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Injection Techniques in Spine

Arun Bhanot

Introduction

Injection techniques¹⁻⁴ in spine are an essential tool in the hands of a spine specialist. Having a sound knowledge of the use of these techniques not only helps in eliciting the exact source of pain generation in certain difficult clinical situations,⁴⁻⁸ but also helps in managing the spinal disorders in certain difficult patient groups especially in older population or patients with significant comorbid conditions that rule out the possibility of any definitive intervention.^{9,10}

The most common injections that are helpful to a spine specialist are:

1. Selective transforaminal nerve root block (diagnostic and therapeutic)
2. Facet joint block (diagnostic and therapeutic)
3. Medial branch block (diagnostic and therapeutic)
4. Transforaminal discography (diagnostic)
5. Interlaminar epidural block (therapeutic).

Prerequisites to Performing the Injections

The patient should have undergone a thorough clinical examination and evaluation by available imaging modalities to arrive at a relevant clinical diagnosis. Sometimes, the MRI or CT pictures are inconclusive. Under such circumstances, the patient's description of symptoms helps in a great way to match the dermatomal/myotomal patterns of pain with the imaging modalities and plan for the proposed intervention. Once decided, the patient should be clearly explained about the nature and intent of the procedure (whether diagnostic or therapeutic). If there are multiple possible sources of pain and the intent of the injection is diagnostic only, the injections should be used sequentially after a gap of a few hours or days from each other to assess the efficacy of a particular injection type. A proper informed consent should be taken just like any other operative procedure and the spinal injections should not be taken lightly as serious limb/life-threatening complications have been reported in the literature despite the best of injection protocols being followed.

Most of the spinal injections are preferably performed in an operating room set-up with the availability of a good radiolucent table that can be moved or tilted in the desired directions, a good quality image intensifier and routine resuscitation equipment to handle any kind of emergencies that may arise. An intravenous line should always be secured to keep ready for any need of resuscitation. As most of the injections are