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***Treatment and management of Lumbago with
Du Huo Ji Sheng Tang and Yan Hu Zhi Tong Wan – A
Case Study***

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Patient overview

Female. 50 years old. Married. Office worker.

Chief complaint(s)

Lower back pain (Lumbago) for 9 years exacerbated for the last 2 weeks.

History and Symptoms

The patient has been experiencing intermitted pain on her lower back for 9 years. The cause of this was an injury from a car accident. After the accident the patient was taken to the hospital for further tests. The X-ray done on her back shown two prolapsed lumbar discs at L4 and L5. She has then been referred by her GP for 6 Physiotherapy sessions and also been taking Paracetamol 1000mg 4 times/day. After the Physiotherapy, the pain has changed from stabbing pain to a more dull one. Subsequently administering the painkillers for a couple of months, the patient has stopped taking them gradually. Occasionally, when the pain becomes more severe, she takes the prescription again for a couple of days until the pain improves.

Two weeks ago, due to cold-rainy weather her dull pain began to be more of a strong ache in her sacrum. The administration of the painkillers for 5 days had no effect. The initial pain is now accompanied by an intense shooting pain going down on both sides of the legs up to the ankles, neck and upper arms. It is aggravated by prolonged sitting and cold weather. Moving around alleviates the sufferings, although generally the back feels stiff and tense. Scans and other tests for her back have not been repeated since her accident. The GP diagnosed her with Sciatic Pain and prescribed her Codeine 30 mg every 6 hours, but the patient refused to take them. Instead she started Acupuncture.

The patient is very concerned in continuing her office work and feels quite low emotionally.

The constant worrying and the pain have affected her sleep and currently she can only manage to sleep 5h per night. The energy level is normal. Has started a few months ago menopause with little hot flashes.

The patient has no history of major illnesses and is otherwise in good health.

Tongue and pulse

Tongue: enlarged, pale with teeth marks and greasy white coating.

Pulse: Deep, weak.

Clinical observation

Scoliosis from T11 to L5 from right to left can be observed in standing inspection. In motion testing, the patient has limited movement in forward flexion, lateral flexion (worse left side) and sitting rotation. Hip external rotation is limited. Along the Thoracolumbar fascia, the muscle area felt tense (particularly on the left side) and also tender. On palpation, pain could be felt in points like BL25, Yaoyan, BL53, BL54, BL56, GB30, and GB29. Painful Ashi points in the Gluteus medius and Tensor Fasciae latae muscles on the left which elicited intense pain down the back of her leg to GB40. Straight leg raise test was positive (Epstein, 2008).

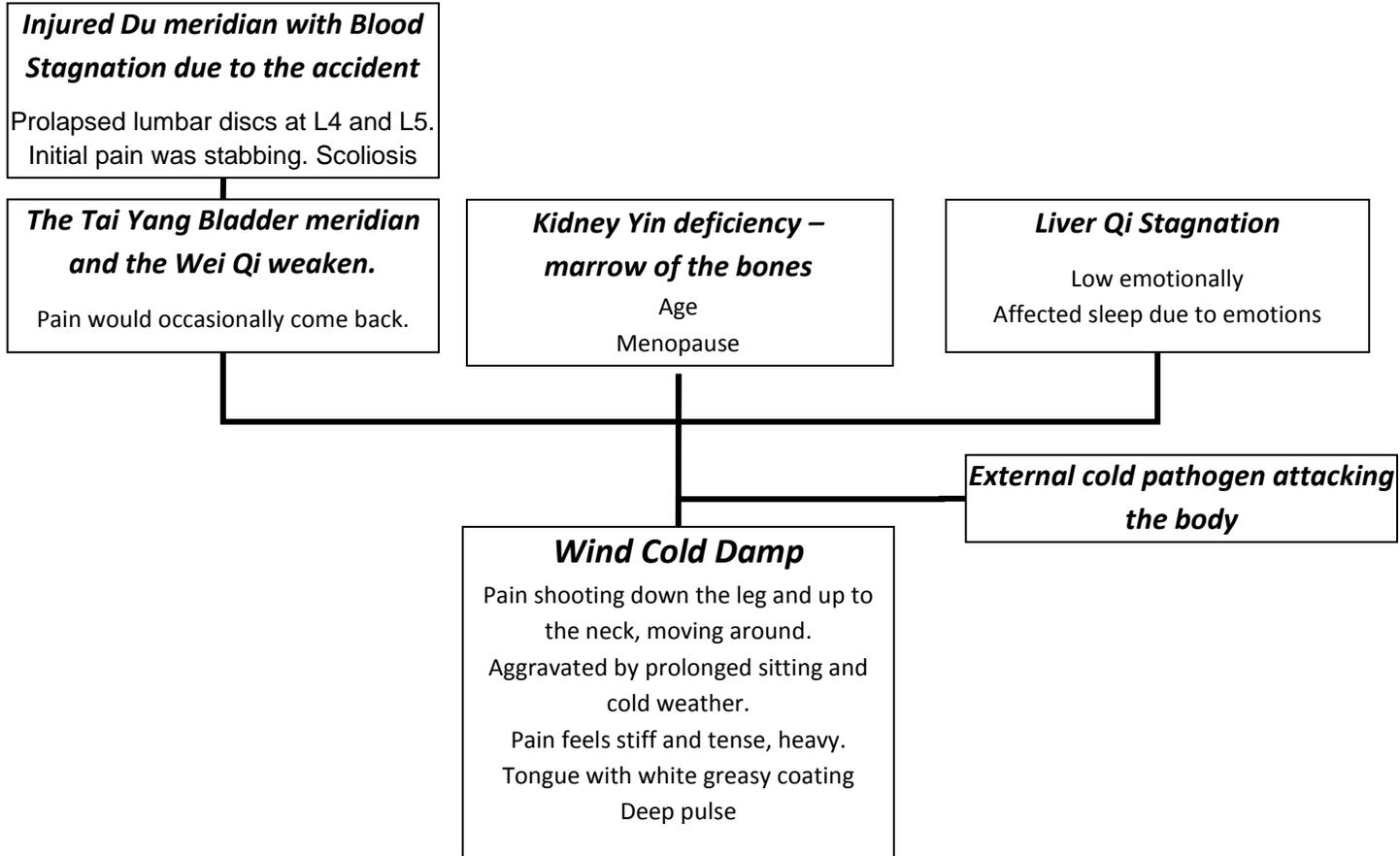
TCM Diagnosis and Syndrome Differentiation

Yao Tong (Lumbago / Lower Backache) - Wind Cold-Damp invading the channels.

Explanation of TCM diagnosis

The patient's Yao Tong condition has a long history and it started from the accident that resulted in the prolapsed discs. Following this injury the Governing Vessel (DU meridian) has been weakened. Intimately connected to Tai Yang and Wei Qi, the impaired Du meridian can no longer help the other systems and problems can easily arise along the course of the channel sinew which became prone to repeated invasions of pathogenic factors. From this, the invasion of Wind- Cold can lead to a stagnation of Qi in the Bladder and Gallbladder meridians (Maciocia,2008). Long term stagnation can lead to Liver and Kidney depletion. In close connection with these two organs is the Spleen, which produces and transforms the Blood and Qi. In this case due to prolonged stagnation and depletion of the two organs, the Spleen is not able to maintain her initial functions and as a result produces Dampness. Although the patient does not have many symptoms of this, the teeth marks and pale tongue constitute an initial sign of Spleen involvement.

The following chart summarizes the mechanism and the symptoms that demonstrate the diagnosis:



Principle of Treatment

Expel the cold pathogen, drain Dampness, warm the channel sinews, activate Qi and Blood circulation and stop the pain.

Base Formulae

Yan Hu Zhi Tong Wan (Yan Hu Suo, Bai Zhi),

Du Huo Ji Sheng Tang

Prescription

Du Huo 9g

Qin Jiao 6g

Niu xi 6g

Xi xin 6g

Sang Ji Sheng 6g

Dang Gui 6g

Fang Feng 6g

Du Zhong 6g

Chuan Xiong 6g

Sheng Di Huang 6g

Rou Gui 6g

Fu Ling 6g

Bai Shao Yao 6g

Ren Shen 6g

Zhi Gan Cao 6g

Administration

Decoction – 1 dose per day for 1 week.

Dang Shen usually replaces Ren Shen, increasing the dosage to 12g (Bensky, 1990; Chen and Chen, 2004)

Modern research has found in *Asarum* species aristolochic acid which is linked with kidney damage and cancer (Hsieh *et al.*, 2010). As a result of this, *Xi Xin*, *Asarum sieboldii*, has been banned in many countries in the EU (Martena *et al.*, 2007). For medical safety *Xi Xin* can be removed from this formula (Jennes and Flaws, 2004).

Yan Hu Zhi Tong Wan – 4-6 pills for 2-3 times a day for 1 week (Chen and Chen, 2004).

Course of Treatment

2nd consultation: 17/ 11/ 2011. The pain decreased in intensity but is still present in the lower back and radiates more to the left leg. Sleep has not improve. There are no other complaints.

Tongue is red with teeth marks and white sticky coating on the back.

Thready pulse.

As the symptoms began to ameliorate, *Du Huo Ji Sheng Tang* will be kept until the following visit, to maintain achieved effects.

3rd consultation: 24 / 11/ 2011. The pain has diminished significantly and does not radiate anymore.

Sleeping is still bad. The patient feels more thirsty and hot.

Tongue is red with teeth marks, thin white coating.

Pulse: thready and a little rapid.

The patient left for a holiday and as a result of this she took a month supply of *Du Huo Ji Sheng Tang* till the next session. She was advised that new symptoms could appear and that she needed a new herbal prescription that will match her new described condition.

Prognosis

The symptoms of the patient have improved. Having positive results for her physical health she can continue with the *Du Huo Ji Sheng Tang* for a month with the supply already provided. As the wind-cold-damp symptoms tend to not have an impact anymore on the patient's wellbeing, new symptoms that will reveal the underlying Liver and Kidney depletion can appear. As a result, new modifications

to her prescription will need to be done. As her condition could show more of a Kidney Yin deficiency, modified Liu Wei Di Huang Tang can become part of her prescription.

Modified Liu Wei Di Huang Wan

Shu Di Huang 24g	Mu Dan Pi 9g
Shan Zhu Yu 12g	Ze Xie 9g
Shan Yao 12g	Bai Shao 9g
Fu Ling 9g	Dang Gui 9g

The first three herbs are used as tonics to invigorate the Yin of Kidney, Liver and Spleen. The other three purgatives clear together heat and Bai Shao, Danguai nourish and enrich Blood (Chen and Chen, 2009).

Discussion

For an injury that caused a chronic lumbago with acute onset pain, it was necessary for a prescription that would have dealt with the new developed symptoms, as well as target the root of the patient's medical issue.

Traditionally used as a Wind-Damp-cold dispelling formula, Du Huo Ji Sheng Tang (DJT), together with Yan Hu Suo Zhi Tong Wan, Qi stagnation and Blood stasis pills, would provide the appropriate prescription for the patient.

In TCM, it is considered a key principle to consult and always to adjust the treatment according to the patient's particular syndromes and illness variations (Chen and Chen, 2009). In this case, the prescription was little changed. The patient has complied very well with the prescribed medication and has had positive results. As a consequence of this, the medicine matched the patient's need and it validated the given diagnosis.

For the wind-cold symptoms like pain moving around, shooting down the leg or up to the neck, Du huo, Fang Feng, Qin Jiao, Sang Ji Sheng were used in the patient's prescription to dispel wind- cold, damp and to relieve the pain. For tonifying the Liver and Kidney, to strenghtens the bones and tendons, Du zhong and Niu xi were used. They also helped with improving her low mood that was causing lack of sleep and for her Kidney Yin deficiency. Dang Sheng, Fuling, Zhi Gan Cao tonify her Qi and strengthen the Spleen. Although her injury is quite old, there is still some stasis that are blocking the sinews channels. As a result of this, Yan Hu Suo, Bai Zhi, Rou Gui are used for removing Blood Stasis and Qi stagnation, meanwhile Dang Gui, Chuan Xiong, Sheng Di Huang, Bai Shao Yao nourish and invigorate the blood.

According to Shih *et al.*, 2012 cohort studies of randomly sampled cases from Taiwan National Health Insurance Research Database have proved that the most frequently prescribed formula for treating osteoporosis has been Du Huo Ji Sheng Tang. Despite this fact, unfortunately there is still few controlled trials in English and even fewer free articles available, which narrows down its popularity in the Western medical world.

In TCM, osteoarthritis is a combination of Wei and Bi Syndrome, which is in quite close relationship with the TCM diagnosis given to the patient.

A clinical trial in Taipei from 2005, 68 patients with osteoarthritis in the knee where treated with DJT for 4 weeks (Lai *et al.*, 2007). The results of this piece of research was that the given formula reduced pain and stiffness, improved physical functioning, but it was less affective in treating aversion to cold and flaccidity.

In *vivo* experiments, on osteoarthritis rabbits the significant therapeutic effect of Du Huo Ji Sheng Tang was associated with inhibition of VEGF and HIF- 1alpha expression (Chen *et al.*, 2009).

Hayashi *et al.*, 2007 have experimented on a dog with intervertebral disk disease at C3-C4 and dorsal extradural compression at C1-C2 and C3-C4 with electro-acupuncture and DJT. The motor rehabilitation of the dog was accomplished and there were no recurrent symptoms. This demonstrated that the formula can have very good results in resolving musculoskeletal problems.

Trying to find the answer for the specific component that can provide pain free results in the prescribed formula of the patient, Wei *et al.*, 1999 have evaluate the effects of Du Huo and Yan Hu Suo on a rat model of inflammatory hyperalgesia. The outcome of this research was that Du Huo is an effective herbal agent in attenuating persistent inflammation and hyperalgesia in rats.

Conclusion

The patient has had good result of the herbal prescription that was given to her. The few reports and studies available do not provide sufficient scientific based evidence to demonstrate the effectiveness of Du Huo Ji Sheng Tang and Yan Hu Suo Zhi Tong Wan.

Further prospective controlled investigations in Chinese herbal medicine in the management of disease is needed to more accurately state, like is been in the case of this clinical study, that herbal prescriptions can produce increasingly significance improvement to the patient's lower back recovery.

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