Clinical Observation on Treatment of Lumbar Intervertebral Disc Herniation with Electroacupuncture on Jiaji (Ex-B 2) Points plus Traction: A Clinical Report of 30 Cases

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Clinical Study

Clinical Observation on Treatment of Lumbar Intervertebral Disc Herniation with Electroacupuncture on Jiaji (Ex-B 2) Points plus Traction: A Clinical Report of 30 Cases

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Abstract  Objective: To investigate the clinical efficacy of treating herniation of lumbar intervertebral disc with electroacupuncture on Jiaji(Ex-B 2) points plus 3-D traction. Methods: To allocate 90 cases randomly into three groups and adopt therapies of 3-D traction, electroacupuncture on Jiaji(Ex-B 2) points and comprehensive method (combination of electroacupuncture on Jiaji(Ex-B 2) points and 3-D traction) and then compare the pre-treatment and post-treatment result with scores of clinical symptoms and clinical efficacy. Results: After 4-week treatment, the group of comprehensive therapy showed better effect than the other two groups. Conclusions: Electroacupuncture on Jiaji(Ex-B 2) points plus 3-D traction has positive effect on herniation of lumbar intervertebral disc.

Key Words  Intervertebral Disk Displacement; Electroacupuncture; Traction

Herniation of lumbar intervertebral disc is now quite common in clinical practice. It refers to the posterior or posterolateral bulging or protrusion of intervertebral tissues including nucleus pulposus due to degeneration of annulus fibrosus or trauma-related fissure, which in turn irritates or compresses the nerve root and leads to inflammatory reactions and subsequently nutritional disorder of nerve root and conductive impairment, resulting in low back pain, sciatica and even obvious nerve dysfunction. Non-operative therapies are important for this problem, and most patients can get relief or removal of symptoms, except for 10%-15% of them might need surgery. The authors adopted electroacupuncture plus 3-D traction for this problem and the report is now as follows.

Clinical Data

1. Diagnostic criteria
The selection of cases is referred to Herniation of Lumbar Intervertebral Disc and Diagnostic and Therapeutic Effect Standard of TCM Disease Syndromes as well as confirmation of unilateral or bilateral herniation of lumbar intervertebral disc through CT scanning or MRI.

2. Inclusion criteria
a. Those who conform to the above criteria and aged from 20 to 55; b. Those with obvious clinical symptoms including persistent low back pain and leg pain as well as claudication; c. Those with positive sign of spinal nerve compression or abnormal sensation; d. Those who are confirmed as simple herniation of lumbar
intervertebral disc through CT scanning or MRI and show corresponding symptoms with the image result.

3. Exclusive criteria
   a. Those aged below 20 and above 55 years old; b. Those with complications of spinal canal stenosis, lateral recess stenosis, obvious stenosis of intervertebral space as well as severe degenerative changes; c. Those with long history of herniation of lumbar intervertebral disc, especially longer than 10 years or with complication of calcification; d. Those with indications of CT scanning or MRI that there is more than 50% compression of spinal dura mater sac by obvious adhesion or protrusion of nucleus pulposus; e. Those with rupture of fibrous ring or posterior longitudinal ligament and the nucleus pulposus tissue entering the spinal canal; f. Those with obvious low back pain but mild leg pain; g. Those with complications of slip of vertebral body, other pathological changes of spinal canal and spine, intraspinal tumor, and metastatic tumor of vertebrae; h. Those with diabetes or mental disorders; and women in pregnancy; i. Those with paralysis of bilateral lower limbs, disorder of defecation and cauda equina syndrome such as numbness in saddle area.

4. General data
   Among 90 cases conforming to the above diagnostic criteria, 52 are male cases and 38 are female cases, ages: 20-55 years old, average age: 39.7±4.59, disease duration: 1 day to 22 years, and average duration: 5.5±2.3 months, 33 cases have single low back pain, 37 cases have low back pain with complications of numbness or pain of one-side lower limb, 5 cases have low back pain with complications of numbness or pain of bilateral lower limbs, 5 case have no low back pain but only radiating pain or numbness of unilateral or bilateral lower limbs, 27 case have complications of abnormal sensation of lower limbs or weakened muscle strength, 13 cases have complications of intermittent claudication, 3 cases have complications of scoliosis, no cases have numbness of perineum or dysfunction of sphincter, 57 cases have single segment and 33 cases have multi-segments. All the cases were randomized into three groups according to the envelop method.

Therapeutic Approaches

1. Group of electroacupuncture (Group A)
   Points: to locate the points at 1 cm lateral to the superior and inferior spinous process of the affected intervertebral discs bilaterally, and the point Huantiao (GB 30) of the affected side as well as points adjacent to affected nerve stem as adjunct points (such as Chengfu/BL 36, Weizhong/BL 40, Zhibian/BL 54, Chengshan/BL 57, Zusanli/ST 36, Yanglingquan/GB 34 and Kunlun/BL 60).

   Operation: The points were punctured 2-2.5 cun (up to the patient's figure), after routine sterilization, with filiform needles sized in 75 mm obliquely (15º) toward the midpoint of spine. Then the adjunct points were done with routine manipulation and the major points were connected with electric stimulator (the intensity was up to the patient's tolerance), plus infrared lamp irradiation. The needles were retained for 30 min. The treatment was done once a day and lasted 4 weeks consecutively.

2. Group of 3-D traction (Group B)
   The patients were asked to take prone position on the traction bed with chest and back area as well as buttocks fixed in the designed board respectively, buttocks and legs formed a certain angle downward and the affected intervertebral space as the top of that angle. Then the traction force and rotation angle were designed according to the patient's symptoms, signs and check results and patient's height, body weight and gender, and the relevant data was made input into computer. When rotating the board of buttocks and legs, the chest and low back board was done longitudinal traction. The traction force was 1/3-1/2 of the body weight; the inclination angle ranged from 0 º to 20 º; and the rotating angle ranged 0 º±15 º. After setting up all parameters and confirmation of no errors with examination as well as complete preparation of the bed, the doctor stepped on the foot plate for traction. Each traction lasted 30 min, followed by a bed rest with supine position on a hard bed. The therapy was done once every day, for 4 consecutive weeks.

3. Group of comprehensive therapy (Group C)
   The patients received both electroacupuncture on Jiaji(Ex-B 2) points and 3-D traction.

Observation Methods

1. Observation items
   The chief symptoms, signs and pain improvement before and after the treatment are observed in the study. The pain scoring was evaluated by visual analogue scales (VAS). The scoring of signs was evaluated as straight leg raising test. At the same time, with reference