

Traditional Chinese Veterinary Medicine for Neurological Diseases

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Edited by: Huisheng Xie, Cheryl Chrisman and Lisa Trevisanello

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ABOUT THE EDITORS

Huisheng Xie has taught and practiced Traditional Chinese Veterinary Medicine in both small and large animals since 1983. He is the founder of the Chi Institute, in Reddick, Florida, which is dedicated to train veterinarians in veterinary acupuncture, herbal medicine, food therapy and tui-na. His textbooks include *Traditional Chinese Veterinary Medicine-Fundamental Principles*, *Xie's Veterinary Acupuncture*, *Xie's Veterinary Herbology*, and *Application of Tui-na in Veterinary Medicine*. He had been the assistant and associate professor of College of Veterinary Medicine, Beijing China Agriculture from 1983 to 1994. He is currently a clinical associate professor of College of Veterinary Medicine University of Florida.

Cheryl L Chrisman received her DVM from Michigan State University in 1968 and became a Diplomate of the ACVIM Specialty of Neurology in 1975. She practiced and taught neurology at the Ohio State University and University of Florida for 37 years. As a graduate of Chi Institute, she became certified in veterinary acupuncture and also practiced acupuncture at University of Florida as a faculty member of the Acupuncture Service. She is currently on the faculty of Chi Institute and Editor-in-Chief of the American Journal of Traditional Chinese Veterinary Medicine.

Lisa Trevisanello received her DVM from the University of Padua, Italy in 2003. As a graduate of the Chi Institute, she became certified in veterinary acupuncture. She incorporated acupuncture into her practice of small animal medicine. Currently, she is working on her Master Degree of TCVM from the Southwest University, China. She co-authored chapters of *Xie's Veterinary Acupuncture*, *Equine Acupoints CD* and *Xie's Chinese Veterinary Herbology*.

CONTRIBUTORS

Chi Hsien Chen DVM, PhD

National PingTung University of Science and Technology,
Taiwan, CHINA

Han Wen Cheng DVM

Taipei, Taiwan, CHINA

Cheryl L Chrisman DVM, MS, EdS, DACVIM-Neurology, CVA

University of Florida, FL, USA

Roger M Clemmons DVM, PhD, CVA, CVFT

University of Florida, FL, USA

Bruce Ferguson DVM, MS, CVA, CVCH, CVTP, CVFT

Murdoch University, AUSTRALIA

Margaret Fowler DVM, CVA, CVCH, CVTP, CVFT

Panama City Beach, FL, USA

Songhua Hu DVM, PhD

Hanzhou, Zhejiang, CHINA

Elisa Katz DVM, CVA

Wallingford, CT, USA

Daniel King DVM, CVA, CVCH, CVTP

Tolono, IL, USA

Weerapongse Tangjitjaroen DVM, PhD

Chiang Mai University, THAILAND

Joan D Winter DVM, CVA, CVCH, CVTP

Simi Valley, CA, USA

Heidi Woog DVM, CVA, CVCH

Ketchum, ID, USA

Huisheng Xie DVM, MS, PhD

University of Florida, FL, USA

INTRODUCTION

Traditional Chinese Veterinary Medicine for Neurological Disorders

Cheryl L Chrisman DVM, MS, EdS, DACVIM-Neurology, CVA

In the Chinese medical classic text, *Huang Di Nei Ching* (Yellow Emperor's Classic of Internal Medicine or Canon of Medicine), written during the Warring States period (401–250 BC), the brain was not viewed as one of the important five *Zang* organs (e.g. Liver, Heart, Spleen, Lung, Kidney).¹ The Kidney was considered the center for vigor and strength. The brain was viewed more as a reservoir of the Kidney system, because when full, the body felt strong and light, but when it was Deficient, dizziness, tinnitus, blurred vision, aching limbs and tiredness resulted.¹ Since the brain resided within the bony skull, it was considered a reservoir of bone marrow and came to be known as the “Sea of Marrow”. The spinal cord was considered bone marrow within the vertebral canal. Peripheral nerves were not mentioned in early records. Marrow from a traditional Chinese medicine (TCM) perspective thus includes brain, spinal cord and bone marrow.

The ideas of *Yin* and *Yang* and the Five Elements as well as the treatments used in TCM and traditional Chinese veterinary medicine (TCVM) originated with the *Daoists*, ancient Chinese philosophers, whose ideas coalesced around 500 BC. The *Daoists* had an advanced view of the brain as an organ.¹ They considered the brain as the palace of *Ni Huan*, a Chinese translation of the Sanskrit word for “nirvana.” The brain was considered the source of seminal Essence. The spinal cord was the Channel linking the cavity of the “Sea of Marrow” with *Ming Men* (the gate of life) situated between the Kidneys. As the idea of Extraordinary *Fu* organs evolved in TCM, the Brain became recognized as one of these special organs and became not only the “Sea of the Marrow”, but also the “House of the Mind and Spirit” similar to the earlier *Daoists* perception.²

In TCVM, the correct *Bian Zheng* or pattern identification is paramount to achieve the optimum treatment outcome.² Although there are several useful diagnostic systems and theories in TCVM, the ones most useful to describe TCVM patterns of neurological diseases are a combination of the theories of *Yin/Yang*, Eight Principles, TCVM Pathogens, Five Elements, Five Treasures and *Zang-Fu* physiology and pathology. The six roots of the Eight Principles are extensively used to describe neurological problems as External or Internal, Excess or Deficiency and Hot or Cold. The location of the neurological disorder can be External and involve the Channels, peripheral nerves and muscles or Internal affecting the Extraordinary *Fu* organs (Brain and Spinal cord) of the Kidney system often with concurrent imbalances in the Spleen, Liver or Heart systems according to their Five Element theory relationships. Excess neurological patterns often involve invasion of a TCVM pathogen like Wind-Heat, Wind-Cold or Damp-Heat or Stagnation of *Qi* or Blood or both (*Qi*/Blood Stagnation). Deficiency patterns often involve the Elements and *Zang* organs of the Kidney, Liver, Spleen and Heart. Further, the most common Deficiency patterns of neurological diseases include Deficiencies of *Jing*, *Qi*, *Yin*, *Yang* and Blood. *Qi* Deficiency may be primarily localized to one or more Channels (Exterior) and result in neurological deficits related to the specific cranial or spinal nerves and muscles involved (e.g. facial nerve paralysis or masticatory myositis). When *Qi* Deficiency involves the spinal cord, it has an Interior location and is associated with Kidney *Qi* Deficiency causing paresis or paralysis of the pelvic limbs or all four limbs.

As a review from the conventional anatomic perspective, the nervous system of dogs and cats consists of central and peripheral components.³⁻⁶ The central nervous system (CNS) is the brain and the spinal cord and the peripheral nervous system (PNS) is the cranial and spinal nerves. The brain is further divided into the cerebrum and brainstem and the brainstem consists of four sections from rostral to caudal: 1) the diencephalon containing the thalamus, hypothalamus and other structures, 2) midbrain, 3) pons and 4) medulla oblongata. The cranial nerves and spinal nerves of the PNS enter and/or exit specific brain stem and spinal cord segments respectively.

The spinal cord is divided into five sections that relate to the thoracic and pelvic limbs.³⁻⁶ The cranial cervical spinal cord (C1-C5) is caudal to the medulla oblongata, but just cranial to the thoracic limbs. The caudal cervical spinal cord (C6-T2) is located in the thoracic limb region and motor and sensory peripheral spinal nerves of the limb form the brachial plexus. The thoracic and cranial lumbar spinal cord (T3-L3) is located between the thoracic and pelvic limbs. The caudal lumbar and sacral spinal cord (L4-S2) is located in the region of the pelvic limbs and the femoral nerves (L4-L5) and sciatic nerves (L6-S2) enter and exit to form the lumbosacral plexus. The sacrocaudal spinal cord (S2-Cd5+) is located caudal to the nerves of the pelvic limbs. In dogs, the spinal cord is shorter than the vertebral column in the caudal lumbar region and terminates at vertebrae L6 or L7. The nerve roots L6-Cd5+ continue in the spinal canal to form the cauda equina and each one exits immediately behind the vertebra of the same number. Most discussions of neurological disorders also include primary muscle diseases, because muscles have a symbiotic relationship with peripheral nerves.

Conventional veterinary medicine and traditional Chinese veterinary medicine (TCVM) differ in their approach to the diagnosis and treatment of neurological diseases. However, when integrated, the two medical paradigms can lead to a deeper understanding of dysfunction and more effective therapeutic options for neurological patients. Understanding the disease process from a conventional perspective can deepen the understanding and application of TCVM theories and disease patterns and lead to better TCVM treatments. Understanding TCVM theories and disease patterns can deepen the understanding of the conventional disease and offer treatment when there are no conventional treatments. The conventional neurological examination is needed for accurate lesion location so that correct local acupoints or acupoints on Channels that traverse the lesion can be treated. Most common conventional neurological diagnoses are associated with one to seven different TCVM patterns that require different treatments.

The TCVM patterns and suggested acupuncture, Chinese herbal medicine, *Tui-na* and Food therapy treatments will presented in the subsequent chapters for the following conventional neurological disorders: 1) head injury, 2) cognitive dysfunction, 3) meningoencephalitis, 4) brain tumor, 5) idiopathic epilepsy, 6) congenital hydrocephalus, 7) idiopathic tremors, 8) geriatric tremors, 9) optic neuritis, 10) trigeminal neuritis, 11) facial paralysis, 12) vestibular disease, 13) deafness, 14) laryngeal paralysis, 15) masticatory myopathy, 16) intervertebral disk disease, 17) spinal cord trauma, 18) cervical spondylomyelopathy (wobbler syndrome), 19) fibrocartilaginous embolism, 20) diskospondylitis, 21) degenerative myelopathy, 22) atlantoaxial malformation, 23) meningomyelitis, 24) spinal cord tumor, 25) brachial plexus injury, 26) sciatic nerve injury, 27) lumbosacral degeneration 28) cauda equina injury, 29) polyneuropathy, 30) myasthenia gravis and 31) polymyositis. There is increasing research support that confirms practitioners' experiences that integration of TCVM treatments can result in less conventional medications with adverse side effects, fewer invasive neurosurgical procedures, faster recovery, improved degree of recovery, less disease recurrence and overall improved quality of life for neurological patients.

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