

Case Report

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Report Title

Using Acupuncture and Chiropractic treatment to improve life quality of a geriatric Golden Retriever with polyneuropathy and operated larynx paralysis

Author Information

Name: Tina Gysin
Address: Hinterdorfstrasse 7,
5618 Bettwil, Switzerland
Phone: +41 78 866 20 20
E-mail: vetchirotg@gmail.com

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1. Abstract

Acupuncture in combination with chiropractic treatment was successfully used to improve life quality of a geriatric Golden Retriever with polyneuropathy and operated larynx paralysis. Dry needle acupuncture was performed in three therapy sessions at intervals of 2 and 4 weeks. Proprioception and coordination of the patient's hindlimbs improved while the expiratory breath sound remained unchanged. The patient showed a significant improvement in endurance on daily walks. This case shows a variety of age-related Zang fu patterns and how they affect each other.

2. History

Ambra is a 14 years old Golden Retriever bitch that was presented for examination and treatment in acupuncture and chiropractic at 10.01.2022. One year prior her performance deteriorated rapidly during summer and she showed heavy and noisy breathing. She was then diagnosed by a veterinary clinic for a unilateral laryngeal paralysis. Laryngeal paralysis can be caused by a trauma, a mass giving pressure to the N. laryngeus recurrens, polyneuropathy, immune mediated skeletomuscular diseases like myasthenia gravis or hypothyroidism and also inherited correlations are known¹. In Ambra's case the clinicians suspected, due to reduced proprioception in her back legs, a laryngeal paralysis caused by polyneuropathy. She underwent surgery and the owners were told that it is expected that Ambra's back end and coordination would become weaker continuously in the future. The surgery and recovery did run very well but as predicted in the following months she lost strength in her back legs and had problems with coordination. She fell down the stairs a couple of times and daily walks outside got shorter. Her breathing became much better after surgery but sometimes she still showed heavy noisy breathing that got worse in summer. She showed a general lack of energy and motivation. When she was presented for acupuncture and chiropractic treatment she was not on a specific medication but got some food supplements containing willow bark, green lipped mussel, incense, methylsulfonylmethan, devil's claw to support her locomotor system.

3. Conventional Clinical Signs and Chiropractic Diagnosis

Ambra was presented on the 10.01.2022. The main complain of the owners was the weakness in her back legs and her noisy heavy breathing. She had problems climbing up the stairs to the consultation office. While standing still her back legs were tucked under with a slight kyphosis in her lumbar region. Her fur was dull and not smooth. She was panting noisy during the consultation at a room temperature around 18° Celsius. She was very friendly but her view seemed sometimes a bit confused. The background of her eyes showed a grey color. While walking she dragged her toes regularly and she showed a lot of pace going faster. Her tuber sacrale on the right side was higher than on the left. Overall her muscular constitution was not bad and appropriate to her age. The muscle mass and tension on the forelimb was ok. The muscles in the lumbar region were tensed and painful. The quadriceps were weak on both sides while the hamstrings presented normal. Her left back leg is the weakest of all four legs and she puts more pressure to the right hind. She doesn't show any lameness. Proprioception in the front legs was fine, but slowed down in the back. The claws of the back feet were aberrated and the paws felt cooler compared to the front.

Chiropractic listings: Atlas superior right, Atlas Posterior right, Temporomandibular Joint left, Lumbar 2th and 3th posterior and right, PSIS (posterior superior iliac spine) right, Sacral base right, Sacral Apex left.

No further diagnostics like X-Ray or Ultrasound were made that day.

4. Clinical signs/diagnosis – TCM (eastern)

During the consultation Ambra was happy and her mood seemed to be balanced. Her fur was dull and dry. In her face she was light colored with a lot of grey hair. Her eyes had a grey background and her view seemed confused sometimes. She had a little wart close to GB1 on the lateral canthus of her left eye. Overall her skeletomuscular constitution was age appropriate with stiff muscles in the lumbar region close to the Shu points of Stomach, Triple Heater and Kidney. There was also a hot sensation in that region. The paws of the back legs felt a bit cooler than the front and on her left back foot she had a small wound close to Bladder 67. She didn't walk smoothly. She walked a lot in amble and sometimes she stumbles with her back feet. There was no specific lameness. Especially the stairs were problematic for her, going up and down. Ambra was panting constantly, producing an inspirational breathing sound. She had a toxic scar on the Large Intestine meridian close to LI18 from larynx surgery one year ago. According to the owner she was sleeping a lot during the day, but had an active phase during the night at 3:00 am where she woke up, panted and walked around for about 30 minutes.

She preferred the cold. Her favorite weather condition was the winter time with a lot of snow. The owners describe that she feels like a young dog when she can play in the snow. She didn't like heat at all.

The tongue looked low energy, was red and wet with thin white coating at the floppy margins. Her pulse was weak but fast.

Ambra got normal kibble for food. She was very greedy with food and has a big appetite but had issues to gain weight. Thirst was normal. Her stools looked normal. According to the owner she had problems to hold her position while pooping because of her lower back weakness. The position for peeing was not problematic for her.

The toxic scar was treated with a QiPulse 635 nM: Professional Red Laser prior to the evaluation of the Back Shu points in each session for approximate 2-3 minutes.

Active Shu points: BL13 (Lung), BL15 (Heart), BL20 (Spleen), BL21 (Stomach), BL22 (Triple Heater), BL23 (Kidney) (buckled at the back while pushed), BL 26 (Bladder)

Active Mu points: LU 1 (Lung), LIV14 (Liver), LIV13 (Spleen), GB25 (Kidney), CV3 (Bladder)

TCM Diagnosis: Kidney Yin and Jing deficiency, and as a consequence he show Lung Qi deficiency, Spleen Qi deficiency and Qi stagnation in the Bladder meridian and blood deficiency.

The Zang Fu patterns Ambra showed were initially caused by the Kidney Jing deficiency. It was diagnosed based on Ambras age related symptoms (gray hair, sore lower back, weak hind legs, bad hearing, orientation problem due to dementia ^{2,3}). It is considered normal at her age to have less Jing which later developed into a Kidney Yin deficiency ⁴. The Yin deficiency was diagnosed based on Ambra's red tongue (sign for false heat ⁵), her increased activity with panting in the night, her aversion to heat, her fast, thin and weak pulse and her weak constitution ⁶. The Yin deficiency was located in the Lower Jiao due to the extreme weakness in her back legs and pain in the lumbar region ⁷. Furthermore, is her active time during night around three o'clock in the morning which, considering the organ watch, is the lowest energy level of the Bladder, the Yang organ of the water element ⁸. Considering all these factors and the active Kidney Shu and Mu points the diagnosis of Kidney Yin deficiency was made.

Ambra's symptoms also lead to a Qi deficiency (general weakness and fatigue ⁵) localized in the Lung (breathing noise and weak respiration, active Shu and Mu points) and Spleen (difficulty gaining weight, excessive eating, active Shu and Mu points) ^{2,4,5}. In this case not all

typical Symptoms of Qi deficiency are shown (f.e. swollen and pale tongue) because they are overshadowed by the false heat symptoms of Kidney Yin deficiency.

The dry and dull hair of Ambra could be a result of blood deficiency. Other matching symptoms are general weakness, tiredness and a thin and weak pulse ^{2, 4}. Blood deficiency can be caused by Spleen Qi deficiency which leads to an insufficient Blood generation or by increased consumption due to inner heat (Yin deficiency). In addition to that, Jing and blood have an important relationship thus one transforms into the other. As Kidney Jing is deficient in Ambras case more blood could be consumed ⁹.

Qi Stagnation in the bladder meridian was diagnosed because of pain and stiffness along the bladder meridian ⁶ and the bad healing wound at BL67 on the left paw of the back legs.

5. Conventional treatment and chiropractic treatment

Adjustment of the found chiropractic listings was made prior to the acupuncture treatment. In the combination treatment of chiropractic and acupuncture it is always interesting to compare the sensitivity of especially Shu points but also Mu points before and after the adjustment. Sometimes some local blockages can be released and make it easier to find the pathogenic Zang Fu or blocked meridians. In this case the active Shu and Mu points mentioned above were measured after chiropractic adjustment. In some cases, acupuncture can help to make a chiropractic release faster (only 1 session) and smoother by decreasing muscle tension before the adjustment. In Ambra's case this was not necessary.

6. TCM treatment

The treatment Principles in this case were:

Kidney Jing deficiency:	→	Tonify Kidney Jing ^{4, 10}
Kidney Yin deficiency:	→	Tonify Kidney Yin ^{4, 10}
	→	Eliminate false heat symptoms
	→	Strengthen the hind quarters and the lower back
Lung Qi deficiency:	→	Tonify Lung Qi ^{4, 11}
	→	Improve the heavy breathing
Spleen Qi deficiency:	→	Tonify Qi
	→	Strengthen the Spleen ^{4, 12}
	→	Improve transformation and transportation function of the spleen
Qi stagn. in the Bladder Meridian:	→	Tonify Qi ^{13, 14}
	→	Move Qi in the bladder Meridian
	→	Resolve pain
Blood deficiency:	→	Generate blood
	→	Move blood

For all acupuncture points a dry acupuncture therapy was chosen using copper handled needles by Nine Needles with a diameter of 0.20 x 15mm. All points were needled unilateral except LI4 and Liv3 were needled on both sides. The needles stayed in for about 5-10 Minutes if they did not fall out spontaneously. During one treatment not more than 6 points were chosen to be needled and the even distribution on all 4 legs and balancing out the Yin and Yang system was striven for as far as possible.

All points used in the following three treatments are listed in table 1:

Point name	Anatomic description	Indication
Lung 9 (Tai-Yuan) ¹⁵	Distopalmar of the most medial prominence of the radial styloid process, overlying the radiocarpal joint, medial to the radial artery and the tendon of the flexor carpi radialis.	Source point Earth point of metal meridian and therefore tonification point, Shu-Stream point, Used for tonification of Lung Qi and Yin, good for interior deficiency problems, used for heavy breathing and breathing noise.
Kidney 6 ¹⁵	In a depression overlying the joint space between the talus and calcaneus, distoplantar to the medial malleolus.	Used to nourish Yin, used to cool blood, benefits the throat.
Kidney 3 ¹⁵	In the depression at the midpoint of a drawn line from the tip of the medial malleolus to the insertion of the common calcanean tendon.	Earth point of water meridian, Source and Shu-Stream point, used to tonify Kidneys, used to strengthen the caudal back and cool down heat, used to alleviate caudal back pain.
Stomach 36 (Hou-San-Li) ¹⁵	In a depression just lateral to the distal aspect of the cranial border of the tibial crest, in the middle of the cranial tibialis muscle.	Earth point of the earth element, He-Sea point, used to benefit the Stomach function and Spleen function, used to tonify Qi and nourish blood and Yin, used to tonify Yuan Qi, Nutritive Qi and Wei Qi.
Bladder 40 ¹⁵	In the popliteal fossa in the middle of the transverse crease between the m. biceps femoris and m semitendinosus.	Master point of the caudal back and hip, Earth point of the bladder meridian, He-Sea point, used to remove obstructions from the channel and to eliminate blood stasis, used for problems of the caudal back, hip and stifle.
Bladder 23 ¹⁵	In a depression 1.5 cun lateral to the caudal border	Shu point for the Kidney, used to tonify Kidney Yin

	of the spinous process of the 2 nd lumbar vertebra.	and strengthen the caudal back and stifle, used for Lumbosacral problems and problems along the channel.
Conception Vessel 4 ¹⁵	On the ventral midline, 3 cun caudal to the umbilicus.	Alarm point for the Small Intestine, Meeting point for all 3 Yin Channels of the hind leg (Spleen, Kidney, Liver), Benefits the Kidneys, used to nourish Blood, yin and Qi, used as a strong tonification point.
Large intestine 4 (He-Gu) ¹⁵	In the depression between the 1 st and 2 nd metacarpal bones in the middle of the 2 nd metacarpal bone on the radial side.	Master Point for the Face and Mouth, Source point, used to stimulate the dispersing function of the Lung and to remove obstructions along the channel, used to alleviate pain and spasm in general, used to activate Qi and Blood, used for laryngeal paralysis.
Liver 3 ¹⁵	In a depression dorsal between the 2 nd and 3 rd metatarsal bone, at the level of the shaft of the bone.	Source point, Shu-Stream and Earth point, used as Four gates together with Li4 for soreness in joints of extremities and dispersion of Qi and blood in the whole body, used for blood deficiency.
Spleen 6 ¹⁵	In a depression 3 cun proximal to the tip of the medial malleolus of the tibia on the caudal border of the tibia.	Master point of the caudal abdomen, crossing point of all 3 leg Yin channels, used to benefit the Spleen function, used to tonify Qi, Blood and Yin especially in the lower Jiao and Hindlimbs, used to tonify the Kidney, to move and nourishes Blood.
Yao-Bai-Hui ¹⁵	In the depression on the dorsal midline in the lumbosacral space.	Used to tonify Kidneys and to activate Qi and blood, used to alleviate pain, used for hindlimb paralysis and lumbosacral pain.

Treatment 1: 10.01.2022

In the first Treatment the TCM diagnosis was made after chiropractic adjustment followed by the treatment of the Acupuncture points: **KD 6, ST36, LU 9, CV 4, BL 40, Yao Bai Hui**. The amount of needled Yin and Yang Organ points was balanced. **KD 6** was used to nourish Yin and to cool blood (treating false heat symptoms). **St36** was used to benefit the spleen function of transformation and transportation and to tonify Qi and to nourish Blood and Yin. Additionally it tonifies Yuan Qi, nutritive and defensive Qi and also benefits the hind leg. To tonify Lung Qi **Lu 9** was used, as it is a good point to use in chronic Lung deficiency patterns. **BL 60** was chosen because it's the master point of the caudal back and hip and can be used for paresis of the real legs. It also is beneficial for false heat symptoms caused by Yin deficiency. To further tonify Yin and strengthen the Yin meridians of the hind leg **CV 4** was chosen, due to its function as a strong tonification point for Yin, Qi and Blood. Finally **Yao Bai Hui** was needled to tonify Kidneys, alleviate pain and to support the proprioception of the back legs¹⁵. Ambra was a very good patient and did accept the the needles very well. No needles fell out during the treatment and stayed for approximate 7-8 minutes. She reacted to **ST36**. When the needle was already in for about 3 minutes, she turned her face towards the needle. After removal she tried to scratch the region after the needle was removed. Shu and Mu points of Spleen, Lung and Bladder were not reactive anymore after the treatment. Sensitivity of Shu and Mu points of the Kidney decreased but was still triggerable.

Results and Treatment 2: 21.01.2022

According to the owners Ambra's back pain and walking improved a lot. She doesn't wince before the owners touched her lower back and her walk got looser and more relaxed. They also said, that she was more active during the day. She still has her active episodes at night but.

When she entered the room for the second treatment Ambra was very enthusiastic. Her lumbar muscles were much more relaxed. Her breathing sound and the panting did not change. Her back leg coordination improved quite a bit. She got up the stairs much better than the last time even though proprioception is still low in her back feet, especially the left one. The wound on her back left foot is still there but dried out. Her Tongue is still red and weg.

In the second Treatment no Chiropractic treatment was done.

Active Shu and Mu points: Kidney, Bladder, Lung. Spleen only the Mu point was active.

In the second treatment the following Acupuncture points were chosen: **KD 3, CV 4, SP 6, LU 9, LI4**. This time more Yin organs were treated to try to have better results regarding her Yin deficiency symptoms. **CV 4** and **LU 9** were repeated from the first treatment for the same reasons mentioned above. **KD 3** as the Source point was used to cool heat symptoms, to benefit the Kidneys and to strengthen the caudal back and extremities. **SP 6** is the crossing point for all three leg Yin channels and thus it tonifies Qi, Blood and Yin in the Lower Jiao and the Hindlimbs. It also tonifies the Kidneys and moves and nourishes Blood. It is a good point for paralysis and atrophy of the hindlegs. **LI4** was because it's the master point of face and mouth, and by that it benefits the throat. It can be used in laryngeal paralysis and to activate Qi and blood¹⁵. Also, the owners were given some advice for training with Ambra. They should massage her feet du move Qi, go regularly on short walks and walk with her on different grounds to give her back legs nerve input. It's important to keep her going and move her.

Treatment 3: 22.02.2022

Since the last treatment Ambra improved at many levels. She is still panting a lot, but the sound in her exhalation got better and her breathing seemed more relaxed. According to the owner she has a lot of energy and runs around quite a bit. Proprioception was much better this time and if

she goes slow, she can walk stairs up and down with almost no help from her owners. The wound on her left back foot almost disappeared. Her tongue is pink. For the third treatment focus was to tonify her Kidney, to keep moving Qi and blood and to improve her coordination. Since the last time Ambra only wakes up 1-2 a week during the night.

Chiropractic was not performed at this treatment.

Active Shu and Mu points: Kidney.

The followed acupuncture points were chosen for the third treatment. **Lv3 and Li4, ST36, Bai Hui, Bl23. ST 36 and Yao Bai Hui** were repeated from previous treatments for the same reasons already mentioned. **LV 3 and LI 4** in combination are called „The Four Gates” and were used to move Qi and Blood through the whole body, especially the hind legs. **BL 23** tonifies Kidney Yin, benefits the hind leg, strengthens caudal back and stifle. It was very nice to see such a nice improvement. It would be good to repeat the treatment especially close to summer. It is possible that she falls back in her old patterns when the temperatures surrounding her are rising.

7. Discussion

Ambra was presented for a combination therapy of acupuncture and chiropractic treatment to strengthen her weak hind legs, improve proprioception, relieve her stiff lower back and to improve her endurance due to heavy breathing. One years earlier, she had a successful surgery for unilateral larynx paralysis. Her breathing has improved since then. In Ambra's case, it was probably caused by idiopathic laryngeal paralysis as part of the laryngeal paralysis-polyneuropathy complex, which can be hereditary. Laryngeal paralysis is more common in large and older dogs 3 such as the Labrador Retriever, Golden Retriever etc.¹ Since surgery, the strength and coordination of Ambra's hind legs have steadily deteriorated so that she shows great difficulty climbing stairs. Her willingness to perform is significantly reduced in general but especially in summer and she exhibits audible breathing with a louder expiratory breathing sound. At 14 years old, Ambra has already reached a proud age for a Golden Retriever (life expectancy 10 - 14 years)¹⁶. In Ambra's case, the goal is not to cure all symptoms, but to improve her quality of life by strengthening her musculoskeletal system, give her more energy and resolving any pain that may occur. With the symptoms present, a blood test should be performed in the near future to check organ parameters, especially Kidney parameters and also trace elements.

According to the principles of Traditional Chinese Medicine, Ambra was diagnosed with several conditions. Among them, the symptoms of Kidney Yin deficiency are most evident by the weakness in the lower back and hindquarters. Her back paws feel much cooler than in the front and her proprioception is decreased. The Yin deficiency is clearly shown by the false heat present. Ambra's tongue is red and she is constantly panting. She avoids heat and is most active in the depths of winter with lots of snow. She also shows restlessness at night with panting, which is typical for Yin deficiency. In addition to that, she appears rather weak overall and with a lack of substance^{5,6}.

Besides the Kidney Yin deficiency, Ambra shows symptoms of a Lung Qi deficiency (chronic complains, difficulty in breathing with exertion, poor vitality, reduced performance level, loss of drive¹¹), a Spleen Qi deficiency (reduced function of transforming and transporting Qi, eats a lot but has problems to gain weight¹²), a Qi stagnation in the Bladder meridian (pain along the spine especially in the thoracolumbar part, tense M. longissimus dorsi) and blood deficiency (dry skin, dry hair with no luster, dry paws, general weakness and lethargy, dementia)⁶. The

TCM diagnosis mentioned above are also reflected in the sensitive Shu and Mu points: Lung, Spleen, Kidney, Bladder.

The present TCM patterns are mainly caused by Ambra's age. Due to her age, she has little Jing left. Jing, also called "essence", exists in prenatal and postnatal form. Postnatal Jing is extracted from Gu Qi and is possessed by each Zang organ. Prenatal Jing is located in the Kidneys and its quantity is fixed at birth. During life, Jing is consumed until its final consumption coincides with the occurrence of death. The amount consumed depends on lifestyle. If there is a lot of stress or lack of sleep, more Jing is consumed, which is shown by a faster aging process (gray hair, memory loss)^{14,17}. If already at birth little Jing is passed on from the parents to the offspring, this can manifest in a disturbed early childhood development and a later following fertility disorder¹⁴. In Ambra's case, there is an age-related normal Kidney Jing deficiency. This is shown in the many gray hairs in her face, the tired eyes with gray background, her constitution, the shaky gait and her senile behavior^{10, 14}.

The present Kidney Jing deficiency was followed by Kidney Qi and Yin deficiency and a loss of Qi in general. Kidney Qi deficiency often occurs together with Lung Qi deficiency³. In this case, the Kidney loses the function of grasping the Lung Qi¹⁸, which would result in a dysfunction in the Lung organ. This would explain in Ambra's case the correlation with the weak hindquarters, the pain in the lumbar region and the laryngeal paralysis with difficulty in breathing. Furthermore, Kidney Jing deficiency also leads to Spleen Qi deficiency. At this moment, the symptoms of severe Spleen Qi deficiency (loss of appetite, chronic diarrhea, prolapse, edema¹²) are not yet noticeable, but they could still manifest in the near future. The general symptoms of Qi deficiency are in the foreground (general weakness, tiredness, unwillingness to move, dizziness)⁶.

The goal for Ambra's treatment was to strengthen and to activate the Qi makers (Lung, Spleen, Stomach) in such a way that Ambra has more Qi available in her everyday life to spare excessive consumption of Jing. This means that besides the treatments she needs a lot of rest with regular intermittent movement to move Qi, should not get emotionally upset and needs good food with easily digestible energy available. With more Qi, she should be able to regain more strength and energy while walking. The Spleen can nourish the post-sky Jing and is a central organ in Ambra's treatment to slow down her aging process. Thus ST 36 was used to strengthen Qi and Blood, support the function of the Spleen to transform and transport Gu Qi and the Stomach in storing and providing food¹⁵. To strengthen the Spleen in the best possible way, it is also important to provide food that support Spleen functions. Another Qi maker, the Lung, whose functions include controlling breathing and distributing the Zhong Qi¹⁵ (Gu Qi and Qing Qi¹⁹) was supported with LU 9 in the first and second treatment. Lung 9 is better suited for internal and deficiency patterns compared to Lu7. As a tonification point, Lung 9 tonifies Qi and Yin and thus also supports the formation and distribution of more Qi¹⁵.

To support Ambra's difficult breathing caused by Qi deficiency with possible Qi stagnation in the lung meridian, the toxic surgical scar on the Large Intestine meridian close to LI 17 in the larynx region was lasered for about 2-3 minutes before the acupuncture treatment till the local sensitivity was gone. Large Intestine and Lung both belong to the air element and influence each other as Yang and Yin organs. LI 4 was needled in the second treatment to remove remaining obstructions along the channel and to improve the dispersing function of the lung¹⁵. After strengthening the Qi organs the next step of the treatment was to nourish Kidney Yin. This was achieved with the point combination of KD7, CV 6 and Yao Bai Hui. Due to the Yin deficiency in the Kidneys, Ambra lost substance, strength and proprioception in her hind limb. She also showed symptoms of false heat, which did not allow her to sleep peacefully at night⁶. The combination of points that specifically strengthen Kidney Yin (KD7) but also affect all Yin

meridians on the hind leg (CV6) are of great importance¹⁵. To support the recovery of the nerval conduction Ambra's owner were advised to massage her feet regularly to move qi and to walk her over different grounds to increase nerval input and to enhance nerval placidity.

To release the stagnation and thus pain along the Bladder meridian, BL 40, Yao Bai Hui and BL 23 were needled during the respective treatments. All three supported the lower Jiao and BL 40 and 23 release stagnation along the meridian¹⁵.

The blood deficiency was treated simultaneously with the other treatment strategies by tonifying Yin, Qi and Essence. The best points that supported specific Blood deficiency were: ST 36, SP 6 and LV3. Liver is the storage box for the blood and moves blood.

In addition, to strengthen the coordination of the 4 legs and drive the flow of Qi and Blood to the back paws, LV3 was needled at the end of the third treatment in combination with LI4 which are called 4 Gates needled on all 4 legs¹⁵. Since Ambra's hind legs are cool with reduced proprioception, circulation there seems to be decreased. By moving Qi and Blood, the activity of the hind legs can be strengthened and coordination with the front legs can be restored.

In a case like Ambra's where Qi and Yin were deficient in multiple organs, the support with Chinese herbs would have been very valuable, since it is difficult to fill emptiness only with needling of acupuncture points. Without herbs the principle in this case was to strengthen Qi producing organs to increase the energy transformation out of food.

Acupuncture can be very useful as a support for age-related symptoms. During the three sessions, Ambra's owner described an increase in performance when walking, as well as more strength in the hind legs and Ambra was able to slowly climb stairs more safely again. Also the episodes in the night were less after the 2nd treatment and occurred only 1-2 times a week. The first treatment was used in combination with chiropractic. These two techniques support each other. For example, acupuncture can be used to release blockages more easily by chiropractic. In Ambra's case the needles were used after the chiropractic treatment. This makes it possible to release some local painful spots along the Bladder channel on the back and thus to make a more accurate TCM diagnosis, since organ-related pain in the Shu points can hardly be released with chiropractic. In a western approach Ambra was diagnosed with a polyneuropathy.

Similar that disease in dogs the initial cause of peripheral neuropathy in humans is not clear.

The symptoms present similar to the dog: reduced sensation and loss of motoric function.

Concomitant to human neuronal damage of small animals can be localized at the level of the axon or of the myelin^{21, 22}. Studies in human medicine showed the positive effects of acupuncture to alleviate neuronal pain and function of the nerves in patients with polyneuropathic disorders^{20, 23}. The hypothesis of the beneficial effect of acupuncture on polyneuropathy is that it may increase the blood flow²⁴ in capillary beds surrounding the neurons. The increased blood flow could support nerval regeneration by supplying the damaged nerve tissue with oxygen and nutrients while pollutants can be removed. This effect could also be the reason for Ambras increased proprioception and improvement of strength in her hind legs.

Acupuncture is an excellent support to increase quality of life in geriatric patients like Ambra. From a western medicine perspective there was no possibility to improve Ambras situation except of a possible regime of pain medications or cortisone if symptoms got worse. Looking from a TCM perspective Ambra shows a lot of symptoms that are not considered in a western approach and that is the advantage of acupuncture. Using TCM it is possible to intervene a pathogenic process before a disease has fully developed. It is likely that in a short amount of time Ambra would have developed more severe symptoms regarding her weak Zang Fu. For example, not supporting her Spleen Qi deficiency could have led to diarrhea or prolapses in the future. Thus TCM is very valuable to stop/slow down the pathogenesis of diseases before they fully occur and show typical symptoms known from western medicine.

11 References

- 1 Hirt, Reinhard. Praktikum Hundeklinik, Kapitel: Stimmbandlähmung, Kehlkopflähmung, Larynxparese und -paralyse. Stuttgart: Enke Verlag, 2017.
- 2 Skoien, Jim. IVAS Course Notes, Chapter 11: Zang Fu pathology. 2019-2020.
- 3 Albert Snijders, balance Method lecture.
- 4 Huisheng, Xie; Lauren Frank; Preast, Vanessa. Traditional Chinese Veterinary Medicine, Fundamental Principles, Chapter 8: Primary Diagnostic Systems: Eight Principles and Zang-Fu Patterns, 2nd Edition. Florida: 2013. p328.
- 5 Huisheng, Xie; Lauren Frank; Preast, Vanessa. Traditional Chinese Veterinary Medicine, Fundamental Principles, Chapter 8: Primary Diagnostic Systems: Eight Principles and Zang-Fu Patterns, 2nd Edition. Florida: 2013.
- 6 Puertas Dolores. BEVAS Course Notes, Modul 3: Etio-Pathogeny in TCM. 2020-2021.
- 7 Skoien, Jim. IVAS Course Notes, Chapter 10: Eight Principle Model of Pattern Differentiation. 2019-2020. p10.37.
- 8 Craig, Delores. IVAS Course Notes, Chapter 13: Bi Syndrome or Bi Zheng. 2019-2020. p13.15.
- 9 Hecker, Hans-Ulrich; Steveling, Angelika; Peuker, Elmar. Praxis-Lehrbuch Akupunktur, Chapter 9: Die Organuhr, 2nd Edition. Stuttgart DE: Haug Verlag. 2017. P126
- 10 Huisheng, Xie; Lauren Frank; Preast, Vanessa. Traditional Chinese Veterinary Medicine, Fundamental Principles, Chapter 3: Jing, Qi, Shen, Blood and Body Fluid, 2nd Edition. Florida: 2013.
- 11 Van Den Bosch, Emiel. BEVAS Course Notes, Modul 4: Kidney and Bladder syndromes in TCM. 2020-2021
- 12 Van Den Bosch, Emiel. BEVAS Course Notes, Modul 4: Lung syndromes in TCM. 2020-2021
- 13 Van Den Bosch, Emiel. BEVAS Course Notes, Modul 4: Spleen syndromes in TCM. 2020-2021
- 14 Van Den Bosch, Emiel. BEVAS Course Notes, Modul 4: Liver and Gallbladder syndromes in TCM. 2020-2021
- 15 Huisheng, Xie; Lauren Frank; Preast, Vanessa. Traditional Chinese Veterinary Medicine, Fundamental Principles, Chapter 10: Other Diagnostic Systems: Qi-Blood-Body Fluid, Six Channels, Four Stages, and San Jiao Patterns, 2nd Edition. Florida: 2013.

- 16 Schafer, Richard. IVAS Course Notes, Chapter 6: Getting Started in Small Animal Acupuncture: Acupuncture Points and Meridians. 2019-2020. p13.15.
- 17 Webpage: <https://mein-golden-retriever.de/golden-retriever/wie-alt-werden-golden-retriever-lebenserwartung/>, July 2022
- 18 Maciocia, Giovanni. The Foundations of Chinese Medicine, Chapter 3: Vital Substances. Elsevier, 2015.
- 19 Thews, Franz; Fritz, Udo. TCM und Akupunktur in Merksätzen, Chapter 5: Zang Fu System. Thieme, Stuttgart: 2018.
- 20 Puertas Dolores. BEVAS Course Notes, Modul 1: Fundamental Substances. 2020-2021
- 21 Schröder S, Lieperd J, Remppis A. Greten J H. Acupuncture treatment improves nerve conduction in peripheral neuropathy. Hamburg: 2007.
- 22 Hausner, Robert. Degenerative periphere Neuropathien bei Hund und Katze, Dissertation, 2008, Chrisman, C. L. Poyneuropathies of cats, J. small anim. Pract. 41, 384-389 (2000).
- 23 Chrisman C. L. Polyneuropathies of cats, Small animal practice, 2000.
- 24 Yangqing, Tong. Fifteen-day acupuncture treatment relieves diabetic peripheral neuropathy.
- 25 Litscher G et. al. Changed skin blood perfusion in the fingertip following acupuncture needle introduction as evaluated by laser Doppler perfusion imaging. Lasers Med. Sci. 2002.