



THREE COUNTIES EQUINE HOSPITAL

SPRING NEWSLETTER 2008

Limb Deformities in the Foal

We are rapidly approaching that time of year when the treatment of limb deformities in foals becomes one of our priorities. Abnormal limb conformation may either be present at birth (*congenital*) or may develop over the first few months of life (*acquired*).

Flexural Deformities

These abnormalities involve the flexor tendons and are best visualised by viewing the animal from the side. A mild degree of *flexor tendon laxity* is very common in the newborn foal, particularly if the animal is weak or premature. The condition, which occurs principally in the hindlimbs, is manifested by sinking of the fetlocks, with the foal rocking back onto the bulbs of the heels. In the majority of animals, the condition self-corrects within a few days. Exercise should be restricted during this time to prevent further damage.

Treatment may be required in certain cases in which there is difficulty standing and/or only slow improvement. Heel extensions are then applied to tip the foal forward onto the toes, while simultaneously protecting the heel bulbs. These remain in place until the flexor tendons have strengthened sufficiently to maintain normal limb alignment.



Mild carpal (knee) contracture which will self-correct



'Club foot' foal with 'contracted' tendon

A range of other *flexural deformities* in the newborn foal have previously, though incorrectly, been referred to as 'contracted tendons'. In these, the functional length of the flexor muscle/tendon unit is too short to permit normal limb alignment. Acting like a tight bow-string at the back of the leg, the 'contracted' tendon makes the foal unable to straighten (extend) the limb, causing the knee or fetlock to be fixed in flexion. Abnormal positioning of the foetus in utero and/or the ingestion of toxins by the pregnant mare have both been proposed as contributing factors.

In mild cases, spontaneous improvement often occurs over a few days or weeks. In more severely affected animals, limb splints or tube casts may be applied to hold the joint in a normal position. Gentle stretching of the limb may be carried out manually at frequent intervals. In certain cases, surgical lengthening of the 'contracted' tendon may aid recovery. Sadly, in the condition's extreme form, the affected joint is so severely deformed at birth (*arthrogryposis*), that foaling may be difficult, and, if a live foal is delivered, euthanasia on humane grounds may be necessary.

In the normal growing foal, lengthening of the limb bones and their associated soft tissues is synchronised so that growth occurs smoothly at the same rate. In certain individuals however, rapid, incoordinated growth allows the cannon bone and/or radius (forearm) to grow faster than the flexor tendons can lengthen, leading to the development of an *acquired flexural deformity*. Affected animals develop either a boxy, club foot ('toe-dancer') at around 6 weeks to 6 months of age, or a forward-knuckled fetlock, at around the yearling stage. The nature of the deformity depends upon the age at which rapid growth occurs and may be exacerbated by concurrent pain or lameness, which, by discouraging limb loading, limits normal 'stretching' and consequent lengthening of the flexor tendons.

In mild cases, restriction of food to slow the rate of growth, mineral supplementation and possibly remedial farriery are advised. Where the foot is boxy, frequent lowering of the heels and sometimes the application of a small toe extension will usually restore normal hoof alignment. In more severe cases, surgical release of the appropriate tendon, usually by surgical resection of its check ligament, is carried out.



Flexor tendon laxity in a newborn foal



Severe fetlock contracture – fetlock fixed in flexion



Angular limb deformities

Angular limb deformity refers to crookedness of the limb when viewed from in front or behind i.e. the lower limb is *angled* either to the inside or outside. Again, the condition may either be *congenital* or *acquired*. Affected individuals most commonly present with either 'knock-knee' (carpal valgus) or toe-in (fetlock varus) conformation. Occasionally, both fore or hindlimbs are bowed the same way, giving a 'windswept' appearance, presumably due to abnormal folding of the limbs *in utero*.

The nature of treatment depends upon the severity of the condition and the age of the animal on presentation. Mild cases will usually self-correct with restricted exercise. Glue-on shoes with appropriate extensions may be used to support the limb in correct alignment. In more severe cases, bone lengthening may either be accelerated or retarded surgically at appropriate anatomic sites, with the aim of producing a straight leg in several weeks' time. More recently, **shock wave therapy** has been used to manipulate growth patterns, thus obviating the need for surgery.



Carpal valgus (knock knee) conformation



'Windswept'



Metal plate applied across medial growth plate of radius to retard growth

Mud Fever

This is the time of year when many horses are plagued by Mud Fever. The condition is essentially a skin infection caused by a mixed bacterial/fungal organism called *Dermatophilus congolensis*. The back of the pastern is most commonly affected ('cracked heel') though any part of the lower limb is susceptible.

The organism becomes established on chapped, wet skin, particularly if already irritated by soil particles, *Chorioptes* mites (greasy heel, itchy heel mite) or sunlight in photosensitised individuals. In severe cases, the whole leg becomes swollen and painful due to secondary infection.

In most horses, allowing the legs to dry after exercise, followed by brushing off any mud appears to be the best management practice. In others, hosing and drying of the limbs appears to be more satisfactory. The preferable option appears to depend on the type of horse (fine skinned or feathered) and the local soil type (sandy or clay). Mild infection can usually be managed by the application of topical antibiotic/corticosteroid cream. The use of concentrated antiseptics can worsen the situation due to the chemical irritation and degreasing that they cause. In severe cases, systemic antibiotics and anti-inflammatories may be required.



Mud fever

Website

Please visit our website www.tceh.co.uk to find out more about facilities at the Hospital, staff and other useful information. We welcome your feedback. If you would like to receive your copy of the newsletter by e-mail, please contact the surgery via info@tceh.co.uk with your address. Please note that as a result of our recent subscription to Lifelearn Limited, it is now possible to download over 60 articles by expert authors on specific equine medical conditions. Please click [Equine Health Information](#) on our Home page for details.

Equine Dentistry

If you are having your horse's dental check done at the same time as routine vaccinations please let reception know, in order that sufficient time may be allocated for your visit.

Practice News

In January, Eugenio Cillàn attended the European College of Veterinary Surgeons Conference in Venice, whilst Antonio Andrades undertook further training in Ultrasonography of the Musculoskeletal System on a course in Amsterdam.

Andrew Harrison has been invited to lecture on Equine Disaster Medicine at a British Equine Veterinary Association meeting in March, co-hosted by Hampshire Fire Brigade. He is also organising a 2 day educational course for Vets at Three Counties Equine Hospital in May on In-Field Anaesthetic Techniques.

John Campbell and Graham Potts are to attend a course on Intestinal Stapling Techniques in February, often used during colic surgery. We are looking forward to the return of our Deputy Head Nurse, Chrissie Young, who has just completed a 6 month placement at Scone Veterinary Hospital, Hunter Valley, New South Wales, specialising in critical care of the young foal.

Breeding Season

Thanks to our Laboratory Technician, Catherine Salthouse, we have again maintained our status as a Horserace Betting Levy Board licensed laboratory allowing us to test for Contagious Equine Metritis (CEM) as well as the other two serious venereal pathogens *Klebsiella* and *Pseudomonas*, a potential major cause of loss in the breeding industry. Please do not hesitate to contact us to arrange any pre-breeding checks or laboratory tests (CEM, EVA and Coggins) that your mare may require before going to stud.