Working adults (ages 18 to 64) represent 63% of the population and account for 72% of all low back pain (LBP) health care visits.\(^1\) Low back pain has been identified categorically as acute, subacute, or chronic, depending on the onset, duration, and severity.\(^1,2\) Risk factors have included occupational posture, depressive moods, obesity, gender, and age, and risk is most likely affected by a combination of several of these variables.\(^2\) Low back pain is not a disease but rather a group of signs and symptoms that affects all age groups across the lifespan. It has been shown to be more common from age 35 to 55, with a higher prevalence in women.\(^2,3\)

The World Health Organization anticipates that as the world population ages, the incidence of LBP will increase substantially and become 1 of the leading conditions for which the aging population will seek out medical intervention.\(^2\)

Acupuncture may help improve quality of life as well as reduce lost workplace productivity through more effective and sustained pain relief.\(^4,5\) Stimulating nerves located in muscles and other tissues with the application of fine needles may lead to the release of endorphins and other neurohumoral factors.\(^6\) The expected result is a change in pain processing between the brain and spinal cord.

Acupuncture has demonstrated efficacy in reducing inflammation by promoting the release of vascular and immunomodulatory factors and increasing local microcirculation.\(^6,7,8\)

### CASE REPORT

**Application of Acupuncture to Treat Low Back Pain**

A 2-year case study of fascial needle manipulation on a patient whose low back pain was unresponsive to medications.

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Acupuncture has demonstrated efficacy in reducing inflammation by promoting the release of vascular and immunomodulatory factors and increasing local microcirculation.\(^6,7,8\)
In this case, the pain relief achieved by fascial manipulation was demonstrated through the release of superficial lateral recesses in the tendinomuscular channels that are responsible for pain; this process has been correlated to benefits in the deeper musculard layers and related meridians.10,11 We used Master 4 points in a special 3-needle arrangement called Daoyi, in conjunction with a method called Dong Qi (movement Qi) in which the needle is manipulated as the patient exercises the affected area.10

We found that acupuncture’s overall therapeutic effects help in reducing the use of medication for back complaints, providing a more cost-effective treatment over a longer period of time (e.g., at least 2 years).12,13

Case History
A 28-year-old patient came to the Farmingdale acupuncture clinic in December 2014 with low back pain radiating down his left leg due to disc herniation. It had started 4 months prior when he sneezed and suddenly felt intense pain in his mid-back in the T11-T12 area. After this episode, he had 18 to 20 sessions of combined physical therapy and chiropractic treatments, as well as 2 epidural injections. The patient reported not only that these treatments were not effective in eliminating his pain but also that physical activity and bending forward while sitting made it worse. At the time of the first treatment at our center, the pain was being controlled by oral medications, including ibuprofen, naproxen (Aleve), meloxicam, and topiramate, which were taken as needed.

Musculoskeletal Evaluation
The patient reported pain at 7, using a numeric 1 to 10 pain rating scale. The patient complained of functional limitations, including bending forward, lifting, and sitting for periods longer than 15 to 20 minutes due to increased lower back, left buttocks, and left posterior thigh pain (Table 1).

Testing and Diagnosis
Magnetic resonance imaging (MRI) scans and myelograms of the lumbar spine and thoracic spine were ordered. The first MRI of the lumbar spine, taken in October 2014, revealed a posterior disc herniation on the ventral surface of the cord, disc dehydration, and diminished disc space height. There was a Schmorl’s node (protrusion) located posterior to the inferior T11 endplate. In addition, at L4-L5 a posterior annular disc bulge pressed upon the ventral thecal sac with evidence of disc hydration. At L5-S1, there was a posterior right-sided, subligamentous disc herniation impressing the right ventral epidural space and right S1 nerve root as it approached the lateral recess. Also, mid-facet hypertrophic changes were noted at both L4-L5 and L5-S1.

Table 1. Results of Initial Physical Examination

| Lumbar AROM flexion: 50° with pain both during movement and at end range |
| Lumbar AROM extension: 10° |
| Lumbar AROM lateral flexion: 20° bilaterally |
| Lumbar AROM rotation: 5° to 10° bilaterally |
| Bilateral lower extremity strength: grossly 4/5 |
| Lower abdomen/back extensor strength: 3+/5 |

Palpation: left to right lumbar paraspinal, left piriformis, left hamstring: 2+ tenderness (scale 0 to 3+) with increased hyperventilatory disturbance or irregular pattern.6,7

A summary of the assessment was as follows:

- On self-report, the patient described a tendency to be warm while having an aversion to cold. He was sweaty but not thirsty.
- His digestion was regular, with normal bowel movements, and he had no gas, distention, or bloating.
- He reported undisturbed sleep, averaging 7 hours a night.
- His sense organs and emotional status were assessed as normal. He reported a steady energy throughout the day.
- His pain was described as stabbing and constant and rated between 6 and 7 in the 10-point numeric pain scale.
- The patient’s tongue appeared red at the root of the problem.

We concluded that the patient was Qi and had blood stagnation.

Treatment Plan
Based on the diagnosis, the treatment plan was to alleviate the patient’s pain and to tonify Qi, blood, and yin due to their classical clinical indications. Also, these points were selected because of their anatomical placement, doubling as local points along the affected channel in the bladder and gallbladder, as well as their clinical indications (Figures 1).14

Needling Technique
Qi puncture and fascial manipulation needle techniques were used, applying traditional Qi puncture or triple puncture with a 2-needle technique where 1 needle is placed in the center and 2 needles are placed on the sides. This technique has been used most often to treat areas of deep muscle tenderness. In contrast, fascial manipulation is presented by using a 3-cun needle inserted

Four Pillars of Traditional Chinese Medicine

Looking at physical attributes such as the face, eyes, gait, and tongue is the first pillar. We examined the map of the tongue as it laid out the internal viscera and details of the tongue such as shape, color, texture, moisture, coating thickness and color, size of the papillae, and movement, as these features can be very revealing.

Listening is a second pillar in the evaluation. The patient’s voice may offer evidence of a disturbance or irregular pattern.

Asking is the third pillar. For example, the pulse, like the tongue, presents a blueprint of a patient’s condition. The left and right side of the radial pulse is laid out into 3 sections (from proximal to distal): qi, guan, and cun. Each pair of organs can be recognized within each of these positions. Palpating the pulse is an extremely detailed task requiring complete focus to feel for the quality. The pulse has several attributes that serve as a window between the practitioner and the patient, including the depth, strength, consistency, and even the specific movement in which the blood travels through the vessel.

Side Bar

A brief description of each of the four pillers of traditional Chinese medicine. Classically, each organ has an associated color and shape. For example, the organ associated with green is liver and is shaped like a bird. Each organ also has an associated emotion (heart = love; liver = anger; lung = sadness; spleen = depression; kidney = fear) and a somatotopic arrangement. Also, these points were selected because of their clinical indications. Also, these points were selected because of their anatomical placement, doubling as local points along the affected channel in the bladder and gallbladder, as well as their clinical indications.14
Table 2. Phase 1 Treatment—Points selected to tonify Qi, blood and yin due to clinical indications for back pain—bladder (BL) and gallbladder (GB).

<table>
<thead>
<tr>
<th>Point</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>BL 10 Tianzhu</td>
<td>Activates the meridian, relieves pain</td>
</tr>
<tr>
<td>BL 15 Xinxu</td>
<td>BL 57 Chengshan</td>
</tr>
<tr>
<td>BL 20 Pipu</td>
<td>BL 60 Kunlun</td>
</tr>
<tr>
<td>BL 23 Shenhu</td>
<td>GB 31 Fengshi</td>
</tr>
<tr>
<td>BL 24 Qiaishu</td>
<td>GB 32 Zhongdu</td>
</tr>
<tr>
<td>BL 25 Daqingshu</td>
<td>GB Yangfu</td>
</tr>
<tr>
<td>BL 20 Pishu</td>
<td>GB Xuexihong</td>
</tr>
<tr>
<td>BL 53 Baohuang</td>
<td>GB 62 Shenmai</td>
</tr>
</tbody>
</table>

Classical pair of points used to open up the Taiyang zone of the body where pain is (small intestine SI): Left SI 3 Houxi and BL 62 Shenmai.

The following point is used to tonify the kidney (KD): 3 Taizi.

Auricular points, located in the ear—Homunculi theory—correspond to body pain (EAP):

Hua Tao Jiaj points are used to activate the sympathetic nervous system, to promote better circulation:

L1-2 L3-4 L4-5

Extra points are located anatomically in the affected areas:

Yao yan (lower back and buttocks)

The 4 Gates, remove stagnation and improves Qi

Right LR 3, LI 4

Master Tung points:

33.08 Shu Wu Jin
33.09 Shou Qian Jin
A.04 Sanchan

Figure 1. Illustration of bladder (BL) acupuncture points used in phase 1 treatment. The prescription was formulated because of their anatomical placement, in the bladder (BL) and spleen, doubling as local points along the affected channel to tonify the kidney Qi and Yin.

Upon initiating phase 2 acupuncture (Table 3), the patient reported continued pain in his left lower back and upper buttocks with left lateral upper thigh pain, especially when bending forward. The pain was 5 out of 10 on the numerical pain scale. Acupuncture treatment in this phase emphasized fascial manipulation and the use of Master Tung points to address the pain in the left buttocks and hamstring string muscles. This treatment reduced the patient’s pain to approximately 0 to 2 on the 10-point numeric pain scale between treatment periods, during which Bob admired sitting in a slouched position both with and without his feet elevated.

Discussion

This case illustrated an effective use of fascial needle manipulation and Master Tung acupuncture to treat low back pain/lumbar radiculopathy caused by local Qi and blood stagnation in the Taiyang channel. Stagnation or blockage was relieved through the use of different acupuncture needling techniques to enhance the circulation of Qi and blood throughout the myofascial system.

In Myer’s theory, tracks, or lines of pull through the fascia, are made from myofascial or connective tissue units and show a continuity of fascial fibers. These tracks must be delivered in a straight line or change direction only in a gradual manner.

In this patient, the superficial back line (SBL) in Myer’s system coincided with the Taiyang tendinomuscular channel in TCM. Therefore, fascial needle manipulation was performed on the midline of the hamstrings (a main component of the SBL and Taiyang channel) in the region of BL 36 and BL 37. In the Anatomy Trains concept—a map of the whole-body fascial and myofascial linkages—muscle attachments, or stations, were placed where underlying fibers of the muscle’s epimysium or tendon were enmeshed or were continuous with the periosteum of the accompanying bone. The more superficial fibers of the myofascial unit may, however, run on and communicate with the next piece of myofascial track. The SBL, like the Taiyang channel, connects and protects the entire posterior surface of the body from the...
The fascial needle manipulation occurs at the superficial fascia, deep fascia, and the membranous layer of the hypodermis of the limbs and trunk are divided into the superficial fascia, deep fascia, and epimysial fascia. To be effective, the fascial needle manipulation occurs at the superficial fascial layer, including the membranous layer of the hypodermis and the deeper loose connective tissue layer. This needle technique also involves the deep fascial layer, more specifically the fascial fibers of the deep fascia, known as the undulated collagen fibers and the aponerotic collagen fibers.

The functional application of Stecco’s Fascial Manipulation system is important to note because it correlates the fascial centers of coordination and fusion with the individual acupuncture points on each channel. The center of coordination refers to a single point of reference from which muscle fibers synthesize to collectively move a joint in 1 direction. The center of perception extends over a moving joint and correlates to a specific center of coordination and fusion to a point located topographically.

In addition, Master Tung theory relies on many points not found in the dominant systems of TCM. Distribution of the points includes the entire body, but the points are arranged topographically by an anatomical zonal concept where each zone functions as a microsystem and has points that affect the entire body. In the case study, the affected area was not needled. The Master Tung system of effective point selection is based on 3 types of correspondence: (1) point-to-point correspondence (diseased body area); (2) channel correspondence (diseased channel); and (3) tissue correspondence (diseased tissue). In comparison to these parallels made between the Western fascial system and TCM theory, the Master Tung system and theory was also applied. The most effective application observed was the use of the large Taiji arm-leg correspondence where the right shoulder was used to treat the left lower back and left buttocks/posterior hip symptoms. Specifically, the point Jian Zhong (R GB 25 Jingmen) at the midpoint of the middle deltoid on the right shoulder, was needled and manipulated during seated active range of movement (AROM) of lower extremity/leg/foot, which routinely reduced pain from 1 to 2 to a post-treatment rating of 0 out of 10. This is the clearest example of the efficacy of the use of the Master Tung system.

**Conclusion**

The reduction in pain reported by the patient, achieved with a combination of Master Tung points, myofascial needle manipulation, and Qi puncture—style acupuncture (management of the efficacy of managing the symptoms that had previously adversely affected the patient’s quality of life). Thus, it is an option worth offering to patients with chronic low back who have not found relief with other therapeutic methods. At end of treatment, the patient reported pain of 0 to 2 out of 10 on the 0-10-point numeric pain rating scale, He will continue to receive acupuncture treatment to manage any future low back pain. The patient’s prognosis is good and considered improving based on the reduction of pain symptoms.  

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