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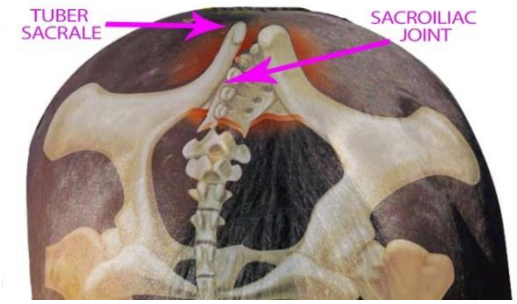
Sacroiliac Disease

Anatomy

The sacroiliac joint (SI joint) is where the vertebral column and the hind limbs of the horse meet and so this is where the propulsive forces are transferred from hind limb to the vertebral column. The sacrum (comprising 5 fused vertebrae) forms a joint with the wing of ilium (part of the pelvis). In donkeys the first coccygeal vertebrae is also often fused to the sacrum.



Though it is called a joint, it is very different to other joints, being virtually immovable. The joint is stabilised by the strong fibrous bands of the ventral sacroiliac ligament. The dorsal sacroiliac ligament attaches to the tuber sacrale (the highest point of the wing of the ilium) and the summits of the sacral spines. It does not form part of the SI joint. The sacroiliac joint is not meant to be mobile so stresses leading to instability can result in pain.

Types of SI Problems

There are broadly speaking 2 different types of problem which can affect the sacroiliac region.

- Acute injury - such as following a fall or slipping, leading to subluxation and secondary muscle spasm. There may be asymmetry of tuber sacrale; this is probably a reflection of injury to soft tissues e.g. dorsal sacroiliac ligament rather than true bony asymmetry. However this asymmetry can also be found in normal horses, or in a horse which has been previously injured but healed. Some care must therefore be given to the interpretation of asymmetric tuber sacrale.
- More commonly seen is low grade chronic sacroiliac pain from repetitive trauma / micro-damage to the joint, leading to sacroiliac dysfunction. This can be a primary problem, or can be secondary, due to the horses gait being altered because of other limb problems/ injuries.. Sometimes there may be genuine osteoarthritis of the joint

Dressage and show jumping horses appear to be over represented amongst animals seen with SI region pain. This may be due to the repetitive nature of some of the movements that they are required to perform.

Clinical Signs

The sacroiliac joint is where the propulsive forces are transferred from the hind limb to the vertebral column, so not surprisingly sacroiliac pain is typified by lack of impulsion, especially when ridden. Other symptoms may include reduced or poor performance, poor canter (breaking canter, changing behind, four beat canter, or inability to canter), unwillingness to work, loss of movement/ power, refusing jumps, difficulty with lateral work, unwilling to work on the bit, and stiffness.

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Once diagnosed, owners often retrospectively report problems of long standing duration (sometimes 1-2 years or more). Sometimes there are other gait abnormalities present e.g. rolling gait, wide based gait, narrow gait, plaiting; but no single type of gait is more typical than another in relation to SI region pain; lack of impulsion is the common feature.
Studies have shown that no conformation type predisposes to sacroiliac disease. Often the affected horses become poorly muscled (disuse of muscles due to pain) in the thoracolumabar region of the back (epaxial muscles*),* and the hindquarters (gluteals). Several problems can result in the horse moving in a stiff way, leading to loss of muscling, so this is not diagnostic of SI disease alone.

Nerve Blocks
The sacroiliac area is inaccessible to x- ray, and the joint is very deep to palpate as it lies under the hind quarter muscle mass. There may be pain on palpation of the tuber sacrale, and there can also be spasm of the back muscles. SI region pain can be difficult to diagnose, but it is possible to infiltrate local anaesthetic into the sacroiliac region. This is generally well tolerated, and performed with the horse standing in stocks.

Improvement in gait following this nerve block could indicate pain in this region (SI joint or ventral ligaments); it is also important to eliminate other causes of loss of hind limb action and lameness, some of which present in a similar fashion (e.g. bilateral suspensory origin desmitis).There can be several factors/ regions of pain contributing to causing a lameness, and it is important to identify all of them. SI disease is often found in combination with other problems. Sometimes clinical signs may have been very mild before the nerve block, and after the block horses with SI pain can have a dramatically improved gait, with a more consistent contact, and can be lighter in the bit indicating the degree of discomfort present even with relatively few clinical signs.

Treatment
Treatment may include medication with corticosteroids into the sacroiliac region, systemic NSAIDS (e.g. equipalazone), and modification of the exercise programme. Bisphosponate drugs such as tiludronate administered by intravenous infusion can also be useful in some types of sacroiliac disease. Any concurrent and contributory lameness problems must also be addressed.

Physiotherapy is also of huge importance in rehabilitation of horses with SI dysfunction. The horse needs to use the gluteal muscles fully; and building core muscle strength and improving posture are vital for recovery, as this allows the back to work correctly. The physiotherapist may use techniques to release muscle spasm; give exercises and stretches to recruit certain muscle groups; and also work in conjunction with the vet in suggesting walking exercises such as pole stepping and long reining. Building muscle mass is an important part of the recovery. Please see our separate document on rehabilitation exercises and discuss what is appropriate with your case vet.

Prognosis for recovery depends to some extent on the underlying reason, but early diagnosis is more likely to result in a full return to work. Some horses may not return to their previous level of work

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