

# An Integrated Conventional and TCVM Approach to the Treatment of Suspected Cervical Disc Disease in a Weimaraner Dog

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## ABSTRACT

A 10-year-old 26.5-kg spayed female Weimaraner was presented for decreased ambulation and collapsing due to cervical intervertebral disc disease. Radiographs taken by the referring veterinarian revealed a narrowed space between the 6<sup>th</sup> and 7<sup>th</sup> cervical vertebrae, as well as ventral spondylosis at this location and between the 1<sup>st</sup> and 2<sup>nd</sup> lumbar vertebrae. Despite being placed on glucocorticoids, glucosamine and chondroitin, her clinical signs had worsened. Acupuncture and *TuiNa* therapy were instituted in conjunction with vitamins and muscle relaxants. These therapies improved her clinical signs but she still remained painful. When the Chinese herbal formula, Cervical Formula<sup>a</sup> was initiated she greatly improved. This case demonstrates that the integration of Traditional Chinese Veterinary Medicine and conventional medicine can be useful to help a patient return to normal function.

**Key words:** Intervertebral disc disease, acupuncture, *TuiNa*, Chinese herbal medicine, Traditional Chinese veterinary medicine, dog

A 10-year-old 26.5-kg spayed female Weimaraner was presented as a referral from another veterinarian for decreased ambulation due to cervical intervertebral disc disease. One year prior to presentation, the dog developed weakness in the pelvic limbs which had improved with glucocorticoids. Two weeks prior to presentation she had an acute episode of quadriparesis with difficulty ambulating. Radiographs taken by the referring veterinarian revealed a narrowed space between the C6 and C7 vertebrae and ventral spondylosis deformans at the same site and at L1-L2 vertebrae. The dog had been placed concurrently on dexamethasone (0.009mg/kg, PO, q 12 h), prednisone (0.38 mg/kg, PO, q 12 h), famotidine<sup>b</sup> (0.38 mg/kg, PO, q 12 h), and a multi-vitamin.<sup>c</sup> The referring veterinarian commented to the author in a personal communication that she had good success using two types of oral glucocorticoids concomitantly for these patients. The author does not agree with this protocol and

wanted the dog taken off one of the medications immediately. She was also taking a generic human glucosamine (18.9 mg/kg, PO, q 12 h) and chondroitin (15.1 mg/kg, PO, q 12 h) product.<sup>d</sup> Although she had responded to glucocorticoid treatment (prednisone 10 mg bid and dexamethasone 0.25 mg bid together) in the past, she was not responding as well after this episode.

At the time of referral, the client reported that the dog had improved some from the onset of this episode, but was still slipping on floors. She was ambulatory but was quadriparetic and ataxic, particularly in her thoracic limbs, with the left weaker than the right. The dog also had prior elevation of both BUN and creatinine and had been placed on Hill's Prescription Diet k/d,<sup>e</sup> which she ate well. There was no vomiting, diarrhea, coughing or sneezing, but she was polyuric and polydipsic. This was thought to be due to the glucocorticoid treatment. She was current on vaccines and heartworm preventative medication.

On physical examination, the dog was quiet, alert and responsive. Her hydration status was adequate, her mucous membranes were pink and she was slightly thin in build. She had a bilateral yeast otitis and her nose was dry. Her heart and

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lungs ausculted normal and abdominal palpation was normal. All peripheral lymph nodes were normal but a walnut-sized subcutaneous mass was present on the left side of her abdomen. She had severe cervical pain and actually collapsed on all four limbs when her head was raised. She also had mid-back pain, stood base wide in the pelvic limbs, and had decreased proprioception on the right pelvic limb.

Based on clinical signs and radiographic changes, this dog was diagnosed with cervical intervertebral disc disease. Obvious signs of diskospondylitis were not seen on radiographs so this was ruled out. Wobbler syndrome or caudal cervical malformation-malarticulation can be seen in this breed and would be a possibility.<sup>1</sup> An MRI, CT and/or a myelogram would be needed to truly diagnose this condition as well as to rule out other possible spinal cord disorders such as neoplasia and meningomyelitis.<sup>2</sup>

On the Traditional Chinese Veterinary Medical (TCVM) examination, the dog was observed as friendly, but reserved, and obeyed the clients' commands very well. She appeared to have a Metal constitution. Her Shen was good. Her tongue was dark pink and her pulse was weak on the left in the Kidney *Yin* position. There was sensitivity at BL 21, the Stomach Back *Shu* association point. The owners said that she preferred soft bedding. They also said that the dog's clinical signs were not worse in any weather change, such as dampness, nor was there a difference in her behavior in the nighttime versus daytime.

The changes seen on radiographs, the localized cervical pain, and ataxia would correspond to pattern of Cervical *Qi* and Blood Stagnation.<sup>3,4</sup> This probably started as *Qi* Stagnation in the channels which then led to Blood Stagnation.<sup>5</sup> *Qi* Stagnation occurs when the flow of *Qi* is blocked and can be caused by emotions, food stasis, trauma and the Six Pathogens.<sup>5</sup> One of these pathogens, Cold, may have played a role in this dog's condition since the clinical signs started in the winter when Cold predominates.<sup>5</sup> The dog did not seem to enjoy (but tolerated) the *TuiNa* or massage therapy, also proving that her condition is more of an excess pattern of Stagnation.<sup>5</sup> Her tolerance was probably related to her Metal constitution.

Moreover, this dog had some evidence of Kidney *Yin* Deficiency. She had a history of increased kidney function tests, a dark pink tongue, and a weak pulse in the Kidney *Yin* position. She had a history of back pain which can also be due to Kidney *Yin* deficient Boney *Bi* syndrome (thus the spondylosis in her lumbar vertebrae).<sup>3,6</sup> To further support *Yin* deficiency the dog also showed some signs of dryness such as a dry nose and increased thirst and urination. Some of these signs may have been due to or were exacerbated by the glucocorticoids that she was receiving, which are warming in nature and can create a *Yin* Deficiency.<sup>6</sup> Additionally, the weakness in both thoracic and pelvic limbs, as well as the dog's thin build, support evidence of a *Qi* Deficiency.<sup>5</sup> The first goal of treatment would be to decrease the Cervical *Qi* and Blood Stagnation. This would be accomplished by moving *Qi* and invigorating Blood.<sup>3</sup> Nourishing Blood is also needed to prevent it from becoming damaged by this invigoration.<sup>3</sup> Blood also needs to be nourished because Stagnant Blood can lead to Blood Deficiency since new blood will not be produced.<sup>2</sup> Blood Deficiency could then create a *Qi* Deficiency by failing to carry *Qi*.<sup>5</sup> *Qi* Deficiency can then lead to further Blood Stagnation by failing to impel Blood circulation.<sup>5</sup> Moreover, *Qi* Deficiency can lead to *Qi* Stagnation as well as Blood Deficiency.<sup>5</sup>

The channels themselves could be invigorated since this is one area where the stagnation is occurring. In this case, the Bladder and Governing Channels would be the most important.<sup>7</sup> The *Yang Qiao* Channel, an extraordinary channel which controls motility of the pelvic limbs and affects the head and neck is also an important channel to treat.<sup>5,8</sup> Additionally, the invasion of Cold could have led to Stagnation of *Qi* and Blood, so treatment should include warming of the channels.<sup>5</sup>

Since this patient was an older dog with a chronic problem, it is often prudent to nourish the Kidney.<sup>5,8</sup> The Kidney should also be nourished because it controls the bones and marrow, which generates the spinal cord and intervertebral discs, and this is the location of this dog's disease.<sup>2</sup> Moreover, this dog had signs of Kidney *Yin* Deficiency and *Qi* deficiency, which is another reason to nourish the Kidney *Yin* and to tonify *Qi*. A Kidney *Yin* Deficiency combined with Wind-

Damp invasion can also lead to a type of Bony *Bi* Syndrome, resulting in spondylosis and intervertebral disc disease.<sup>3</sup> Thus, Wind-Damp also needs to be expelled.<sup>3</sup> Because there is a Kidney Deficiency, the mother of Kidney, namely Lung should also be tonified.<sup>5</sup> Furthermore, the patient's constitution is Metal (Lung) which is another reason to tonify Lung and also its mother, the Spleen.

Weekly acupuncture treatments were instituted using approximately twelve acupuncture points in each session which varied with changes in the clinical signs, tongue and pulses. These included the following points: GV-14 (local point for cervical pain), GV-20 (local point for cervical pain, calming), *Bai-hui* (lumbar pain, pelvic limb weakness), GB-20 (local point for the cervical region, eliminates Wind, point on *Yang Qiao* channel which affects motility), *Jiu Wei* points at C6 and C7 (local points for cervical pain (*Jiu Wei* points are located ½ cun from the dorsal midline in the cervical region; there are 9 points between BL 10 and 11), BL-10 (local point for cervical pain, expels External Wind), BL-11 (influential point for bone), BL-17 (influential point for Blood, moves Blood), BL-23 (*Back shu* point for Kidney, tonifies Kidney *Qi* and Yin, helps back pain and intervertebral disc disease), BL-62 (opens *Yang Qiao* channel, helps ataxia, helps body pain), LI-4 (master point for face, helps body and cervical pain, moves *Qi*, tonifies *Qi* and *Yang*), LI-10 (tonifies *Qi* and Blood, especially tonifies upper part of body), SI-3 (opens Governing channel and decreases Wind in that channel, helps cervical pain, can affect the whole spine, if paired with BL-62), LU-7 (master point for head and caudal cervical region), *Lao-zen* (influential point for the cervical region), ST-36 (tonifies *Qi* and Blood of whole body), SP-6 (tonifies *Qi*, *Yin* and Blood, especially for Kidney, Liver and Spleen, clears Damp), and KID-3 (*Yuan*/source point for Kidney, tonifies Kidney *Qi* and *Yin*, strengthens back, Shu-stream point helps Blood Stagnation and pain).<sup>3,5,7</sup>

Not all of these points were used in each treatment session. Electroacupuncture and dry needles were used but she seemed worse after electroacupuncture so dry needles were used in subsequent treatments. The dry acupuncture needles were kept in for 15 to 20 minutes and were manipulated at least twice in each session.

*TuiNa* techniques were also utilized in each session and some of these were taught to the owners to perform at home daily. These included *Mo Fa*, *Ca Fa*, *Nie Fa*, and *Rou Fa*, which were to be performed on her neck and down her spine. It was also recommended to start Vitamin E (15.9 mg/kg, PO, q 12 h) and to taper and then discontinue the dose of the prednisone but continue the dexamethasone. A centrally-acting muscle relaxant, methocarbamol<sup>10</sup> (9.4 mg/kg, PO, q 8-12 h) was started on the second treatment date because the dog was exhibiting moderate muscle spasms at home.

After the second treatment, using electroacupuncture (2 V constant amplitude, 20 Hz, 9 minutes continuous wave, 6 minutes intermittent wave), the dog's clinical signs worsened and she was raising her right thoracic limb, possibly exhibiting a root signature sign.<sup>1</sup> On the third visit, MSM or methylsulfonylmethane (18.9 mg/kg, PO, q 24 h), an anti-inflammatory nutraceutical<sup>11</sup> was recommended and a Chinese herbal formula, *Jing-Tang's Cervical Formula*, was prescribed (Table 1). Cervical Formula was designed to treat Cervical Qi and Blood Stagnation.<sup>12</sup> The formula activates Blood, moves *Qi*, dissipates Stagnation, reduces pain, and directs the energy to the neck region via transporter herbs.<sup>12</sup> While there are other herbal formulas designed specifically for *Bi* Syndromes that would encompass Kidney *Yin* tonifying herbs, the herbal formula chosen, Cervical Formula, seemed to better target her area of pain and stiffness. This is because the formula has three herbs, *Ge Gen* (Radix Puerariae),<sup>13-16</sup> *Chuan Xiong* (Radix Ligustici Chuanxiong),<sup>4,14,16</sup> and *Qiang Huo* (Rhizoma et Radix Notopterygii),<sup>14,16,17</sup> which bring the energy of the formula to the upper parts of the body, including the neck. The formula shares some common herbs with an older formula, *Ge Gen Tang* (Kudzu Decoction),<sup>f</sup> which was used to disperse Wind-Cold symptoms which included a stiff neck and headache.<sup>13,18</sup> The newer formula adds more herbs to nourish and activate Blood in order to decrease the Blood Stagnation and pain. Thus, this formula is better suited to treat a deeper problem localized in the neck such as that caused by intervertebral disc disease. There are also more herbs to clear Wind-Damp-Cold. In the intervening time, the dose of the dexamethasone (0.02 mg/kg, PO, q 12 h) was increased.

**Table 1:** Herbal components of Cervical Formula <sup>4,6,12-17</sup>

<b>Name of Herb Pinyin</b>	<b>Name of Herb Pharmaceutical (Common)</b>	<b>Percentage in Formula</b>	<b>Actions of Herb</b>
<i>Ge Gen</i>	Radix Puerariae (Pueraria)	15	Clears Wind-Heat, directs energy upward to the neck Releases muscles, helping stiff neck or upper back Draws fluid to affected area and releases exterior
<i>Bai Shao</i>	Radix Paeoniae Lactiflorae (Paeonia)	10	Nourishes Blood Smooths Liver and stops pain
<i>Ji Xue Teng</i>	Radix et Caulis Jixueteng (Millettia or Spatholobus)	10	Nourishes and activates Blood, Invigorates channels, Decreases pain due to obstruction of channel, Relaxes sinews
<i>Gui Zhi</i>	Ramulus Cinnamomi Cassiae (Cinnamon twig)	10	Warms channels, Disperses Cold, Decreases Wind-Damp-Cold obstruction and relieves pain
<i>Dang Gui</i>	Radix Angelicae Sinensis (Angelica)	10	Nourishes and activates Blood, Disperses Cold Decreases pain due to Blood Stasis, Helps Blood Deficiency with Wind-Damp obstruction
<i>Chuan Xiong</i>	Radix Ligustici Chuanxiong (Ligusticum)	10	Regulates and promotes movement of Qi, Directs energy upward and expels Wind, Activates Blood and relieves pain
<i>Mu Gua</i>	Fructus Chaenomelis (Chaenomeles)	10	Moves Qi and dissipates Stagnation, Decreases pain, Relaxes sinews and unblocks channels Helps Bi syndromes due to Damp
<i>Wei Ling Xian</i>	Radix Clematidis (Clematis)	10	Moves Qi and dissipates Stagnation, Decreases pain at superficial levels by unblocking channels Dispels Wind-Damp, Releases exterior
<i>Gan Cao</i>	Radix Glycyrrhizae Uralensis (Glycyrrhiza or Licorice)	5	Harmonizes formula, Tonifies Spleen Qi Relieves muscle spasms and pain
<i>Qiang Huo</i>	Rhizoma et Radix Notopterygii (Notopterygium)	10	Directs energy upward to help neck, Releases exterior, Disperses Cold, Unblocks painful obstruction due to Wind-Damp-Cold, Decreases pain in upper body, Guides Qi to Greater Yang and Governing channels, Helps superficial areas of body

Cervical Formula in a powder form was thus started during the 4<sup>th</sup> week of treatment at 1 gram twice daily (37.7 mg/kg, PO, q 12 h) for three days, then 2 grams twice daily (75.5 mg/kg, PO, q 12 h). At this time, the dexamethasone dose was slowly reduced to once daily. At the 5<sup>th</sup> acupuncture session (one week after the herbal formula was started), the dog was a little less painful but still raised her right thoracic limb occasionally. After questioning the owners, it was determined that they had only given half of the prescribed herbal dosage. The herbal dosage was increased appropriately and the dexamethasone dosage was decreased to every other day. One week later, the dog was still showing resistance to manipulation of her neck and a root signature sign, but walked a little better. The dexamethasone was completely stopped at this time. After 3 weeks of taking the Chinese herbal formula, the dog was walking much better, was less tender on neck manipulation and was only having occasional difficulty using her left thoracic limb. Her proprioception was a little slow on this limb and she exhibited stiffness moving her head to the left side. Aquapuncture (injecting 0.3-0.5 cc per acupuncture point) using the homotoxicologic formula Traumeel<sup>®</sup> (2.2 cc) mixed with vitamin B-12 (1.0 cc) and sterile water (1.0 cc) was thus initiated.

One week later, on the 8<sup>th</sup> acupuncture session (4 weeks after the Chinese herbal formula was started), the dog was not holding up the thoracic limb and was not walking with her head down. She was less tender on neck manipulation but had some stiffness moving her head to the left. It was recommended to stop the methocarbamol at this time since she no longer had muscle spasms. On the 9<sup>th</sup> visit, her proprioception was normal, but she had pain at the 4<sup>th</sup> cervical vertebra, and had stiffness moving her head to the right side. The dosage of the Cervical Formula was thus increased to 2.5 grams twice daily (94.3 mg/kg, PO, q 12 h). One week later, she was a little stiff moving her head to the right side but was not painful. Her proprioception was still normal. She was running and jumping at home, and according to the owner, she was able to manipulate her head under a fence. Her left shoulder was painful on this visit, and the owner noted that she was worse that particular week on damp days.

On the 11<sup>th</sup> treatment session, the dog was

much improved but was tender in both shoulders and did not want to bear full weight on her right thoracic limb. One week later, the owner felt that she was doing well, running and playing; only on one day of that week did she raise up the thoracic limb. Her neck was neither painful nor stiff, and had a good range of motion. At this time, the Cervical Formula dosage was weaned down and was finally stopped six weeks later. Acupuncture treatments were decreased in frequency from weekly to monthly and then quarterly. Currently the dog is doing well but had some cervical stiffness a few times in the past 2 ½ years, which responds well to acupuncture. She has never become as severe as she was on original presentation.

This case demonstrates how integration of conventional and Chinese medicine can effectively be used to treat cervical disc disease and help a patient return to normal function. For this dog, three branches of TCVM were utilized. These were acupuncture, *TuiNa* and Chinese herbal medicine. Although many patients with Cervical *Qi* and Blood Stagnation will respond to just acupuncture and *TuiNa*, the addition of Chinese herbal therapy seemed to result in recovery.

<sup>a</sup> Cervical Formula™, Dr. Xie's Jing-Tang Herbal, www.tcv.com.

<sup>b</sup> Pepcid AC®, Consumer Pharmaceuticals Co, Fort Washington, Pa.

<sup>c</sup> Pet-tabs®, Pfizer Animal Health, Exton, Pa.

<sup>d</sup> Glucosamine Chondroitin Tablets Double Strength, CVS Pharmacy, Inc, Woonsocket, RI.

<sup>e</sup> Hill's Prescription Diet® k/d®, Hill's Pet Nutrition Inc, Topeka, Kan.

<sup>f</sup> Kudzu Decoction, from Shang Han Lun (Discussion of Cold-Induced Disorders) by Zhang Zhong-Jing.

<sup>g</sup> Traumeel®, Heel Inc, Albuquerque, NM.

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## TCVM NOTES

### Is a Kidney Excess Pattern Possible?

If there is no *Yin*, there must be no *Yang*; If there is no Deficiency, then there is no Excess. However, some things are relatively more *Yang* and others more *Yin*. Younger is more Excess while older is more Deficient. The Liver is more Excess while the Kidney is more Deficient. Kidney Excess can occur in some rare cases (such as acute onset of a kidney infection) but this is more often referred to as Bladder Excess (Damp-Heat). The Kidney stores Jing, which must be preserved and should never be damaged. To make it easier to learn and practice Chinese herbal medicine, TCM dogmas state "the Liver *Qi/Yang* is almost never deficient, and Kidney is almost never excess". This may be the reason that there is no herbal formula recommended to either tonify Liver *Qi/Yang* or clear Kidney Excess.

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