

Case Report

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Using Acupuncture and Chinese Herbal Therapy to treat a Haflinger mare with Sweet Itch, Equine Metabolic Syndrome and Equine Asthma

Author Information

Name: Czvek Lieselot
Address: Eegalstraat 2
8570 Anzegem
Phone: +32 479 03 87 84
Email: info@dierenartslieselot.be

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1. Abstract

Acupuncture and Chinese herbal therapy were used to treat a Haflinger mare that suffered from Sweet Itch (SI), Equine Asthma (EA) and Equine Metabolic Syndrome (EMS). The skin problems were tackled by starting with allergen-specific immunotherapy (ASIT) but this was discontinued one and a half year later due to the disappointing outcome. The EA was treated before with a bronchodilator and corticosteroids without satisfactory results. The EMS was treated with a biguanide-type of drug and slight changes in management but also without gratifying results. The horse received four sessions of dry needle and/or laser acupuncture in combination with Chinese Herbal Therapy that was started after the first treatment. The goal was to improve the labored breathing, energize the horse, normalize the urination frequency and volume, normalize the water intake and diminish the itch. After the first treatment there already was visible improvement and the signs kept on improving until the last treatment five weeks later. Prognosis is follow-up sessions will be needed to obtain a good quality of life and to keep the horse healthy and balanced as long as possible.

2. History

Grace is a 19-year-old Haflinger mare with a history of Sweet Itch (SI) since the owner got her in 2012. At that moment, she received a single injection of dexamethasone with good results, but the itch returned once the drug stopped working. Later on, the vet performed an Immunopharm allergy test on blood (ELISA) that showed hypersensitivity against *Culicoides* spp. Thereupon, an allergen-specific immunotherapy (ASIT) was started but the horse continued to be itchy during spring, summer and fall. This treatment was discontinued one and a half year later, in 2014. The owner turned to supporting the horse using herbs, essential oils and a rug to protect Grace against the *Culicoides*.

In June 2017 Grace started coughing for the first time. Next to the cough, she showed breathing difficulties. The conventional examination revealed an expiratory and inspiratory stridor, more pronounced on the right side. A broncho-alveolar wash was performed and showed the presence of a lot of mucus. No bacteria were found. Cells that were present in the wash were neutrophils (41%, ref. 5-10), macrophages (50%, ref. 45-70; very active and strongly vacuolized), eosinophils (0,01%) and lymphocytes (8%, ref. 10-40). Based upon this, the vet concluded to Equine Asthma. At that time, treatment consisted of clenbuterol 0,022mg sirup BID for ten days at first and was combined later with prednisolone 300mg SID for ten days because there was no improvement with clenbuterol alone. The conventional vet advised the owner to soak the hay before giving it to the horse. Despite the medication and the soaking of the hay, there was no improvement in complaints. It was only when the owner switched from hay to haylage that the EA passed. The diet could be changed to hay again in 2018, despite regular EA flare-ups during the following years. When the EA reoccurred in that period of time, the owner soaked the hay and the EA passed again but only until January 2022 where the owner didn't get any improvement anymore by soaking the hay.

However, during 2020, 2021 and 2022 the EA also occurred during wintertime.

On top of this, Grace had colic symptoms (anorexia, lying down, kicking the belly, pulling up the upper lip) in August 2021. The conventional vet couldn't find any abnormalities on rectal exam and treated her with an injection of scopolaminebutyl after which the symptoms disappeared. However, the day after Grace showed the same symptoms again and was treated for a second time with a scopolaminebutyl injection. This had again the same beneficial effect. Unfortunately, the day after the story repeated himself whereupon Grace was sent to the horse clinic of the University of Ghent for a specialized ultrasound. The ultrasound revealed edema of the caecum which was not alarming at that time but needed to be followed closely. The next morning, the ultrasound was repeated and showed that the edema had increased and that the tip of the caecum was starting to invaginate. At that moment, the vets concluded a colic surgery was needed. During the surgery, the tip of the caecum was reponed, no enterectomy was needed. When the rest of the intestines were checked, the vets saw that a part of the colon tenue was also edematous. Grace was treated post-op with antibiotics and NSAID's at first but then got switched to corticosteroids because she had a flare-up of colic symptoms after surgery and the caecum was still swollen and slight edematous. Ten days after surgery, Grace could return home. Another week later, a follow-up ultrasound showed that the caecum had returned to normal.

In February 2022 Grace developed polyuria/polydipsia. The conventional vet performed a new blood test (see results below) and concluded she had insulin resistance (IR) or Equine Metabolic Syndrome (EMS). Following this blood test, she was put on metformine 1000mg BID and a supplement called Glucobalance 1tsp BID in combination with a change in management (no

grazing and soaking the hay). Sadly enough, there were no improvements in her complaints and overall health.

Grace was presented in March 2022 for acupuncture since other therapies weren't successful and there was only a deterioration of her physical health. At that time, she suffered from a labored breathing, polyuria/polydipsia, low energy level and itch at the crest.

3. Western clinical signs, diagnostics and diagnosis

Grace was presented with seasonal itch, mainly at the crest, but the main complaint of the owner at the time of consultation was the labored breathing, the fact that Grace was very low in energy, drinks a lot and urinates more frequently and with bigger volumes.

General clinical examination was performed and showed a mild nasal discharge but no coughing. The breathing frequency was elevated and there was inspiratory and expiratory stridor. Auscultation of the lungs revealed wheezing.

In the middle of the crest all the hair was gone due to rubbing the crest against surfaces.

At the end of February 2022, a blood test had been performed. This showed elevated insulin (56,3µU/mL), highly elevated I:G (= insulin/glucose) ratio (0.630µU/10.mg), very low RISQI (= reciprocal of insulin square-root index) (0,13mU/L), highly elevated MIRG (=modified insulin-to-glucose ratio) (13,1mU²/10.L.mg), increased fructosamine level (330µmol/L) and increased LDH and gamma- GT (656U/L and 33U/L).

No other diagnostic tests were done.

Based on the history, the clinical signs and the bloodwork the diagnosis of Insulin Resistance, IR, was made as a part of Equine Metabolic Syndrome, next to the already existing Equine Asthma and Sweet Itch.

NIER					
Ureum	20	mg/dL	20 - 41		
Creatinine	1.2	mg/dL	0.8 - 1.5		
HART-SKELETSPIER					
CK	241	U/L	<500		
LEVER-GALWEGEN					
Bilirubine totaal	0.72	mg/dL	0.5 - 2.0		
AST (GOT)	283	U/L	<385		
LDH	↑ 656	U/L	<600		
Gamma-GT	↑ 33	U/L	<30		
Alkalische fosfatase	173	U/L	<250		
GLDH	5	U/L	<8		
VETMETABOLISME					
Triglyceriden	26	mg/dL	<50		
GLUCOSE					
Glucose	90	mg/dL	80 - 120		
Insuline (12u vasten)	↑ 56.3	µU/mL	<14.3		
<i>Om een betrouwbaar resultaat voor insuline te krijgen, dient het staal 's morgens genomen te worden nadat het paard de avond voordien enkel nog hooi heeft gekregen (dus enkele uren uitgevast). Het paard mag niet op de weide staan en geen krachtvoer gekregen hebben. Tevens dient het dier stress- en pijnvrij te zijn.</i>					
I:G ratio	↑↑ 0.630	mU/10.mg	<0.100		
RISQI	↓↓ 0.13	(mU/L) ^{-0.5}	>0.32		
MIRG	↑ 13.1	mU ² /10.L.mg	<5.6		
Fructosamine	↑ 330	µmol/L	200 - 300		

Picture: Extract from the blood test done on February 25, 2022, showing the changes that were encountered.

4. TCM clinical signs, diagnostics and diagnosis

At the time of the consultation, Grace lived in a paddock paradise with two other horses. Although she is the oldest one, she is the horse that is hierarchically situated the lowest, even while the other two horses don't have a dominant personality. She easily "mouths" (= opening and closing the mouth with an extended neck while the corners of the lips are pulled back) when the other horses come near her. All the horses are fed only hay but got haylage in the past. When Grace has a flare-up of EA, the hay gets soaked again for all the horses. They only go on the grass for a maximum of two hours per day.

Grace is a round shaped, "meaty" type of horse. She is very food-orientated and is a typical "easy-keeper". She has a quiet and stable character but can be insecure or easily afraid when meeting new things or being confronted with new situations. The itch always starts in spring but is at its worst in late summer or fall.

She started drinking and urinating more frequently in December 2021. The owner is not sure if she drinks more at once or if she drinks more frequently. She does know that Grace urinates bigger volumes at once and that the urine has a transparent aspect but no abnormal smell.

The owner also tells me that Grace will not come out of the shelter when it is cold. It happens frequently that she stays behind in the shelter while the other horses of the herd walk around the track. The few times she is active is when the owner comes to fill the slowfeeders with hay or if other food is involved. She also has weak knees and sometimes crepitations are heard at the level of the knee.

All of this makes Grace a mixture between an Earth and a Water constitution.¹ She associates with the Earth element because of her gentle character but pensive trait, her love for food and the fact that her itch is worse in late summer-fall. On the other hand, she associates with the Water element because she is more fearful at times, easily overweight, has weak knees and shows symptoms during wintertime lately. Both elements are unstable at the moment.^{1,2} Both horse constitutions are also prone to develop IR/EMS.³

On inspection Grace shows no abnormal movements or asymmetries of the extremities, head or body. Her eyes are bright but there are scratch marks around the eyes and yellowish secretion is present in both eye corners. Her nose shows a sticky white nasal discharge. Her tongue is pale, swollen and slightly wet. She has a rather dull coat. The hairs in the middle of the crest are gone and the skin in that spot shows a dry aspect. There are scratch marks at the level of the Bladder meridian in the neck area.

On palpation the ears and limbs feel cold. The pulse feels slow and empty. There are no zones of muscle atrophy. A slight crepitation can be heard and felt at the level of the knee.

There is a toxic scar in Conception Vessel which is due to the colic surgery. It has a raised, crusty aspect and is itchy too.

The toxic scar was treated with a 635nm class IIIa laser before palpating the Back Shu points and this procedure was repeated every session for about 2 minutes before re-evaluating the Back Shu points.

The Back Shu point of Lung (BL 13), Spleen (BL 20) and Kidney (BL 23) felt empty bilaterally and the horse felt cold in the lumbar area at both sides. The Mu point of Spleen (LV 13) and Kidney (GB 25) is sensitive. The Mu point of Lung (LU 1) feels empty.

It is clear there is a deficiency problem here because the symptoms developed gradually and are chronically present, in combination with an empty pulse.²⁵ We especially think of a Yang deficiency because of the cold symptoms (cold ears and limbs, cold in the lumbar area, clear and copious urine, slow pulse)¹⁶ and the swollen and wet tongue.^{5,17} Kidney is involved because of the clear and abundant urine, weak knees, fearfulness and symptoms during wintertime. Spleen is involved too because of signs of Dampness (white nasal discharge) and the fact that endocrine function of pancreas is related to Spleen.¹⁸ As Damp produced by Spleen easily is deposited in Lung²⁶ and there is a labored breathing, dyspnea and wheezing, this indicates that Lung is affected as well.⁶

Based on the history, the anamnesis and the clinical examination we can conclude that Grace has a Kidney Yang deficiency with Spleen and Lung Qi deficiency. This is compatible with her constitutional sensitivity.

5. Western treatment

Grace was put on metformine 1000mg BID to regulate the glucose and insulin levels. She was supplemented with Glucobalance 1tsp BID and the owner was advised to keep her off the grass and to soak the hay. The vet proposed to start to aerosol as treatment for the EA because earlier administration of clenbuterol and prednisolone did not give any improvement, but the owner was reluctant to use this.

At the time of the acupuncture consultation none of the above-mentioned medication or supplements were still administered.

6. TCM Treatment

The Treatment Principles are:

- for Kidney Yang deficiency⁷
 - strengthen the Fire of the Gate of Life
 - tonify and warm Kidney
- for Spleen Qi deficiency⁴
 - tonify (Spleen) Qi
 - benefit Spleen transformation and transportation function
 - benefit ascending function of Spleen
- for Lung Qi deficiency⁶
 - tonify Lung Qi
 - restore Lung descending and dispersion function

A Dry Needle Acupuncture Treatment was chosen for every session using Cloud and Dragon silicon coated needles, without guiding tube, size 0.25mm x 25mm, except for BL 23 and GV 4 where Cloud and Dragon needles 0.30mm x 25mm with indirect moxa were used. All points

mentioned were needled unilaterally at a depth of 5mm, while BL 23 and GV 4 were needled bilaterally. The needles remained in place until they spontaneously fell out or could be removed without friction. One point was treated with a 635nm class IIIa laser instead of needles due to its location and to avoid risk of perforation. It concerns CV 6. The point strategy changed in each session to balance the body from different “angles” and to balance Yin and Yang as much as possible while keeping in mind that Yang needed to be enhanced.

Treatment during the first session on March 2, 2022

Evaluation of the diagnostic points:

- Back Shu point of Lung (BL 13): empty feeling bilaterally
- Back Shu point of Spleen (BL 20): empty feeling bilaterally
- Back Shu point of Kidney (BL 23) empty and cold feeling bilaterally
- Mu point of Spleen (LV 13): sensitive
- Mu point of Kidney (GB 25): sensitive.

In addition, the horse felt cold in the lumbar area at both sides.

The goal of the first treatment was to use a small number of points according to the Balance Method to bring more balance between Yin and Yang⁸ combined with moxa to expel the cold in the lumbar region. Therefore, the points ST 40, SP 3, LI 10 and LU 7 were needled.

LU 7 (Lie Que) ^{9,10}	In the depression on the medial surface of the radius, 1.5 cun proximal to the most medial prominence of the styloid process, 0.5 cun distal to the level of PC 6. ^{9,10}	Master point for head and neck, expels Exterior Wind, stimulates Wei Qi, stimulates the descending and dispersing function of Lung, opens the water passages, resolves Phlegm from the Lung together with ST 40. ^{9,10}
ST 40 (Feng Long) ^{9,10}	In the groove between the long and lateral digital extensor muscles, halfway between the patella and the lateral malleolus of the tibia. ^{9,10}	Luo point, Influential point for Phlegm, to transform and remove Phlegm from the body, opens the chest. ^{9,10}
SP 3 (Tai Bai) ^{9,10}	In the depression just proximal to the medial sesamoid bone, between the suspensory ligament and the deep flexor tendon, at the level of the distal end of the second metatarsal bone. ^{9,10}	Earth point of Earth Meridian and therefore Horary point, regulates and strengthens Spleen and Stomach, benefits the function of Spleen of transforming and transporting, dispels and transforms Dampness, harmonizes the Middle Jiao. ^{9,10}

LI 10 (Shou San Li) ^{9,10}	In the depression in the muscular groove between the extensor carpi radialis and the common digital extensor of the forelimb, 2cun distal to the transverse cubital crease, most evident when the elbow is flexed. ^{9,10}	Powerful point for regulating and tonifying Qi and Blood, stimulates immunity, similar effect to ST 36, used in cases of immunodeficiency, generalized weakness and decreased energy, homeostatic point. ^{9,10}
BL 23 (Shen Shu) ^{9,10}	In the depression 3 cun lateral to the dorsal midline, between the spinous process of L2 and L3, in the muscular groove between the longissimus lumborum and iliocostalis lumborum muscles. ^{9,10}	Back Shu point of Kidney, strengthens the caudal back and stifle, benefits the Kidney function of dominating water metabolism, dispels and transforms Dampness, used for urogenital problems and asthma. ^{9,10}

LU7 contributed to diminish the asthmatic attacks, regulating the immune system to smooth allergic reactions, and regulating the flow of Qi from Lung to Kidney so that Qi doesn't get trapped in the Upper Jiao. It also helps in clearing Phlegm from the Lung together with ST 40.

ST 40 is a good point for Phlegm anywhere in the body, for respiratory problems with moisture and asthma. Together with LU 7 it removes Phlegm from the Lung which will help Grace with her breathing problems and nasal discharge.

SP 3 was added to transform Dampness and Phlegm presenting in a white nasal discharge. This point also benefits the Spleen function of transforming food and drinks into a usable Qi and transportation of these nutrients to the rest of the body. Strengthening the Spleen will also result in strengthening the Lung as they are at the same energetic level as Spleen (Taiyin)^{13,14} and Spleen needs to send Qi up to Lung.¹⁹ This leads to a better flow of Qi from Lung to Kidney and thus strengthening Kidney at the same time which leads to an improvement of the labored breathing.¹⁵

LI 10 is a powerful point to tonify Qi which is needed to give the horse more energy. Simultaneously, it regulates the immunity system and therefore helps in all kinds of allergies like SI and EA.

In addition to these points, BL 23 was needled bilaterally with indirect moxa on top to expel cold in the lumbar region, to tonify Yang and tonify Kidney.

I advised to start with Chinese herbs (Itching by Natural Care) to help Grace with her itch at 4g BID for four weeks to start with.

To support Grace' healing, I advised to accommodate her in a sand paddock and keep her off the grass for the time being. It was recommended to give only hay and to soak the hay for 30minutes, prior to giving it to the horse.²⁴ The food was changed from a concentrated feed with 33% soluble carbohydrates to a vitamin and mineral balancer with a maximum of 10%

soluble carbohydrates²⁴ to take the load off the Spleen. Grazing periods will have to be reintroduced later after Grace' recovery in a slow manner.

Results and treatment during the second session on March 11, 2022

According to the owner Grace was more active and the nasal discharge was better but not completely gone. The breathing frequency diminished after the first treatment but then worsened a little when the weather got colder again. The thirst and the urinary changes stayed the same. The itch was not completely over but definitely better in such a way that the scratch marks started to heal. The limbs and the ears still felt cold. The pulse was empty and slow.

Evaluation of the diagnostic points:

- Back Shu point of Lung (BL 13): still feels empty
- Back Shu point of Spleen (BL 20): still feels empty
- Back Shu point of Kidney (BL 23): still feels empty
- Mu Point of Lung: feels empty
- Mu Point of Spleen (LV 13): still sensitive
- Mu Point of Kidney (GB 25): still sensitive.

KD 7, SP 6, SP 9, GV 14, BL 13 and BL 43 were needed.

KD 7 (Fu Liu) ^{9,10}	In the depression 2 cun proximal to the most medial prominence of the medial malleolus of the tibia, just cranial to the calcaneal tendon. ^{9,10}	Metal point of Water Meridian and therefore Tonification point of Kidney, tonifies Kidney Yang, resolves Damp, used for urogenital problems. ^{9,10}
SP 6 (San Yin Jiao) ^{9,10}	3 cun proximal of the medial malleolus of the tibia, caudal to the tibial border. ^{9,10}	Transforms Dampness, benefits Kidney function of dominating water metabolism, benefits Spleen function of transforming and transporting, benefits Liver function of flow of Qi, Master point of the lower abdomen and the urogenital system, used as immunostimulant, in allergic dermatitis and generalized weakness. ^{9,10}
SP 9 (Yin Ling Quan) ^{9,10}	Proximal to the border of the gracilis muscle, cranial to the saphenous vein. ^{9,10}	He-Sea point, transforms Dampness and moves Blood together with SP 6, regulates water passage, dispels Dampness. ^{9,10}

GV 4 (Ming Men) ^{9,10}	In the dorsal midline, between the spinal process of L2 and L3. ^{9,10}	Benefits Yang, especially Kidney Yang, eliminates Interior Cold due to Yang deficiency, strengthens Original Qi, benefits the lumbar area, benefits the Kidney function of dominating water metabolism, used in all problems related with Kidney and Kidney function, stifle problems and urogenital problems related with Interior Cold derived from a Yang deficiency. ^{9,10}
BL 13 (Fei Shu) ^{9,10}	In the depression 3 cun lateral to the dorsal midline at the caudal edge of the scapular cartilage in the 8 th intercostal space. ^{9,10}	Back Shu point for Lung, dispels and promotes the Lung function of dispersing Qi, regulates Nutritive and Defensive Qi, used for lung problems. ^{9,10}
Bl 43 (Gao Huang Shu) ^{11,12}	Situated at the outer Bladder line, in the depression 5 cun lateral to the dorsal midline, 2 cun lateral to BL 14, in the 9 th intercostal space. ^{11,12}	Supplements Qi, strengthens Wei Qi, nourishes the Essence, eliminates Phlegm, strongly supplementing point for all three parts of the Triple Burner, used for all chronic diseases in weakened patients and in chronic lung problems ^{11,12} .

KD 7 was used to tonify Kidney Yang and get more grip on the urinary changes.

SP 6 was used to clear Dampness together with SP 9 to resolve the nasal discharge. As it also benefits Kidney it was indicated to help with the urinary changes Grace was still presenting. Because it is an immunostimulant, it is a good point to help with the SI.

SP 9 is regularly used in combination with SP 6 to transform and dispel Dampness to help resolve the Damp in the lungs and thus to resolve the nasal discharge. It regulates the water passage and helps in dealing with the urinary changes.

GV 4 with indirect moxa was used here to expel the Interior Cold and strengthen Yang with the goal of further countering the urinary changes.

BL 13 regulates the Lung function and will support the skin and lung problems the horse experiences. As mentioned before, supporting Lung will also support Spleen (Taiyin level)^{13,14} and Kidney as Lung sends Qi down to Kidney.¹⁵

BL 43 is often used in combination with BL 13 in chronic lung problems to not only address Lung but also the emotional aspect related to lung diseases. It is a great point to deeply nourish and support Kidney and Spleen which makes it an excellent point to use in this case.^{6,11,12}

I advised the owner to check Grace for PPID, considering her age and the fact that she was diagnosed with EMS earlier.²³

Results and treatment during the third session on March 25, 2022

After the second treatment Grace showed no nasal discharge anymore and the labored breathing was a lot better. The urination frequency and volume and the water intake diminished after the second treatment. Grace had more energy with the consequence that she came more out of the barn which led to a small increase in polyuria/polydipsia during some colder spring days. The itch had improved a lot and the skin and manes were healing nicely. The owner mentioned the weakness at the level of the knees had improved too. The owner did check for PPID but ACTH levels on EDTA blood were normal.

	Resultaat	Vorige Resultaten	Eenheid	Referentie
GLUCOSE				
Insuline (12u vasten)	7.1	56.3	µU/mL	<14.3
Om een betrouwbaar resultaat voor insuline te krijgen, dient het staal 's morgens genomen te worden nadat het paard de avond voordien enkel nog hooi heeft gekregen (dus enkele uren uitgevast). Het paard mag niet op de weide staan en geen krachtvoer gekregen hebben. Tevens dient het dier stress- en pijnvrij te zijn.				
HORMONEN IN BLOED				
ACTH	16		pg/mL	
<29 pg/mL (november tot juli) <47 pg/mL (augustus tot oktober)				

Picture: Blood test performed on March 18, 2022 showing normal insulin and ACTH levels. This rules out concurrent PPID.

Evaluation of the diagnostic points:

- Back Shu point of Spleen (BL 20): still a little empty
- Back Shu point of Kidney (BL 23) still a little empty.
- Mu point of Spleen (LV 13): sensitive but better compared with the second session.
- Mu Point of Kidney (GB 25): sensitive but better compared with the second session.

KD 3, GV 14, TH 6, CV 6 were used. In this session the focus was put on the polyuria/polydipsia and therefore no points specifically addressing the Lung were chosen.

KD 3 (Tai Xi) ^{9,10}	In the depression on the medial aspect of the hock area, in the middle of the webbed area cranial to the calcaneal tendon, at the level of the tip of the tuber calcanei. ^{9,10}	Source point, benefits the Essence and the Kidney function of dominating the water metabolism, tonifies Kidney Qi, Yin and Yang. It strengthens the caudal back and is used in urogenital problems. ^{9,10}
GV 14 (Da Zhui) ^{9,10}	On the dorsal midline, in the depression between the dorsal processes of C7 and T1. ^{9,10}	Meeting point of all the Yang channels, Sea of Qi, tonifies Yang, regulates Nutritive and Defensive Qi,

		used in respiratory problems. ^{9,10}
TH 6 (Zhi Gou) ^{9,10}	In the groove between radius and ulna, 3 cun proximal of TH 4. ^{9,10}	Fire point of Fire Meridian and therefore Horary point, harmonizes Qi in the three burners, expels Wind. ^{9,10}
CV 6 (Qi Hai) ^{9,10}	On the ventral midline, 1,5 cun distal to the navel. ^{9,10}	Tonifies and regulates Qi, tonifies Yang and Original Qi, resolves Damp, used for physical weakness, pale urine. ^{9,10}

KD 3 was used to tonify the Kidney further and to improve the urinary changes even more. Strengthening the Kidney will also continue to strengthen the weak knees and support Kidney in regulating the water metabolism.

GV 14 will tonify Qi further and therefore increase the general energy level of the horse. By regulating the Nutritive and Defensive Qi, it will also contribute to controlling the skin problems.

TH 6 was mainly used here to harmonize Qi in the three burners. Triple Heater is also important for a correct flow of Body Fluids which is disturbed in case of Dampness.

CV 6 was used to tonify Yang and this way to tonify Spleen in her function of transformation and transportation. It resolves Damp too in order to contribute the further healing process in the Lung and solve the urinary problems.

Results and treatment during the fourth session on April 8, 2022

The owner informs me that Grace is doing much better: her water intake, urination volume and frequency has decreased a lot, she isn't rubbing her manes anymore and moves better and more energetically.

Examination of the Back Shu and Mu points didn't reveal big changes. The toxic scar is not itchy anymore and feels smoother.

SP 3 (Tai Bai) ^{9,10}	In the depression just proximal to the medial sesamoid bone, between the suspensory ligament and the deep flexor tendon, at the level of the distal end of the second metatarsal bone. ^{9,10}	Earth point of Earth Meridian and therefore Horary point, regulates and strengthens Spleen and Stomach, benefits the function of Spleen of transforming and transporting, dispels and transforms Dampness, harmonizes the Middle Jiao. ^{9,10}
ST 36 (Zu San Li) ^{9,10}	In the depression just lateral to the tibial crest, in the muscular groove between	Earth point of Earth Meridian harmonizes the element, benefits Spleen

	the tibialis cranialis and long digital extensor mm., 2 cun distal to the proximal edge of the tibial crest. ^{9,10}	function of transforming and transporting, benefits Yin, Yang, Qi and Blood, expels Damp. ^{9,10}
LU 9 (Tai Yuan) ^{9,10}	Distopalmar to 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 muscle. ^{9,10}	Source point, Earth point of Metal Meridian and therefore Tonification point, used for chronic Lung deficiency problems, tonifies Lung Qi, used for RAO and dyspnea. ^{9,10}
KD 3 (Tai Xi) ^{9,10}	In the depression on the medial aspect of the hock area, in the middle of the webbed area cranial to the calcaneal tendon, at the level of the tip of the tuber calcanei. ^{9,10}	Source point, benefits the Essence and the Kidney function of dominating the water metabolism, tonifies Kidney Qi, Yin and Yang. It strengthens the caudal back and is used in urogenital problems. ^{9,10}

SP 3, ST 36, LU 9 and KD 3 were needled just to keep the former unbalanced organs in good health.

SP 3 was needled because it is the major point of tonification of Spleen.^{9,10}

ST 36 harmonizes the Earth element consisting of Stomach and Spleen and thus strengthening the Spleen and benefiting the Spleen function as a Spleen pattern is part of the underlying cause of IR/EMS. It builds Qi which supports the energy level and expels Wind and Damp.

LU 9 is the Tonification point of Lung and is regularly used in chronic lung conditions as EA. At the same time, tonifying Lung will also tonify Spleen (Taiyin level).^{13,14}

KD 3 was used to strengthen the Kidney in general. Strengthening the Kidney continues to strengthen the weak knees and support Kidney in regulating the water metabolism.

After the last treatment, the owner requested another blood test to check the insulin level. This was still normal.

	Resultaat	Vorige Resultaten	Eenheid	Referentie
GLUCOSE				
Insuline (12u vasten)	10.2	7.1	66.3	µU/ml <14.3
<small>Om een betrouwbaar resultaat voor insuline te krijgen, dient het staal 's morgens genomen te worden nadat het paard de avond voordien enkel nog hooi heeft gekregen (dus enkele uren uitgevast). Het paard mag niet op de weide staan en geen krachtvoer gekregen hebben. Tevens dient het dier stress- en pijnvrij te zijn.</small>				

Picture: Extract from the blood test performed on April 15, 2022 showing normal insulin levels.

7. Discussion

Grace was presented for acupuncture and herbal treatment for a range of physical problems including SI, EA and EMS. These were treated conventionally before (clenbuterol, dexamethasone, prednisolone, metformine) but without satisfying results. From a conventional point of view, it could not be explained why Grace was suffering from Sweet Itch at first, then developing Equine Asthma next to it and resulting in Equine Metabolic Syndrome on top with edema of the caecum in between leading to an emergency colic surgery to reponne the caecum.

To deal with the SI, the conventional vet performed an Immunopharm blood test that showed hypersensitivity against *Culicoides* spp. Unfortunately, the allergen-specific immunotherapy did not relieve the itch. Scientific studies state that these enzyme-linked immunosorbent assay tests are not completely reliable and that the efficacy of allergen-specific immunotherapy (ASIT) against the detected allergens, frequently has a disappointing outcome²⁰. The owner turned to using a topical dilution of essential oils instead in combination with the use of herbs to sooth the skin.

When the EA started in 2017, Grace was living outside 24/7 in a paddock paradise system. That way, ventilation problems and exposure to dust was already minimal. A broncho-alveolar wash confirmed the diagnose of Equine Asthma. At that time, treatment consisted of clenbuterol at first and was combined later with prednisolone because there was no improvement with clenbuterol alone. The conventional vet advised the owner to soak the hay before giving it to the horse. Despite this, there was no improvement in complaints. It was only when the owner switched the diet to haylage that the EA passed. The diet could be changed to unsoaked hay in 2018, even though there were regular EA flare-ups during the following years. When the EA reoccurred during that period of time, the owner soaked the hay again and the EA passed but only until January 2022 where the owner didn't get any improvement anymore by soaking the hay.

In 2022, Grace showed polyuria/polydipsia on top of the SI and EA complaints and was very low in energy. Another blood test was performed and confirmed the suspicion of EMS, although she was not showing the typical signs of EMS (obesity, cresty appearance of the neck, laminitis).²³ The conventional vet started metformine and Glucobalance and advised to avoid grass and accommodate her in a sand paddock with hay. Sadly enough, Grace kept on drinking and urinating a lot more than normal. Because the owner was desperate after all these years of chronic complaints that only worsened in time, she turned to acupuncture to try to support Grace in her chronic illnesses.

Because of the gradual onset of signs and chronic worsening of the symptoms, in combination with an empty pulse, we conclude to a deficiency problem. In combination with the cold signs, exterior (aversion to cold) as well as interior (cold ears, cold limbs, cold in the lumbar area) plus a swollen and pale tongue, it concerns a Yang deficiency.^{5,16} Since Grace presents with urinary complaints shown as clear copious urine without strong odor, Kidney Yang deficiency is clear.⁷ Kidney Yang deficiency will fail to warm the body leading to cold symptoms and will also fail to transform fluids leading to an accumulation of fluids, seen as abundant and clear urination.⁴ If Qi is insufficient, Spleen cannot perform a good transportation and transformation of food and liquids (= the main function of Spleen), which leads to the formation of Damp by Spleen.⁴ The combination of the points SP 6 and SP 9 were used to tonify Spleen Qi and to resolve Dampness.

The organ that is most sensitive to storing Dampness and Phlegm formed by Spleen is Lung, as seen in this horse in the white nasal discharge and the breathing difficulties. LU 7 and ST 40 were used to resolve Phlegm from the lungs.⁹

The Treatment Principles consist of treating Kidney Yang deficiency by tonifying and warming Kidney, expelling Cold and strengthening Ming Men.⁷ Spleen Qi deficiency can be counteracted by resolving Dampness, tonifying Spleen Qi, benefiting Spleen transformation and transportation function and benefiting Spleen ascending function.⁴ At the same time, Lung Qi deficiency needs to be addressed by tonifying Lung Qi, restoring Lung descending and dispersion function and removing Phlegm from the Lung.⁶

By using acupuncture, we balanced and tonified the flow of energy through the body addressing the respiratory difficulties, the skin problems, the urinary abnormalities and the general weakness. The horse was treated four times with about ten to fourteen days interval after which the results were acceptable and we were able to change the treatment interval to longer periods to achieve a maintenance schedule.

In the first session March 2, 2022 LU 7 and ST 40 were used to resolve Phlegm from Lung.⁹ That way, the respiratory problems Grace was facing and were giving her the biggest discomfort could be solved first. LU 7 is also stimulating the descending function of Lung so that Kidney can grasp the Qi and is stimulating the dispersion function of Lung to counteract the skin problems.⁹ Because an unbalanced Spleen is the cause of Phlegm accumulating in the Lung, Spleen was tonified with SP 3.⁹ As Kidney is necessary to keep the fire burning to obtain a good transformation and transportation by Spleen,⁴ BL 23 was treated with moxa. This also expelled the cold (interior and in the lumbar area). LI 10 was added for its similar effects to ST 36, such as benefiting Qi, Yin, Yang and Blood.⁹ As Large Intestine is at the same energetic level as Stomach (Yang Ming)^{13,14} tonifying Large Intestine will balance Stomach and thus indirectly Spleen too, because both are part of the Earth element.² In addition, Large Intestine is opposite to Kidney on the Organ Clock and will contribute to balance Kidney.²⁷

In the second session March 11, 2022 we roughly continued with the above explained concepts only using other points and focused less on Lung itself because the nasal discharge and the breathing frequency were better. Furthermore, tonifying Spleen will indirectly support Lung too (Taiyin level).^{13,14} The combination of SP 6 and SP 9 was used to tonify Spleen, Kidney and Liver and to resolve Dampness. GV 4 was needled and treated with indirect moxa to benefit Yang and to eliminate Interior Cold due to Yang deficiency. KD 7 helped in tonifying Kidney (especially Kidney Yang) to keep the fire burning and to support Spleen in her main function. The combination of BL 13 and BL 43 is often used in chronic lung problems and is a strong combination to move Qi and Phlegm in the Lung.⁶

In the third session March 25, 2022 Kidney Yang deficiency diagnosis changed to Kidney Qi deficiency as the signs of cold had improved and the Back Shu points neither felt cold anymore. KD 3 tonifies Qi, Yin and Yang and focuses less on Yang alone. This point was used to tonify the Kidney further and to improve the urinary changes even more. Strengthening the Kidney will also continue to strengthen the weaker knees. TH 6 is the Fire point on a Fire Meridian which makes it the Horary point of Triple Heater. This means it harmonizes and balances in both cases of excess or deficiency with fluid imbalance.⁹ Triple Heater is important for the flow of Body Fluids, which changes when Dampness is present. It is a great point to bring more balance between the three Burners because of which Lung, Spleen and Kidney get more tuned

in to each other. It also expels Wind which was needed after a few cold and windy days that lead to an invasion of Wind Cold and worsened the polyuria/polydipsia again.⁹ Triple Heater is opposite to Spleen on the Organ Clock and will contribute to balance Spleen.²⁷ GV 14 contributed to regulating Nutritive and Defensive Qi and is helping to control the skin- and respiratory problems.²⁸ CV 6 was used to still tonify Yang somehow and that way to support Spleen in her function of transformation and transportation. It resolves Damp too which contributes to the further healing process in the Lung. As it is a Sea of Qi point, it strongly builds and stores Qi and therefore increases the general energy level of the horse.⁹

The fourth session April 8, 2022 was meant to evaluate the progress the horse made the past weeks and to balance out the overall energy flow. It is the question if this was needed at that time but in my opinion, it was better to generally support the horse' system after all these months (even years) of illness, instead of waiting until things deteriorated again. The points that were needled at that time were SP 3, KD 3, ST 36 and LU 9. The first two points were already mentioned and discussed above. ST 36 was added to the treatment as a point that builds and moves Qi but at the same time expels Damp if needed. As an Earth point on an Earth Meridian, it is a Horary point and harmonizes the Earth element.⁹ LU 9 is also an Earth point but on a Metal Meridian, which makes it a Tonification point and will tonify Lung Qi. It clears the Lung, resolves Phlegm and is therefore often used in chronic lung problems.⁹

To prevent a decline in Grace' health the owner was advised to plan regular follow-ups and to continue with the management changes. The Spleen has the tendency to get upset by irregular feeding times and by food rich in nonstructural carbohydrates (=NSC).²³ That is why Grace will benefit from a structured daily routine and a change in food from a concentrated feed to a vitamin and mineral balancer that completes the 24/7 supply of hay. Grace was kept off the pasture from the beginning of the treatment and accommodated on a sand paddock. This way, the uptake of grass containing a lot of NSC or fructans can be avoided. It is wise to skip grazing periods until she is completely recovered and to reintroduce the grass in a slow manner, taking into account that short grass is either stressed or growing and contains too many NSC²³ for a horse that has a weak Spleen. Long, fully grown grass that carries foxtails is the best type of grass to graze on for Grace. Just like grass or food, hay needs to contain less than 10% NSC.²⁴ This can be obtained by soaking the hay for 30minutes, prior to giving it to the horse.²⁴

After the fourth session, Grace' overall health had improved a lot. It is difficult to say how she would have evolved without the acupuncture treatments but regarding the fact that she has had health problems for years, we may assume these would not have resolved spontaneously. On the contrary, there was a high risk at developing a severe laminitis on top which would have caused Grace pain and even more discomfort.²³

If we look at this case from a TCM perspective, all the symptoms and diseases match together like the pieces of a puzzle, even considering the constitution of this horse. Where conventional medicine did not see the relationship between all the diseases that were occurring, TCM can perfectly explain the pathogenesis of it all. The colic surgery due to caecum invagination fits in as well. The invagination is actually caused by edema of the caecum and edema is a sign of both Spleen and Kidney deficiency.^{29,30} Even the fact that the horse didn't experience any improvement with corticosteroids when she was diagnosed with EA and for which corticosteroids are widely used,²¹ can be explained by the fact that inflammatory drugs are a cold type of medicine. Using cold drugs in a being that already suffers from cold symptoms can deteriorate the complaints and can have caused the IR/EMS to develop.^{16,22}

Where conventional medicine looks at all the different health issues as isolated diseases with a different etiology, TCM finds the missing link between them. In this case, treatment based on TCM principles has proved to be effective and can be used to find the root cause and treat the occurring health problems in a powerful way.

8. References *

1. Snijders, Albert. BEVAS Course Notes, Module 1, The Five Constitutions. 2020-2021. 6-7, 10.
2. Craig, Delores T. IVAS Course Notes, Chapter 14: Five Elements Theory. 2019-2020. 507-548.
3. Harman, J. An ancient medicine prospective of IR and Cushing's Issues of the horse. Holistic Horse. <https://holistichorse.com/health-care/an-ancient-medicine-prospective-of-ir-and-cushing-s-issues-o/>
4. Van Den Bosch, Kati. BEVAS Course Notes, Module 4, Spleen Syndromes in TCM. 2020-2021. 20, 21.
5. Puertas, Dolores. BEVAS Course Notes: Module 3, Tongue Diagnosis in TCM. 2020-2021: 1-16.
6. Van Den Bosch, Emiel. BEVAS Course Notes, Module 4, Lung Syndromes in TCM. 2020-2021. 50-51.
7. Van Den Bosch, Emiel. BEVAS Course Notes, Module 4, Kidney and Bladder syndromes in TCM. 2020-2021. 32, 33, 35, 36.
8. Snijders, Albert. BEVAS Course Notes, Module 5, Balance method in acupuncture or I-Ching acupuncture. 2020-2021. 70, 74.
9. Puertas, Dolores and Snijders, Albert. BEVAS Course Notes, Module 2, Zang-Fu organs in TCM. 2020-2021.
10. May, Kevin. IVAS Course Notes, Chapter 7: Equine Acupuncture: Acupuncture Points and Channels. 2019-2020.
11. Matern, Christina. Acupuncture for Dogs and Cats: a pocket atlas. New York: Thieme, 2012. p192
12. Urinary Bladder 43 (n.d) Retrieved from <http://www.Acupuncture.com/>. <http://www.acupuncture.com/education/points/urinarybladder/ub43.htm>
13. Puertas, Dolores. BEVAS Course Notes, Module 1, Jing Luo Mai. 2020-2021.
14. Schafer, Richard A. IVAS Course Notes, Chapter 5: Meridian System Theory. 2019-2020. 5.3-5.5
15. Puertas, Dolores. BEVAS Course Notes, Module 2, Zang-Fu organs in TCM, Metal Element. 2020-2021. 13, 32.
16. Van Den Bosch, Emiel. BEVAS Course Notes, Module 3, Eight Principles Pattern Diagnosis. 2020-2021. 8, 9, 23
17. Ostermeier, Nell. IVAS Course Notes, Chapter 12: Clinical application of tongue diagnosis for beginners. 2019-2020. 12.13, 12.14
18. Puertas, Dolores and Snijders, Albert. BEVAS Course Notes, Module 2, Zang-Fu organs in TCM, Earth Element. 2020-2021. 19.
19. Van Den Bosch, Kati. BEVAS Course Notes, Module 4, Spleen Syndromes in TCM. 2020-2021.4.
20. Ginel, Pedro J. Veterinary Dermatology, Volume 25, Issue 1. (November 25, 2013): 29-e10. <https://pubmed.ncbi.nlm.nih.gov/24267396/>
21. Mainguy-Seers, Sophie and Lavoie, Jean-Pierre. Journal of Veterinary Internal Medicine, Volume 35, Issue 1. (June 3, 2021): 2045-2057. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8295667/>

22. Puertas, Dolores. BEVAS Course Notes, Module 3, Etio-pathogeny in TCM. 2020-2021. 23.
23. Kritchevsky, Janice E. MSD Veterinary Manual, Overview of Equine Metabolic Syndrome (April 2019). <https://www.msdsvetmanual.com/metabolic-disorders/equine-metabolic-syndrome/overview-of-equine-metabolic-syndrome>
24. Paulsen Jim, Earing Jennifer, Johnson Roy and Ralston Sarah. University of Minnesota Extension, Horse Nutrition, Soaking your horse' hay (Reviewed in 2021). <https://extension.umn.edu/horse-nutrition/soaking-your-horses-hay#non-structural-carbohydrates-%28nsc%29-1164160>
25. Skoien, Jim. IVAS Course Notes, Chapter 10, Eight Principle Model of pattern differentiation. 2019-2020. 10.9, 10.10, 10.12, 10.13.
26. Van Den Bosch, Emiel. BEVAS Course Notes, Module 3, Eight Principles Pattern Diagnosis. 2020-2021. 91.
27. Matern, Christina. Acupuncture for Dogs and Cats: a pocket atlas. New York: Thieme, 2012. 25-26.
28. Matern, Christina. Acupuncture for Dogs and Cats: a pocket atlas. New York: Thieme, 2012. 310.
29. Puertas, Dolores. BEVAS Course Notes, Module 2, Zang-Fu organs in TCM, Earth Element. 2020-2021. 27.
30. Puertas, Dolores. BEVAS Course Notes, Module 2, Zang-Fu organs in TCM, Water Element. 2020-2021. 17.

* References to the BEVAS Course Notes: page indications are based on the XXL presentations of these courses.