Abstract

A six-year-old Domestic Short Hair castrated male presented for herbal treatment of chronic rhinitis. His condition had been lifelong. Previous nasal biopsy determined chronic active plasmacytic and neutrophilic rhinitis and periodic cultures revealed many resistant infections. Periodic treatments with enrofloxacin yielded the only positive results, but were associated with significant risk. Acupuncture was effective but implausible. Traditional Chinese Medicine was employed and Spleen Qi Deficiency with resultant Damp Heat was diagnosed. San Ren Tang, or Three Seeds Decoction, was prescribed and yielded dramatic improvement within one month.

The improvement has sustained to date. This case report demonstrates the positive effects of Chinese Herbal Medicines in a condition where there are few effective Western treatment options available.

History

A six-year-old neutered male Domestic Short Hair presented to an integrative private practice with a lifelong history of chronic rhinitis. He was adopted as a kitten from a shelter and had bilateral purulent nasal and ocular discharge when taken home. Physical examination was normal otherwise. The primary care veterinarian had originally prescribed amoxicillin with clavulanic acid and antibiotic ocular ointment for 14 days. Minor improvements were noted in the amount of discharges. The cat’s energy level and quality of life otherwise continued to be normal. Blood work, skull and chest radiographs were normal. Castration was performed without event. Conjunctival herpes and Chlamydia cultures were negative. A nasal culture was not done at that time due to lack of equipment. Empiric courses of orbifloxacin, clindamycin and enrofloxacin yielded mild, none and marked improvements, respectively. Month-long courses of enrofloxacin every few months were implemented when the purulence showed evidence of epistaxis. Nasal administration of triple antibiotic drops with dexamethasone did not improve clinical signs.

One year later, physical examination was the same. The cat was of normal stature, energetic and within normal limits other than the nasal discharge, ocular discharge and respiratory noise. An endoscopic examination, flush and culture were performed of his nasal passages.

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showed inflammation, mucopurulent discharge and a culture resistant to all oral antibiotics available at the practice, except for enrofloxacin. Consultation with a human otolaryngologist led to an attempt at a nasal steroid spray. This yielded only epistaxis and much agitation. Trial of oral prednisone resulted in epistaxis and severe drying of the nose.

Acupuncture required sedation due to the cat’s fractious attitude but did yield several days’ reduction in upper respiratory noise and mucopurulent nasal and ocular discharge. Due to the sedation, however, it was impractical to do acupuncture frequently. Acupuncture points used included GV20, GV14, BaiHui, LU1 and BL13. See Table 1 for special qualities and indications detailed for each point. (Note: having looked at this case again, I would have used points directed more at tonifying the Spleen and draining Damp. These points would have included BL20, ST40, SP6 and are included in Table 1. Further discussion on Spleen tonification and Damp draining follows.)

Two years later, another endoscopy with nasal flush was performed, again yielding resistant culture results. A biopsy showed neutrophilic and plasmacytic rhinitis. The condition was likely an allergy plus chronic infection. Since his quality of life was never affected, antibiotics were to be used as necessary. Over the years, the cat had two episodes of sterile cystitis that resolved without treatment and, very occasionally, soft stool. His diet was always Natural Choice Weight Control that was measured carefully as he had a tendency towards weight gain.

Chronic rhinitis in cats is prevalent yet has few effective treatment options. In an investigation of nasal disease in the cat at the University of Bristol in 2004, a retrospective study was undertaken of 77 cats presenting for nasal disease. Chronic rhinitis accounted for 27, or 35%, of cases. With these, clinical signs included nasal discharge, sneezing, upper respiratory tract noise, ocular discharge, weight loss, lymphadenopathy, cough, respiratory tract dyspnea, facial distortion and lethargy. Diagnostic procedures included nasal radiography, endoscopy, nasal flush with culture and cytology. The only mode of treatment was antibiotic therapy, used in 22 (81%) of the cases. Amoxicillin and clavulanic acid was used for 16 of the cats. Of those available for follow up, 11 cats still had clinical signs (five of which were treated periodically) and only three had resolution of clinical signs (Henderson et al 2004). This illustrates the few options and remarkably poor treatment success for this relatively common feline predicament.

Chinese Herbal Medicine has been studied regarding chronic respiratory disease in humans. A 2003 randomized, placebo-controlled study was conducted to assess whether the common treatment of Chinese herbal therapy for seasonal allergic rhinitis in humans was truly effective. A Traditional Chinese herb was used and it, consisted of 18 single herbs. The herb was evaluated based on a Five Point Scale as well as a Quality of Life Questionnaire. After eight weeks, the severity of nasal and non-nasal symptoms was significantly less in the active treatment group compared to the control group. Marked improvement rates were 60.7% and 29.6% for active and placebo respectively (Xue et al 2003). This is one study in many reflecting firstly, that herbal treatments are commonplace for human
rhinitis and secondly, that the treatments are often very effective.

Physical Exam
Three years later, the cat was evaluated again from a Chinese Medicine perspective. His personality was vocal and social. He got on well with the other dogs and cats in the home. He was always hungry, his thirst was normal. Bowel movements were regular, with an occasional soft stool. Urination, other than two incidents of stranguria and hematuria, was normal. He had a tendency to urinate inappropriately (in close proximity to the litterbox) if the litterbox was not cleaned daily. He had no stiffness or trouble sleeping. He sought warm areas to sleep in and preferred cushioned beds, except when it was very hot. He sneezed often and a brown- or red-tinged mucoid discharge would be evacuated.

On physical exam, his body condition score was 4/5. His coat was silky and smooth; he was energetic and very vocal. He had yellow-brown crust over both nares and very loud upper respiratory noise on inspiration. His eyes displayed yellow-brown tinged epiphora bilaterally. His inner pinnae had moist, brown discharge bilaterally. Everything else was within normal limits. His tongue was thick, bright pink, scalloped and wet. His pulse was quick and slippery. Active points were BL20 and BL23. My Chinese diagnosis at that point was Spleen Qi Deficiency with resultant Damp Heat accumulation. Table 2 illustrates clinical signs correlated with Traditional Chinese Medical diagnosis.

Treatment
The herbal formula chosen for treatment was San Ren Tang, Three Nut or Three Seeds Decoction. It has been described as one of the quintessential cat formulas of veterinary herbal medicine, as well as a main formula to address the ubiquitous problem of Damp Heat in small animals. San Ren Tang was developed to treat Damp Heat due to poor Spleen function. The formula is designed for patients who show signs of Damp but are not yet showing pronounced Heat signs. Heat signs include pruritus, agitation, hematuria and mild fever or heat intolerance. Damp signs include greasy coat, cough (moist or productive), snoring/reverse sneezing, profuse eye discharge, chronic vomiting, dysuria, crystalluria, chronic conjunctivitis and heat intolerance. Diseases treated in veterinary medicine include the following: asthma, nasal congestion, wheezing, snoring, canine reverse sneezing, constipation, recurrent cystitis, inappropriate urination, urolithiasis, cystitis, weight gains, chronic vomiting, inflammatory bowel disease, gastritis, seborrhea oleosa, allergic dermatitis and fungal otitis externa (Marsden 2006).

Biomedical aspects of the individual herbs comprising Three Seeds Decoction have been studied in detail. Apricot Seed, or Xing Ren (pictured below), has been shown to be an antihypertensive, antitussive and antiasthmaic, as well as antineoplastic herb. Coix Seed, or Yi Yi Ren, has proven...
effects on muscles (inhibitory on skeletal, stimulating on smooth muscle of uterus, varied on intestines) with a sedative, analgesic, antipyretic and possibly antineoplastic action. Talcum, or Hua Shi, when applied externally, absorbs large amounts of chemicals and toxins to protect against skin irritation. When ingested, it protects the stomach lining from gastritis, suppresses nausea and vomiting, and reduces absorption of toxins through the intestinal tract.

Pinellia, or Fa Ban Xia, has antitussive, antiemetic and antineoplastic properties. Cardamom, or Bai Dou Kou, has the benefits of increased secretion of gastric acid, increased intestinal peristalsis and

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Table 1.

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<tr>
<th>Acupuncture Point</th>
<th>Special Qualities</th>
<th>Indications</th>
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<tbody>
<tr>
<td>GV20</td>
<td>Clears mind, tonifies Spleen, good for Liver Fire, Liver Yang Rising and Liver Stagnation, Yang Deficiency &amp; Collapse, Blood Exhaustion, Dispels Wind</td>
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<tr>
<td>GV14</td>
<td>Dispels Wind and Heat, Tonifies Wei Qi, Opens all the Yang Channels, Tonifies or Drains Yang</td>
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<tr>
<td>Lumbosacral point/Yao BaiHui</td>
<td>Sciatica, Pelvic Limb Disorders</td>
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<tr>
<td>LU1</td>
<td>Lung Alarm Point</td>
<td>Diagnostic, Respiratory, Cough, Bronchitis, Asthma</td>
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<tr>
<td>BL13</td>
<td>Lung Association Point</td>
<td>Dispels Wind, Wind Cold, Helpful in Lung Disorders and Dry Skin</td>
</tr>
<tr>
<td>BL20</td>
<td>Spleen Association Point</td>
<td>Drains Damp, Tonifies Qi and Blood</td>
</tr>
<tr>
<td>ST40</td>
<td>Luo Point, Influential Point for Phlegm</td>
<td>Transforms and Disperses Phlegm</td>
</tr>
<tr>
<td>SP6</td>
<td>Master Point for the caudal abdomen and pelvic disorders</td>
<td>Disperses Damp, Damp Heat, Tonifies Qi, Blood and Yin, tonifies Spleen, Useful for Poor Shen</td>
</tr>
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(Marsden and Wynn 2003)
decreased vomiting. Lopatherum, Dan Zhu Ye, is both antipyretic and diuretic in this combination. Magnolia Bark, or Huo Po, has been shown to cause decreased secretion of gastric acid and to reduce contractions of duodenum, it is a mild anticoagulant, CNS suppressant, and an antihypertensive. It has a stimulating effect on respiration at low dose, inhibiting at high dose and is an antibiotic (*Streptococcus mutans*, *Staphylococcus aureus*, *Bacillus subtilis*, *Diplococcus pneumoniae*, *Bacillus dysteneriae*) (Chen 2004).

The biomedical aspects of the individual herbs show why they would be useful in chronic respiratory and gastrointestinal diseases, in particular.

The formula was obtained as a tincture from Kan Herb Company. The dose was 0.2ml / 5 lbs twice daily. The herb was mixed with his food and he took the full dose daily.

Several months into the treatment, the cat's diet changed from Natural Choice Weight Control to a blend of Wellness Grain Free and Natural Balance Limited Ingredient Grain Free kibble. The protein bases were Salmon and Duck. These are cooling and neutral in nature and are indicated for Heat conditions. The low carbohydrate food also promotes Spleen function and reduces the generation of Damp from a faulty Spleen. The herbal treatment and the diet change were staggered to better assess which treatment was affecting which clinical sign.

**Results**

The patient was assessed on a daily basis for epiphora, nasal discharge and upper respiratory sounds. Within two weeks, the patient had subjectively less ocular and nasal discharge, though it was still present. Within one month, minimal or no respiratory noise was audible, the crust over his nares was gone as was his eye discharge. His energy level was dramatically increased. The cat still sneezed and mucoid discharge would be present. He did not have any episodes of soft stool or cystitis after starting the herbs.

Every month or two, the cat would not be medicated for 1-2 days due to owner non-compliance. At these times, several days later, a brown crust would reappear over his nares and the loud respiratory noise and epiphora would return. As long as the herb was resumed as soon as possible, the cat’s signs again would disappear. After several months, the lag time it took for the signs to resolve lessened from one to two weeks, to two to three days. No repeat biopsy or other diagnostics were performed due to clinical improvement and anaesthetic requirement for attaining them, although having the diagnostics would have been ideal.

**Discussion**

This case represents a common scenario in veterinary medicine. Western medical options are exhausted, leaving few other options for treatment. Eastern medical treatment is considered and is a good option due to its different overall approach. Focusing on an underlying cause for this cat’s lifelong respiratory issues is the crux of the solution.

Cats are prone to Spleen Qi Deficiency. Spleen Qi Deficiency can be caused by overwork, complete fasting, inappropriate diet and over-consumption of food (particularly carbohydrates). In small animals, diet seems to be the primary
Cats evolved as carnivores and the current commercial mainstream diets are very high in carbohydrates and may aggravate imbalances. Carbohydrates theoretically drain the Qi of the Middle Jiao (where the Spleen and Stomach exist). Without proper Spleen function, the organ is unable to transform fluids correctly, hence Damp accumulates. This Damp tends to accumulate were normal fluid would. Damp, in time, can become Damp Heat. In this cat’s case, Damp Heat accumulated in his Upper Jiao, within his nasal passages and his eyes. It occasionally took hold as Damp Heat in his Lower Jiao within the bladder wall and his colon, resulting in episodes of stranguria and hematuria. His body fat was from phlegm, a result of Damp accumulation (Marsden 2009).

San Ren Tang, or Three Seeds Decoction, is designed to promote the descent of Lung Qi, transform and dry Damp in the Middle Jiao and drain Damp down to and out of the Lower Jiao (Marsden 2006). As the name indicates, it contains three seeds. Apricot seed is used in the Upper Jiao as an antitussive. Cardamom seed has gastric anti-inflammatory effects and stops vomiting in the Middle Jiao. Coix seed resolves colitis by inhibiting nitric oxide synthesis and this effect extends to the urinary tract. The other herbs support these actions and promote normal peristalsis, mobilize small amounts of swelling and reduce mucous production (Marsden and Fougere 2009). See Table 3 for more detailed information on individual herb qualities.

The formula was developed originally to treat human geriatric patients retaining phlegm and exhibiting Qi stagnation. These geriatric patients exhibit Qi Deficiency, which when coupled with overeating or over-consumption of cold or raw food, leads to stagnation of food and Qi. The overall purpose of the formula is to: 1. redirect Lung Qi and soothe the diaphragm and 2. to dissolve phlegm and promote food digestion. In humans, a white greasy tongue coating and slippery pulse suggest

<table>
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<tr>
<th>Clinical Sign</th>
<th>Traditional Chinese Medical Pattern</th>
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<tbody>
<tr>
<td>Tongue: thick, pink, scalloped, wet</td>
<td>Damp Heat</td>
</tr>
<tr>
<td>Pulse: quick, slippery</td>
<td>Damp Heat</td>
</tr>
<tr>
<td>Brown Discharge in Pinnae</td>
<td>Damp Heat</td>
</tr>
<tr>
<td>Increased Hunger, but not Thirst</td>
<td>Damp Heat</td>
</tr>
<tr>
<td>Yellow Nasal Discharge</td>
<td>Damp Heat</td>
</tr>
<tr>
<td>Epiphora</td>
<td>Damp</td>
</tr>
<tr>
<td>Stranguria</td>
<td>Damp</td>
</tr>
<tr>
<td>Hematuria</td>
<td>Heat</td>
</tr>
<tr>
<td>Excess Body Fat</td>
<td>Phlegm</td>
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(Marsden 2006)
Qi Deficiency and Phlegm Retention. It is interesting to note that the human indications focus most on respiratory symptoms and gastrointestinal upset. These conditions of asthma and rhinitis are very common in our feline patients, in addition to inflammatory bowel disease and constipation (Chen and Chen 2009).

Although this cat’s exudates were yellow-brown in color (which reflects heat) and his tongue and pulse reflected Damp Heat, he did not seem so affected by Heat that he was restless and cool seeking, with malodorous secretions or halitosis. It was for these reasons, coupled with the fact that it is much more common to use San
Ren Tang for a cat as a first approach, that I chose San Ren Tang over Si Miao San. Si Miao San would have been indicated if Heat Signs were more pronounced. Wei Ling Tang also addresses Damp, however the cat would need to be cooler overall.

A limitation of this case is the less than ideal use of antibiotics. It would have been more appropriate to initially flush and culture the cat’s nares and pharynx and use the sensitivity results to guide antibiotic use. Potentially, it could have reduced resistance in this cat. Enrofloxacin is a risky choice (of which the client was well aware). It is contraindicated in young, growing animals, due to the potential for cartilage abnormalities. Rarely, cats have have been reported to have ocular toxicity, mydriasis, retinal degeneration and blindness (Plumb 2005). It was unfortunate that this cat was uncooperative for acupuncture treatment. Had a laser unit been available, this would have been the perfect modality to use.

Conclusion
This case study demonstrates that Chinese Herbal Medicine can positively affect chronic rhinitis in cats, even after Western Medicine has not been effective.

References


