Silver Needle Therapy for Low Back Pain

PROCEDURE "SHOWS PROMISE" IN TREATING POSTSURGICAL PAIN

Editorial Staff

It is estimated that up to 40% of all patients who undergo surgery to repair a herniated disc do not have a satisfactory outcome. In some cases, postoperative scars or lesions may form, causing pain in the low back or buttocks; in others, back muscles may stretch and become more prone to injury, creating tender pain points that can be difficult to treat and nearly impossible to cure.

In an effort to reduce the pain that may occur after disc surgery, patients have sought a variety of treatments, including pain medications, massage, and even followup surgery, often with unsatisfactory results. A recent study published in the *Journal of Manipulative and Physiological Therapeutics* (*JMPT*) suggests that a form of acupuncture known as silver needle therapy may provide the effective, prolonged relief of pain these patients have been seeking.

A team of investigators led by Dr. Li Yi-Kai of the First Military Medical University in Guangzhou, China examined 24 patients (17 male) with an average age of 54.5. Each subject had undergone surgery involving removal of the nucleus pulposus, the soft, gelatinous portion found in the center of a disc.

All of the patients had aching or stabbing pain in their low back and/or buttocks, with areas of tenderness located at soft-tissue points near the lumbar vertebrae, the buttock fascia and the erector spinae muscle. Before undergoing silver needle therapy, the patients had been treated with traction, massage, traditional acupuncture and moxibustion, non-steroidal anti-inflammatory drugs and herbal medicine, respectively, but none of the therapies had shown satisfactory results.

Patients were treated by first being placed in a prone or lateral position. Tender points were identified by the person delivering treatment in conjunction with feedback from the patient. Using the tender point as a guide, other points placed two centimeters apart were marked for needling, and a lidocaine solution was injected to reduce any pain associated with needle insertion and moxa.

Autoclaved silver needles (80% silver, one millimeter in diameter, and tapered to a point without being very sharp) were then inserted into the same location as the lidocaine injection. Needles were inserted perpendicularly or obliquely depending on the location of the tender spot. Moxa cones were placed on top of each needle stem and burned. Once the moxa had finished burning and the needles had cooled completely, they were removed, and an iodine tincture was applied to prevent infection.

The average period of treatment was 56 days, with each patient undergoing therapy once or twice. Pain scores were measured using the Total Tenderness Score System, rating the patients' pain on an ascending scale of 0-3. Pain scores of each tender point were taken two months after treatment and compared to pre-treatment scores.

Results

The researchers noted a "statistically significant difference" in pre- and post-treatment pain scores.

Each area of tenderness scored at least one point lower after treatment, with the greatest differences seen for tender points near the lumbar vertebrae. Total tenderness scores were also significantly lower for each area, with the buttock fascia and attachment sites of the erector spinae muscle experiencing the greatest improvement.

Table I: Average tenderness scores before and after treatment.		
Site of tenderness	Before treatment	After treatment
Transverse process of third lumbar vertebrae	2.75	1.42
Facets of lumbar vertebrae	2.63	1.33
Buttock fascia	2.50	1.36
Attachment site of erector spinae muscle	2.40	1.10

Table II: Total scores for each tenderness point before and after treatment.		
Site of tenderness	Before treatment (points)	After treatment (points)
Transverse process	66	34
Facets	61	31
Buttock fascia	37	19
Attachment site of erector spinae	24	11

Before undergoing silver needle therapy, the researchers offered a number of suggestions for both practitioners and patients. They noted, for instance, that the silver needles to be used "must be long enough to reach the site where the soft tissue pain originates, have a relatively thick needle shaft to prevent it from breaking or stasis caused by strong muscular spasm, and be relatively soft so as to turn along the bony surface to reach the site of the soft tissue lesion."

In addition, because of the pain associated with numerous injections of lidocaine, and because silver is highly conductive to heat, the researchers recommended that silver needle therapy be performed with the patient under general anesthesia, and that "a skilled doctor with full experience in this field" be present to make sure treatment is being delivered properly while the patient is anesthetized.

Given these conditions, some patients may be wary of undergoing silver needle therapy. The results of the *JMPT* study, however, suggest that any pain patients might undergo during the procedure would be well outweighed by the benefits they would receive afterwards. As the researchers noted in their discussion: "Silver needle therapy · has the advantages of simplicity, convenience, practicality and safety · Relaxation of muscles is achieved after the pain is eliminated, and in turn, the pain is eliminated after the muscles relax."

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