IRON LEGS, NEVER FALLING

A CASE OF ARTHRITIC PAIN MANAGEMENT WITIH CHINESE MEDICINE

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ABSTRACT

CASE DESCRIPTION: A 65 year-old female with a preexisting diagnosis of rheumatoid arthritis presented to the clinic with pain in the lumbar region and left knee and leg accompanied by leg numbness precipitated by an injury sustained while cleaning. As a result of her impaired walking due to her main symptoms the patient had episodes of falling. In Chinese medical terms she was diagnosed with Bi-Impediment due to damp-cold accumulation, and concurrent vacuity of the kidney yin and yang and blood stasis. TREATMENT: The patient was given a total of 23 acupuncture treatments between April and October 2007, and supplementally took *Qi Ye Lian Zhi Tong Pian*. The initial stage of treatment focused on regulating the channels to stop pain, followed by a second treatment stage focused on supplementing vacuity. RESULT: The patient was asked to complete a validated assessment tool, the Measure Yourself Medical Outcome Profile (MYMOP), at the onset and at several points during the course of treatment. There was a significant reduction pain over the course of treatment and improvement in quality of life based on several markers.

INTRODUCTION

Maintaining independence is a key concern of the elderly patient. However, as people age a variety of factors impede their ability to function as they would when younger, and about one fourth of patients over the age of 65 have some impairment in their activities of basic living (ADLs).[1] Pain related conditions are common in the elderly and as many as 50% of people over the age of 65 also suffer from a musculoskeletal complaint that limits ADLs.[2] Since diseases of the elderly often times present atypically and are multifactorial in origin,[1] conditions may be recalcitrant and lingering.

This case study describes a 65 year-old female with a recent diagnosis of disc herniation leading to chronic pain in the lower limb that significantly impaired normal function and led to dangerous falls. Simultaneously however she suffered from rheumatoid arthritis for many years duration. She was successfully treated with acupuncture that both abated her pain and allowed her to return to normal daily activities.

BIOMEDICAL PERSPECTIVE

As already mentioned, pain that limits ADLs in the elderly patient is common. Pain is especially associated with diseases of the musculoskeletal system, and degenerative joint disease (osteoarthritis, OA) is radiographically present in 90% of all patients by the age

of 40, making it the most common form of joint disease in all demographics.[3] Primary OA results from long term degeneration of articular tissues while secondary OA occurs as a result of articular injury. Inflammation is absent in OA and deformity is minimal at most in the effected joints. Treatment ranges from palliation with drugs to surgical interventions, although in even treatments for mild to moderate pain such as NSAIDs are frequently associated with adverse events.[4]

Different from osteoarthritis, rheumatoid arthritis (RA) is a less common cause of chronic pain (1-2% incidence in the U.S. population), although one that leads more commonly to long term joint deformity and functional impairment. As RA is an inflammatory disease, unlike in OA patients, general markers of inflammation such ESR are elevated. RA patients are often also serologically positive for rheumatoid factor and may have elevated immune globulins. Aside from blood findings, differential diagnosis of OA and RA is usually obvious. OA patients chiefly have pain in the DIP and PIP joints while RA affects the MCP and writs joints. OA joints when enlarged are bony and hard, while in RA they are spongy and warm on palpation. OA may present unilaterally or bilaterally, or with history of injury, and RA often present bilaterally and symmetrically with insidious onset.[3] RA tends to effect women more than men (3:1), and has typical onset in younger or middle aged patients (age 25 to 50).[3,5] Both OA and RA are managed at first conservatively with NSAIDs, and later with COX-2 inhibitors. Other drugs such as methotrexate or oral corticosteroids may be used in RA patients.[3,5] Both OA and RA as painful conditions may limit ADLs in the elderly patient.

Falls are a special concern of the elderly patient. Accidental injury is a leading cause of mortality in the elderly and falls account for two-thirds of these deaths. Aside from mortality, falls in the elderly lead to impaired function, early nursing home admission, and both self or community imposed restrictions on day-to-day activities. Risk factors for falls can be classified as either extrinsic or intrinsic; extrinsic factors include polypharmacy or environmental factors, and intrinsic factors include lower extremity weakness, poor gait, balance disorders or cognitive impairment for example. Arthritis, because it can lead to poor balance, gait disturbance, or leg weakness is a documented risk for falls.[6] Studies have also shown that impaired lower limb function specifically of RA is a risk factor for falls in the elderly.[7] Symptom management for elderly patients with arthritis or other pain conditions thus becomes an urgent issue not only for the sake of comfort but equally important for reducing the risk of serious injury or impairment.

CHINESE MEDICAL PERSPECTIVE

In Chinese medicine various types of pain and numbness conditions such as arthritis, spondylosis, sciatica, or limb pain fall under the traditional diagnosis of Bi[a] (Impediment). Impediment is listed in numerous chapters of the *Huang Di Nei Jing*

[a] 痺

including *Su Wen* chapters 18, 34, 43 and 63, and *Ling Shu* chapters 6, 19, and 27.[8] In particular, Su Wen Chapter 43 (*Bi Lun*[b]) is devoted to discussing impediment patterns.

Chinese medical theory posits that all pain including impediment pain is related to a lack in free flowing movement of the qi or blood; a traditional statement of fact states "when there is no longer movement or penetration, pain results (bu tong ze tong[c])." According to the *Su Wen, Bi Lun*[9], impediment results when wind, cold or dampness, or a combination of these three, enters the body at the fleshy exterior and blocks the channels.[d] In the same chapter impediment patterns are differentiated according to external evil (e.g. cold impediment, wind impediment or damp impediment), which tissue the evil effects, or which viscera is predominantly effected.

In elderly patients however, mixed patterns usually present with both repletion and vacuity existing simultaneously. Also according to the *Bi Lun*, impediment that lies in the sinews and bones lingers for a long period of time and resists treatment, and when the channels are empty due to stagnation, and the skin is not nourished by construction-ying, numbness will arise as a symptom.[8,9] This corresponds to another statement of fact: "when there is no luxuriance (nourishment), pain results (bu rong ze tong[e])." While it is true that vacuity patterns can thus lead to impediment, according to the *Bi Lun* equally true is that long term impediment at the level of the sinews and bones will damage the liver and kidney viscera. Thus, treatment in these complex cases relies dually on clearing repletion as well as supplementing underlying vacuities.

Contemporary Chinese medicine is well known for its efficacy in treating arthritic conditions, and this fact is well supported by the current evidence base. Acupuncture has been proven in randomized, controlled trials to be effective for pain due to osteoarthritis of the knee[10], and a recent meta-analysis of 33 randomized, controlled trials demonstrated acupuncture's efficacy in treating lumbar pain.[11] While more acupuncture studies have shown efficacy in treating osteoarthritis, other recent well designed pilots have focused on rheumatoid arthritis.

CASE STUDY

Case Description

A 65 year-old female presented to my office in April 2007 with a main complaint of pain in the lumbar region and left knee and leg accompanied by numbness in the same leg. It began four months prior and was diagnosed as a lumbar disc herniation. The pain initially began when she over-exerted herself during cleaning. At her initial presentation the pain in the leg was greater than that in the back with visible swelling present as the

[b] 痺論

[c] 不通則痛

[d] 風寒濕三氣雜至合而為痺也

[e] 不榮則痛

day progresses. She had difficulty standing from a seated position and complained of a general lack of strength that impeded her ability to walk and leading to unintentional falls. Pain was better with sitting or resting.

She also had a preexisting diagnosis of rheumatoid arthritis that was treated for thirteen years with oral prednisone. She reported that she had a constant sense of generalized myalgia worse especially with rainy or damp weather. Her medical history is also notable for several surgeries including an appendectomy, tonsillectomy, cholycystectomy and a resection of a uterine leiomyoma. She suffered a myocardial infarction at age 36 and went through menopause at age 41. The tongue was pink and slightly dusky in color, coatless, and with small vertical cracks in the center. The pulses were deep and slippery bilaterally and especially weak in the right chi position. She generally had a Taiyin body type.[13]

Upon her initial presentation the patient completed a Measure Yourself Medical Outcome Profile (MYMOP)[14] initial form where she identified "leg pain" as her main symptom at a number 4 (0-6 scale with 6 being as bad as the symptom can be). She also identified "joint pain" (number 5 out of 6), and difficulty walking as a result of the main complaints (6 out of 6). Her general sensation of well being in the week prior to her initial visit was a 4 out of 6, with 6 being "as bad as it could be." The patient also indicated that avoiding medication for this problem was "very important." By the time of her initial visit she had already discontinued use of prescription analgesics due to their lack of efficacy for her.

Treatment

Based on her presentation she was diagnosed with Bi-Impediment due to damp-cold accumulation and concurrent vacuity of the kidney yin and yang. Simultaneously there was blood stasis diagnosed on the basis of tongue color and the idea that all enduring disease eventually leads to stasis of blood. Treatment was then focused on supplementing the kidney, expelling damp, warming the channels and stopping pain. The initial phase of treatment (her first 7 treatment over about 6 weeks time) focused more on regulating qi and blood to stop pain, and the subsequent phase of treatment, once pain had been diminished significantly, focused more globally on supplementation.

Acupuncture was used as the major treatment modality and distal points were used exclusively over local points. At most treatments Zhu's Scalp Acupuncture zones lower jiao, lower limbs, and hip were needled; needles used were 1.2 cun, 34 gauge needles supplied by Zhu's Neuro-Acupuncture Center, Inc. All body points were needled to appropriate depth (as defined by Deadman[15] or Tung[16]) with 1.5 cun, 32 gauge needles supplied by Mac Co. In all instanced needles were inserted freehand without the use of guide tubes. Needle stimulation was mostly even technique with simple twirling although scalp points were sometimes supplemented (mostly lower jiao zone during the second phase of treatment) and sometimes drained (all other points and all points during the initial stage of treatment) according to Zhu Mingqing's methods of Jing Qi and Chou Qi.[17] Needles were retained in each treatment for a minimum of 30 to 45 minutes, and scalp needles were occasionally retained for up to 24 hours. The points used in each

treatment were varied based on the patient's presentation and progress, and other points were occasionally added to the prescription to address tangential complaints as they arose. An exemplar treatment from the initial and the second supplementing stages of treatment are presented in Figure 1 and a breakdown of the most commonly used points in each stage is presented in Figures 2 through 4.

EXEMPLAR INITIAL STAGE TREATMENT
Bilateral: Lower Jiao Zone (Zhu) x 3 needles, Gb34, Sp6, Kd3
Right side: Lower Limb Zone (Zhu), SJ10 ah-shi x8 needles

EXEMPLAR SECONDARY STAGE TREATMENT
Bilateral: Shuijin through to Shuitong, Ling Gu, Gb34, Sp6, Kd3

Fig. 1

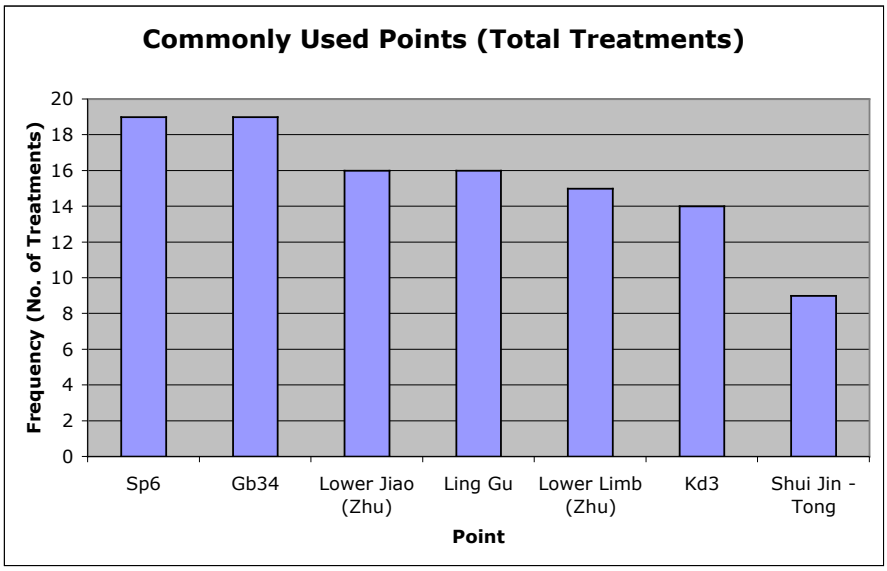

Fig. 2

While acupuncture was the primary modality in the patient's treatment, beginning with the seventh treatment in May 2007 she was given *Qi Ye Lian Zhi Tong Pian*. This formula was given as tablets produced by the Stork Company and supplied by Kamwo Herb and Tea in Manhattan, New York; the patient was instructed to take the tablets on an empty stomach at a dosage of 5 tid.

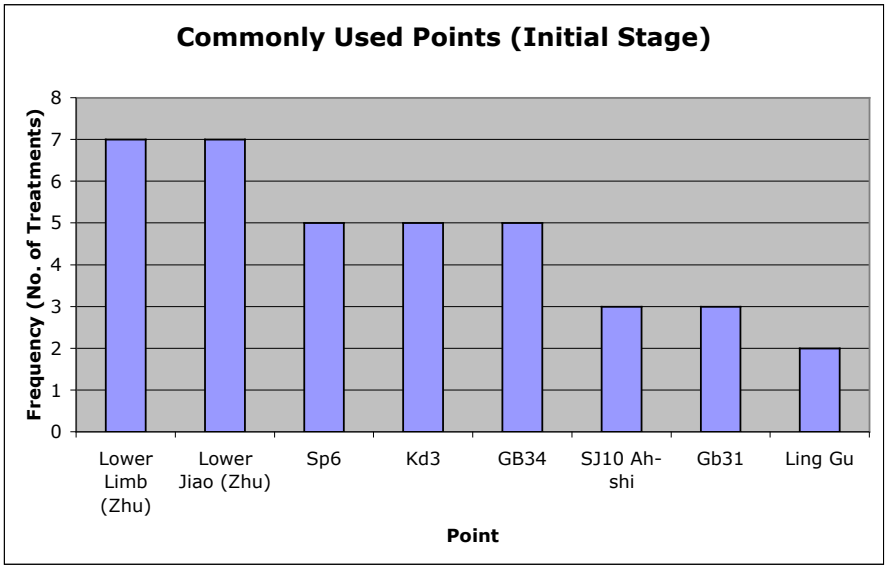

Fig. 3

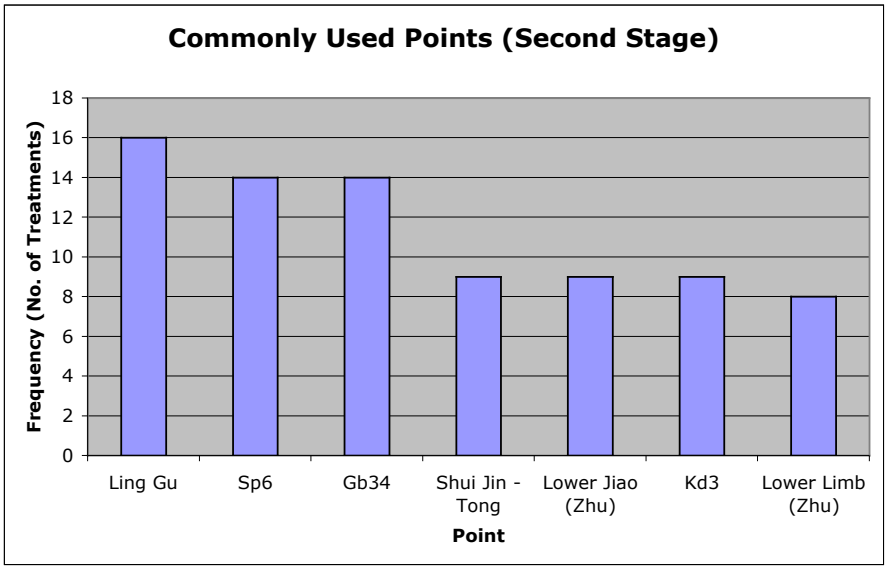

Fig. 4

Outcomes

The patient was given a total of 23 treatments between April and October 2007. She was asked to complete MYMOP initial and follow-up forms over this period of time. Over the period of her treatment the severity of her self-identified main symptoms reduced to a level that was "as good as it could be." Likewise, her general sense of wellbeing improved to "as good as it could be." Initially she indicated on the MYMOP that avoiding medication for this condition was "very important" to her, and since the treatment achieved symptom amelioration without her resorting to medication, her goal was successfully met. Figure 5 plots the progress of her condition as reported on

MYMOP forms over the course of treatment. By the end of treatment the patient reported that she was no longer falling due to her difficulty walking.

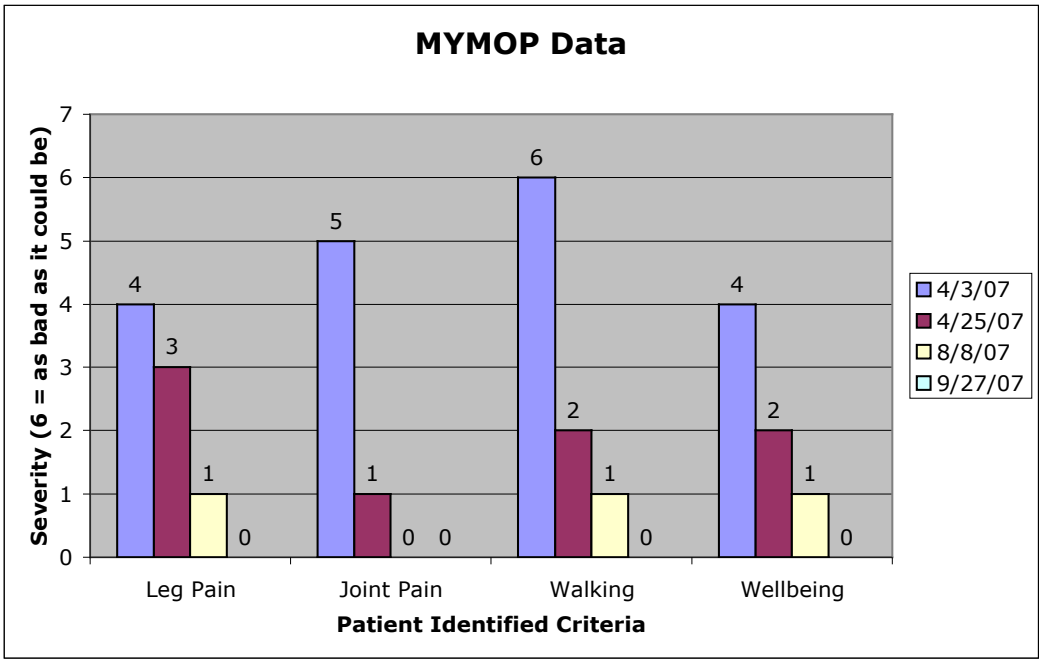

Fig. 5

Discussion

Generally speaking the acupuncture points in this case were used to either treat pain by regulating qi and blood in the effected channels or to supplement the patient's underlying vacuity patterns. *Yanglingquan* (Gb34) is the he-uniting point of the sinews and can be used to treat diseases of the musculoskeletal system. The other points on the leg and arm shaoyang channels, such as *Fengshi* (Gb31) and *Tianjing* (SJ10) move qi and stop pain. Other points, such as *Taixi* (Kd3), *Sanyinjiao* (Sp6), and *Ling Gu* all dually stop pain by regulating the channels and supplement the kidney. *Shui Jin* needled through and through to *Shui Tong* is a special needling method from Tung's acupuncture. These points, located on the chin, work on the idea that the face can be a holographic representation[f] of the entire body with the chin representing the lower jiao[g]. Thus, these points can treat lumbar pain by moving qi and supplementing the kidneys. Zhu's scalp zones used in this case also have a similar effect in both supplementing (the lower jiao zone) and unblocking the channels to stop pain (lower limb zone). The only herbs this

[f] 全息

[g] Note for example that other points on the chin are classically indicated for diseases of the lower jiao, such as *Chengjiang* (Ren24) being indicated for *zheng jia*.

patient took was *Qi Ye Lian Zhi Tong Pian*. This tablet, made entirely of *Qi Ye Lian* (Radix Schefflera arboricola), quickens blood and expels stasis to stop pain.

As previously mentioned, the patient in this case was evaluated with the MYMOP form created by Dr. Charlotte Paterson.[18,19] This form focuses on subjective complaints as well as quality of life markers, and has been validated as a time sensitive measurement tool especially suited for primary care and complementary medicine care. The patient in this case noticed significant improvement not only in subjective pain sensitivity, but also her general sense of wellbeing and her ability to perform activities that were initially limited by her pain. The improvement in walking effectively stopped the patient's episodes of falls that, perhaps more significantly, lowers her continuing risk for other more serious morbidity. Clinical studies have already proved acupuncture's efficacy in treating various arthritic complaints, and this case illustrates that it may also improve longer-term clinical outcomes of problems for which arthritis may be a risk factor, such as falls in the elderly. Future studies could try to look specifically at this issue to see if there is a correlation between acupuncture and Oriental medicine treatment and lowered risk of morbidity and mortality as a result of injury sustained during falls by elderly patients.

Notes

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