindications for THA, radiographic Tönnis grades I and II, and groin, thigh, and trochanteric pain. Six-month follow-up data revealed a statistically significant decrease in visual analog scale (VAS) scores.

TECHNIQUE STEP BY STEP:

1. Supine position. Fluoroscopy is positioned to obtain a true anterior-posterior view of the femoroacetabular joint.
2. Sedation is offered to the patient in an operation theatre.
3. Landmarks of both locations are marked to ensure that the femoral bundle is not trespassed by the 17-gauge trocar.
4. Local anaesthetic is infiltrated to anesthetize the skin and subcutaneous tissues.
5. The trocar is brought from lateral to medial for the femoral articular branch, to lay 1-2 cm cephalad to the joint and just inferior to the anterior inferior iliac spine.
6. For the obturator articular branch, the trocar is brought from medial to lateral to land on the “teardrop” appearance of the junction of the ischium and pubis inferiorly.
7. Stimulation is carried out in the usual manner to look for local contraction.
8. 1 mL of 2% lidocaine is injected in each of the two locations.
9. Radiofrequency ablation is performed for 60 seconds on each location.
10. 1 mL of 0.5% bupivacaine is injected in each location and the trocars are removed.

CONCLUSION:

Use of this technique for hip pain control is controversial. In our experience, PRF of the sensory branches of the nerves innervating the hip joint can be an option for patients with intractable hip joint pain.

REFERENCE:

1. Kawaguchi M et al. Percutaneous radiofrequency lesioning of the sensory branches of obturator and femoral nerve for the treatment of hip joint pain. *Anesth Pain Med.* 2001.