4. Evidence of significant bony spurs blocking entry to disc space
5. Evidence of severe spinal canal or lateral recess narrowing
6. Evidence of an extremely large extruded disc or a large free fragment of disc material
7. Existence of other pathologies or conditions such as fractures, tumors, or active infections

Only patients with clinical abnormalities confirmed by physical examination, x-rays and scans are considered for the new procedure. Tests are done prior to the procedure.

**The Procedure**

The procedure is performed under local anesthesia with the patient awake and in a prone or lateral position. A small needle is inserted into the disc for discography, and is followed by insertion of a slightly larger metal tube or sleeve.

Through the sleeve, a small incision is made in the disc itself. Using x-ray control, the micro-instruments (forceps, curettes, trephines, rasps, burrs, and cutters), the Discoscour (which is a hollow probe with a cutting knife inside) and the laser probe are inserted into the disc space through the sleeve. The disc material is removed or vaporized, and the disc bulge is shrunken further by laser. The procedure takes about 30 minutes, on average. X-ray exposure is minimal.

The supporting structure of the disc is not affected. Upon completion, the needle is removed and a small band-aid is applied over the tiny incision.

**Postoperative Course**

The patient may feel relief from pain immediately following the procedure. This is an outpatient procedure. Walking and mild exercise are usually encouraged on the same day. Some patients experience mild muscle spasms that can generally be relieved with mild analgesics. Pain in the area of the operation is usually minimal. From the day of discharge, a daily exercise program is recommended. There is a re-evaluation examination several days later. Little, if any, postoperative medication is required for most patients. Normal activities can usually be resumed at the doctor’s discretion within a few days to two weeks.

**Advantages**

The primary advantage of this procedure is that there is no interference with the muscles, bones, joints or manipulation of the nerves in the mid-back area. Since insertion of the micro-instruments through the skin and muscle is the only wound, there is no scarring in or around the nerves postoperatively. Additionally, it is an outpatient procedure.

A small percentage of patients are not relieved of their pain with this procedure. There is much less risk of complications from performing percutaneous thoracic discectomy than the conventional traumatic thoracic discectomy surgery.

**Summary**

Percutaneous endoscopic (arthroscopic) thoracic discectomy with laser thermodiskoplasty requires no hospitalization, and provides earlier return to work and to previous daily activities. Pain is minimal. A small percentage of patients do not get relief of symptoms. Rare patient complications include mild muscle spasms and transient pain. It is, after all, a minimally invasive spine surgery!

If you have any questions concerning this procedure, please feel free to discuss the percutaneous thoracic endoscopic discectomy procedure with us further.

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**Dr. John C. Chiu, Medical Director**

Diplomate American Board of Neurological Surgery
California Minimally Invasive Surgery Center
1001 Newbury Park Rd.
Newbury Park, California 91320
805-375-7900, 800-354-8554
Fax: 805-375-7975
email: info@spinecenter.com
Website: http://www.spinecenter.com
on the nerve roots, the pain radiating along the chest and spine can be incapacitating and severe. For many, the only treatment is surgical removal of part of the herniated disc, which, until now, has required a major traumatic operation. Traditional thoracic discectomy requires general anesthesia, the dissection of muscle and removal of bone, and bone fusion. Thoracic discs are difficult to approach surgically because of the ribs, the narrow spinal canal, and the critical position of the spinal cord. It is a traumatic approach often requiring going through the chest, resectioning of ribs and part of the vertebral body, collapsing of the lung, and often requiring bone fusion and metal plate screws. This constitutes a high risk of spinal cord injury or other traumatic complications. A long post-surgical hospitalization and recuperation are needed for this traumatic surgery.

Percutaneous arthroscopic thoracic discectomy is different from the standard traumatic thoracic disc surgery because there is no muscle dissection, bone removal, bone fusion, or a long incision, except for a puncture wound to accommodate the needle, micro-instruments, and the laser probe that are inserted into the herniated disc. Therefore, complications that occur with conventional surgery are eliminated with this less traumatic procedure.

Who Should Consider This Procedure?
Percutaneous thoracic discectomy is specifically designed for patients with uncomplicated, herniated discs accompanied by the following:

1. Intractable pain radiating along the spine and chest wall.
2. Symptoms often include sensory loss, tingling, muscle spasms, and numbness.
3. A positive CT or MRI scan for disc herniation.
4. No improvement of symptoms after 8-12 weeks of conservative therapy, including physiotherapy or chiropractic treatment.
5. Positive myelogram is helpful.

The procedure is not designed for patients with:

1. Evidence of acute or progressive degenerative spinal cord diseases.
2. Evidence of neurologic or vascular pathologies mimicking a herniated disc.
3. Evidence of advanced spondylosis (significant bony spurs) with disc space narrowing, diffuse annular bulging and other spine irregularities.

Percutaneous arthroscopic thoracic discectomy is different from the standard traumatic thoracic disc surgery because there is no muscle dissection, bone removal, bone fusion, or a long incision, except for a puncture wound to accommodate the needle, micro-instruments, and the laser probe that are inserted into the herniated disc. Therefore, complications that occur with conventional surgery are eliminated with this less traumatic procedure.