

Thoracolumbar Facet Joints



Introduction to Facet Joint Syndrome

The first signs of facet joint syndrome are best detected by the hands of an experienced vet. Careful palpation of the central spine and associated muscles can help indicate if pain is evident in this area. Facet joint syndrome usually causes pain off midline and manifests itself in many forms. Basically subdivided into three categories simply on anatomical location - Cervical facet joint syndrome (Neck), Thoracolumbar facet joint syndrome (Back) and Sacroiliac joint syndrome (Rump/Pelvis).

Midline back pain is more likely related to 'Kissing Spines' and pain in the associated ligaments between and along the dorsal spinous processes of the back. Thoracolumbar and Sacroiliac pain are extremely commonly seen together with hind limb lameness and pathology. It is very common to have a horse suffering from hock pain to then develop secondary thoracolumbar or sacroiliac pain and vice versa the back pain itself may in some circumstances be the primary cause of pain in the horse. This why it is extremely common to hear that a horse had its hocks and back medicated at the same time.

Facet Joint Pathology

Before we treat and medicate a horse with facet joint pain we will use ultrasonography to visualise these joints in the horse. The ultrasound machine allows us to see the borders of these joints which lie around three to four inches deep from the skin of the back. On an ultrasound scan we can see if osteoarthritis is evident in the joint, this is usually seen as remodelling of the joint, ie the nice white bony margins are now seen as irregular/broken edges.

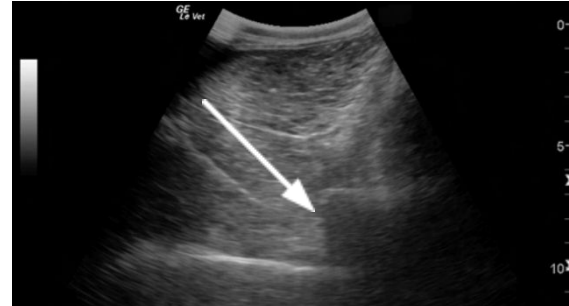
In addition to ultrasound we can also use radiography to assess the health state of the facet joint, but in reality this is only possible for the facet joints of the neck and to a lesser degree the thorax as the musculature of the back and rump in the horse make it impossible to get diagnostic quality images in these regions. A bone scan if needed can confirm increased activity of the facet joints but in our hands the combination of palpation and ultrasound scans seems optimal for the classic thoracolumbar facet joint issues we are seeing day in day out in all types of horses.

There is a strong correlation between palpable pain off midline on the back and remodelling of the underlying facet joints seen on ultrasound scan. Thankfully facet joints good and bad all seem to respond very well to medication and are not quick to need repeat medication. We usually feed a muscle relaxant for 2 to 4 weeks post medication and shock wave as needed every 2 weeks until the back is fully settled and muscled up.

In this image we can see as a curvilinear/convex ultrasound probe is used to locate the thoracolumbar facet joints



In this image we can see what a facet joint should look like under ultrasound. This common image is often referred to as resembling a 'CHAIR'. The arrow shows the joint space.



A perfect example of a healthy thoracolumbar facet joint. See the chair shape at the right of the image – the joint space is at the knee of the chair and the seat is a flat white line. Bony remodelling of the joint gives an irregular seat to the chair and sometimes we can even see distension of the synovial cavity as a larger hypo-echoic (dark) region around the joint.

Medicating the Thoracolumbar Facet Joints

The first thing the veterinarian will do is to scrub the entire region in order to make the environment as sterile as possible. Next the vet will use a sterile ultrasound probe to visualise each individual facet joint in the back, remember facet joints are bilateral so for each vertebrae there will be two facet joints. Once the vet is sure they have a good image of the facet joint they will then keep the probe securely in place and begin to enter a 3.5" spinal needle, they do this slowly and watch as the needle can be seen on passing through the underlying tissues on the ultrasound machine, it is at this point they may need to reorientate the needle to make sure its direction is correct in order to enter the synovial cavity of that facet joint, often a "pop" can be felt as the needle enters the joint. In the image seen above we can easily see the needle as a diagonal white line, thus the vet can be certain they are entering the right location to deposit the medication. Once happy that the joint is successfully entered the veterinarian will then inject corticosteroids with some antibiotic used prophylactically in order to prevent any sepsis from forming.

We usually advise 1 day hand/ horse walking followed by three easy days during which we advise that the horses are kept on two Bute per day. We also recommend that the horses aren't returned to full work and schooling for a minimum of 7 days. Robaxin, the muscle relaxant can help greatly in aiding the horse to get back to work as quickly as possible.

Facet joints respond well to medication and under normal conditions the veterinarian will be able to medicate ten facet joints in a single sitting, ie five facet joints on each side. As with midline back pain shock wave treatment immediately pre and fortnightly post medication can really help fully settle the back pain and help the horse build the top line muscles needed to achieve full core strength.

The sooner we get the back pain free the sooner the core strength builds to keep it pain free.