

The use of the Traditional Chinese Herbal Remedy Bu Gan Tang for Reducing Anxiety in a Dog

Dr Corinne Chapman

DVM, CVA, GDVCHM

British Columbia, Canada



Dr Chapman is a graduate of CIVT's Graduate Diploma of Veterinary Chinese Herbal Medicine course.

Abstract

A traditional Chinese herbal formula, Bu Gan Tang, was successfully used to manage and relieve anxiety and panic disorder in a nine-year-old spayed female pug. Over the course of a one-year treatment, the patient's anxiety frequency and intensity significantly decreased. Attempts with conventional medications were unsuccessful while the use of Bu Gan Tang slowly gave her the confidence to live a normal life again.

Introduction

Anxiety and panic disorder in the canine are at an ever-increasing high and have become a big concern for pet owners who want to see their dogs live happy and comfortable lives. Chronic behaviour issues can be detrimental to the pet-owner relationship, and, in this regard, behavioural issues related to anxiety are among the top reasons that pet dogs are relinquished to shelters (Salman et al., 2000; Scarlett et al., 1999). In addition, there is evidence to suggest that highly anxious pets may have a shorter lifespan than more easy-going pets (Dreschel, 2010). Because of their high prevalence and their negative long-term consequences, pet anxiety disorders have become an important focus of interest. Until now, most anxiety and panic disorders have been treated with antidepressants and anti-anxiolytic medications with mixed results (Stewart et al., 2015; Johnson et al., 2014; Bighelli et al., 2018; Perna et al., 2015).

Novel treatment strategies have included medications that act on GABA, glutamate, and other neurotransmitter systems (Perna et al., 2015). Unfortunately, no one pharmaceutical has been found to truly capture and correct for these behavioural disorders.

Clinical Signs: Western Diagnosis

The patient, an eight-year-old female spayed pug, was presented for chronic and progressive anxiety and panic disorder. Signs of anxiety first began as a young dog. She had lived with a different owner for her first six years of life where she was not well exercised due to the owner's disabilities. She had difficulty being alone, incessantly whining and crying anytime away from the owner. She was afraid of loud noises and would scramble to hide and thus was hyper vigilant and easily agitated. This behaviour persisted with her present owner and became progressively worse after a move.

By eight years of age, the symptoms evolved to include fear of going outdoors, especially at night, to the point where she would not evacuate outdoors and had started eliminating in the home. If taken outside at night, the patient would tremble in fear and refuse to move in the dark. She also had separation anxiety when separated from the other dog in the home and would whine and pace until reunited.

A minimum database (CBC, chemistry and urinalysis) was performed with unremarkable results. Treatment with Fluoxetine (0.5mg/kg PO q24hr for seven days, then 1.0mg/kg q24hr ongoing) and Alprazolam (0.02mg/kg q12hr) was started, which the patient initially responded well to. However, over the course of the next four months anxiety and panic episodes escalated again and increasing the dose and frequency of Alprazolam only made her more lethargic and dull but did not decrease her anxieties. Due to the unfavourable response of the medication and the growing concern about the patient's quality of life, the owner was eager to try holistic options.

Clinical Signs: An Integrative Perspective

On April 8, 2019, the patient was examined and found to be very alert, responsive, and normally hydrated. She was overweight with a body condition score of 7/9, panting excessively, anxiously whining and wiggly throughout the exam. Heart and lung auscultation was within normal limits. The remainder of the physical exam, including neurological exam, was considered unremarkable. The patient had a friendly but nervous personality. She enjoyed being inside, seeking out the warmth of the sun. Her favourite place to be was on the owner's bed and she enjoyed snuggling in blankets. She was noted to love most people and dogs.

She needed to be carried outside and placed on grass to evacuate, but would often tremble and freeze and not eliminate. Her diet was Rayne Urinary Control dry food. She typically had an exceptional appetite. Stools were reported to be formed and normal. She was prone to paddling and vocalizing in her sleep.

On examination, the patient was agitated and had a nervous look on her face like a grimace. Her coat was soft, slightly dry, and she was shedding excessively. The tongue was lavender, pale, and on the dry side. There was no obvious tongue coating. Her

femoral pulses were moderately toned, narrow, and slightly wiry. The TCM exam evidenced multiple signs of Liver Blood deficiency, including a narrow and wiry pulse, lavender and dry tongue, excessive shed and a dry coat, and anxiety and fear behaviours like noise phobia, fear of the outdoors, and separation anxiety.

A TCM diagnosis of Liver Blood and Yin deficiency with Liver Yang Rising was made and believed to be the result of several contributing factors. First, the initial lack of appropriate exercise and heavily processed diet weakened the Spleen and reduced its ability to transport Fundamental substances like Blood to the Lungs. With diminished Blood production and delivery, the Liver could not supply the Heart with sufficient Blood, contributing to a Shen imbalance.

The TCM treatment principles included nourishing and tonifying Liver Blood and Yin (to improve peripheral blood circulation to brain and skin), thereby tonifying Heart Blood and Qi to calm Shen. The patient was started on Bu Gan Tang, a pure Blood tonic, made by Natural Path Herbal Company, at 1/4 tsp twice daily with food.

Discussion

Blood, from a scientific and physiological standpoint, originates from the bone marrow and circulates in the body to nourish tissues and organs. From a traditional Chinese medicine (TCM) standpoint, Blood is formed when Essence, or Post-Heaven Qi, is made in the Spleen and sent to the Lungs where it is pushed to the Heart and finally transformed into Blood (Maciocia, 1989; Marsden, 2014). In TCM, Blood deficiency is described as a lack of adequate blood volume and consequently an impaired peripheral circulation or vasoconstriction such that tissues are not nourished and “moistened”, including the mind (Maciocia, 1989; CIVT, 2019). If Blood is deficient, there is not enough Blood to embrace the Mind and the Mind will become “unhappy or uneasy”, resulting in anxiety, irritability, and restlessness (Maciocia, 1989).

The poor peripheral circulation can also lead to dry skin and coat as is seen with the patient’s excessive shedding (Marsden, 2014; CIVT, 2019). The Heart in TCM is thought to house the consciousness or Shen which is a form of Yang energy. The Heart requires the Pericardium to deliver enough Blood to ensure a balanced Shen. When Blood and Yin are deficient, the Heart will become weak and unbalanced and Heart Yang will rise as Empty Heat as it becomes more uprooted (Maciocia, 1989). This takes the form of more intense mental activity exhibited as heightened noise sensitivity, vivid dreaming, anxiety and panic, as seen with this patient (Marsden, 2014).

Bu Gan Tang is a herbal tonic that contains White Peony root, Ligusticum rhizome, Chinese Angelica root, Licorice root, Ophiopogon root, prepared Rehmannia root, Chaenomeles fruit, and Zizyphus root.

Peony, Ligusticum, Angelica, and Rehmannia together constitute Si Wu Tang (Four Materials Decoction), a pure Liver Blood tonic. Peony, or Bai Shao, is a bitter, sour, and slightly cool root that tonifies and cools Blood and suppresses Liver Yang. White Peony has been found to have anti-PTSD effects in rats and can reduce freezing (panic) time, reverse stress hormone levels, and improve serotonin levels in stressful situations (Qiu et al., 2018). According to Marsden, Chuanxiong Rhizome (Ligusticum) activates and

regulates blood circulation, and prevents the tonic herbs from causing Stagnation in the body. Ligusticum is an extremely common traditional edible-medicinal herb made up of 174 compounds, some of which have pharmacological activities like anti-cerebral, ischemia, blood vessel protection, anti-hypertensive, anti-spasmodic, and anti-inflammatory properties (Chen et al., 2018). These properties all appear to improve blood flow dynamics, ensuring smooth flow and normal blood viscosity.

Angelica (Dang Gui) bolsters the Blood, encourages blood circulation, and nourishes the Liver (Marsden, 2014). Dang Gui studies to date commend its neuroprotective and memory-improving effects and more specifically, its wide range of anxiolytic properties (Nogmai-Tara et al., 2018; Min et al., 2005). Rehmannia, the chief herb of Si Wu Tang, from a TCM perspective, tonifies Yin and boosts Blood production. Rehmannia has been proven to have antidepressant and anxiolytic effects on ovariectomized mice “which were possibly mediated via their modulation of brain neurotransmitters, and regulation of neurotrophins” (Zhou, 2019).

Chaenomeles fruit in Bu Gan Tang relaxes muscle spasms through increasing peripheral Blood circulation and has proven hepatoprotective effects, anti-inflammatory properties, antioxidant actions, antimicrobial and neuroprotective effects (CIVT, 2019; Watychowicz et al., 2017). Sweet-tasting Licorice (Glycyrrhiza) alleviates palpitations by tonifying Heart Qi and has been shown to have anti-inflammatory, anti-oxidative, anti-cancer and neuroprotective pharmacological properties (Marsden, 2014; Hosseinzadeh et al., 2015). Sour-tasting Ophiopogon has been found to have strong antioxidant and anti-inflammatory properties (Wang et al., 2017; Chen et al., 2016). Sour-tasting Zizyphus, also known as the jujube fruit, has various biological effects, including immunomodulatory, antioxidant, anti-tumor, hepatoprotective, and hypoglycemic activities, as well as gastrointestinal-protective effects (Ji et al., 2017).

This demonstrates how these herbs promote blood circulation to increase blood flow to the brain and other organs. By tonifying Blood and bolstering blood circulation, Bu Gan Tang has helped to alleviate this patient’s anxiety.

Conclusion

Using a holistic TCM approach, an anxious dog was successfully treated using the Blood tonic Bu Gan Tang and became less reactive to intense noise, more calm, and demonstrated less daily anxious behaviour. From both a behavioural and physiological standpoint, the herbal remedy Bu Gan Tang had an anxiolytic effect on this patient and could serve as a useful tool in the development of management plans to improve the well-being of dogs who suffer from anxiety.

Within One Month

The patient was able to go outside again for walks, and was even starting to play more. She had become increasingly more calm for walks during the day, but still had to be carried outside at night. She had stopped eliminating indoors and she no longer trembled or froze when outside.

One Year Later

The patient continues to take Bu Gan Tang, is off all Western medications, and is a much more resilient and well-adjusted dog. She now can go for walks both day and night without hesitation and the owner no longer needs to carry her outside as she follows willingly. She is able to rest and remain calm indoors and no longer pines for her dog housemate if separated.

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