hong kong spine & pain centre 香港脊骨及痛症中心

What is a Lumbar Transforaminal Epidural Steroid Injection?

A **lumbar transforaminal epidural steroid injection** is a minimally invasive procedure that is commonly used for radicular pain and lower back pain. This is technically a direct delivery of medications by a long needle under the guidance of X-ray fluoroscopy to reduce the inflammation around the involved spinal nerves, and thus to alleviate the symptoms. The medication takes effect rapidly, and pain relief usually persists for long periods of time, especially if the injection is repeated more than once. The procedure has been well supported by numerous clinical research and studies for treating chronic pain and even intense, acute pain. Most individuals who suffered from decreased mobility or had to miss work due to their back pain can quickly return to their normal activities after receiving steroid injections.

Lumbar transforaminal steroid injections can be used to treat numerous conditions, which include:

- Lumbar spinal stenosis
- A herniated disc
- Degenerative disc disease
- Degenerative lumbar spondylolisthesis
- Lumbar radiculopathy or sciatica

How is a Lumbar Transforaminal Epidural Steroid Injection performed?

The patient lies on his stomach on a surgical table. Sedation may be given by anaesthetist to reduce the discomfort and anxiety during the procedure. After cleaning and sterilising the skin, a needle is inserted in an oblique direction all the way from the skin until the needle tip reaching the neural foramen of the vertebra (i.e. transforaminal). In order to have precise and accurate insertion and positioning of the needle, a physician uses X-ray fluoroscopy as real-time guidance. In addition, before the medication is administered a contrast dye is injected as a means of observing whether the medication will be properly distributed to the affected nerves. Then a certain amount of mixture of steroid and local anaesthetic is delivered through the needle to the epidural space. The entire procedure takes approximately 15 minutes and is a day procedure that patient may leave the hospital in 2 hours after the procedure and does not need to stay overnight in the hospital.

Patients who receive **lumbar transforaminal epidural steroid injections** generally report experiencing dramatic relief almost immediately or within a few days after the injection. If a patient only experiences minor relief, the injection can safely be repeated within a short period of time.

The successful rate of **lumbar transforaminal epidural steroid injection** is about 70-90%. It is a very safe procedure and carries very low risks (~1%). Having said that, the possible complications include nerve or vascular injury, dural puncture, headache and dizziness, infection etc.

Reference

- 1. Gündüz OH, Akhlaque U, Sencan S, Celenlioglu AE, Seker A. Contralateral lumbar radicular pain shortly after a transforaminal epidural steroid injection: an unusual sequel. Am J Phys Med Rehabil. 2014; 93(9):834-5.
- 2. McCormick S, Cushman D, Casey E, Garvan C, Kennedy DJ, Plastaras C. Factors Associated with Pain Reduction after Transforaminal Epidural Steroid Injection for Lumbosacral Radicular Pain. Arch Phys Med Rehabil. 2014; in press.
- 3. Manchikanti L, Cash KA, Pampati V, Falco FJ. Transforaminal epidural injections in chronic lumbar disc herniation: a randomized, double-blind, active-control trial. Pain Physician. 2014; 17(4):E489-501.
- Kraiwattanapong C, Wechmongkolgorn S, Chatriyanuyok B, Woratanarat P, Udomsubpayakul U, Chanplakorn P, Keorochana G, Wajanavisit W. Outcomes of fluoroscopically guided lumbar transforaminal epidural steroid injections in degenerative lumbar spondylolisthesis patients. Asian Spine J. 2014; 8(2):119-28.
- 5. Murthy NS, Geske JR, Shelerud RA, Wald JT, Diehn FE, Thielen KR, Kaufmann TJ, Morris JM, Lehman VT, Amrami KK, Carter RE, Maus TP. The Effectiveness of Repeat Lumbar Transforminal Epidural Steroid Injections. Pain Med. 2014; in press.
- 6. Kim HJ, Yeom JS, Lee JW, Chang BS, Lee CK, Lee GW, Im SB, Kim HJ. The influence of pain sensitivity on the treatment outcome of transforaminal epidural steroid injection in patients with lumbar spinal stenosis. Pain Pract. 2014; 14(5):405-12.