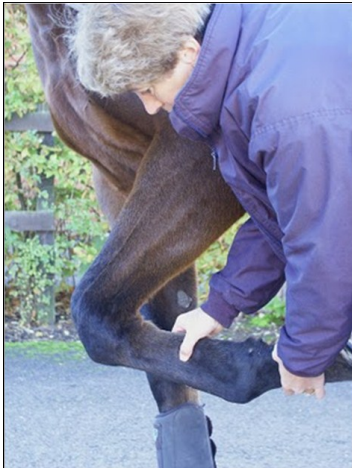




Hallmarq Veterinary Imaging Presents Dr Sue Dyson's Patient, A Showjumper Who Wanted to Stay on the Left Lead

Sue Dyson, FRCVS, is Senior Orthopaedic Clinician in the Centre for Equine Studies at the Animal Health Trust in Newmarket, England. The Animal Health Trust (AHT) operates a referral clinic for cases of lameness in sport horses, which is Dyson's specialty. AHT has advanced diagnostic imaging capabilities that are usually not available in equine veterinary hospitals.

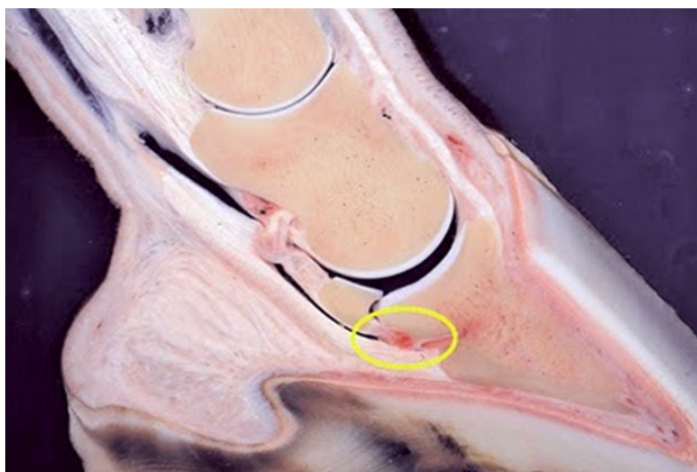


Dr. Sue Dyson of the Animal Health Trust in Newmarket, England performs systematic lameness exams on horses referred to the clinic for diagnosis or treatment. (Sue Dyson/Hoofcare Publishing image)

Imagine Sue Dyson examining Thomas, a five-year-old Warmblood, who competes in low-level showjumping.

Thomas was referred to the Animal Health Trust because he was reluctant to land from a fence with the right forelimb leading. He had become awkward turning to the left and sometimes felt "pottery" (unlevel or unstable) in front. Thomas's vet had detected some swelling in the region of the left front foot's coffin joint, just above the coronary band. He was sound on a straight line but on a circle he showed left forelimb lameness on the left rein, which was worse on a firm surface than a soft one.

Nerve blocks were used to desensitize the back of the foot and this eliminated the left forelimb lameness. On a separate occasion, an injection of a local anesthetic into the coffin joint also made Thomas sound.

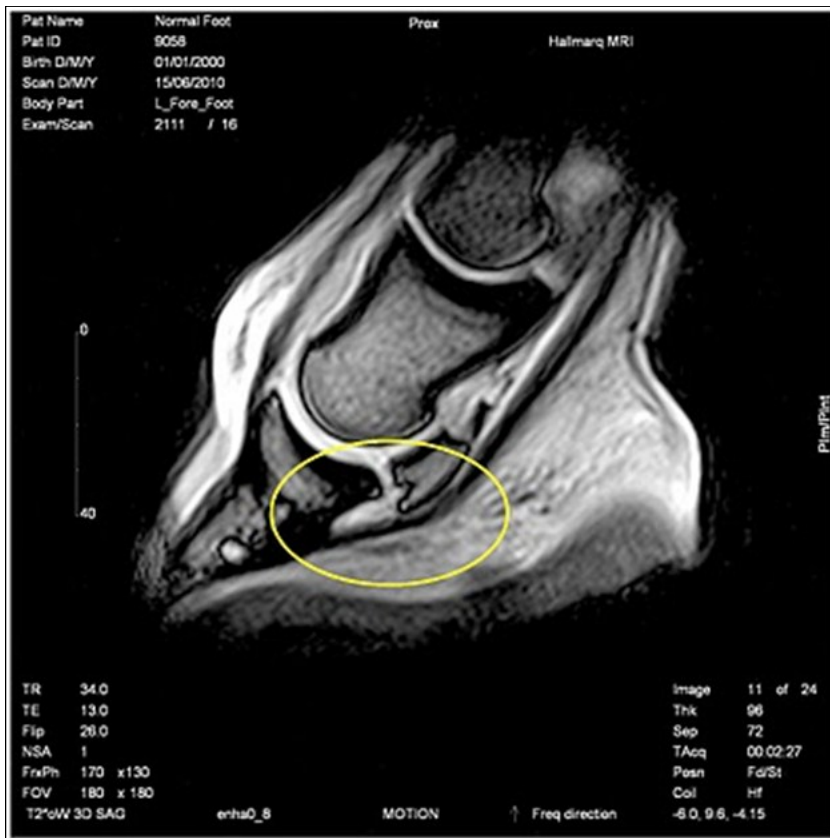


The impar ligament of the navicular bone is known as the Distal Sesamoidean Impar Ligament or DSIL. It anchors the navicular bone by connecting it to the coffin bone (P3). This ligament is very deep inside the foot and is not visible on a radiograph. (HC Biovision plastination image, used with permission)



X-rays of the foot were taken, but the vet saw no abnormalities. The vet explained that although primary injuries of the coffin joint can occur, a positive response to nerve-blocking did not rule out the possibility of injury to one of the other related structures.

A treatment plan devised by the horse's regular vet directed that Thomas's coffin joint was treated with an injection of corticosteroids and hyaluronan, which made him sound within a few days and able to resume full work. He continued to progress well for about six weeks but clinical signs recurred. Nerve blocks were repeated and yielded similar results.



This MRI shows what a normal, undamaged DSIL looks like. It appears like a solid bank of white leading from the navicular bone to the inside of the coffin bone. The veterinarian interpreting the MRI would hope to see the DSIL looking like the one in this image. (Hallmarq reference image)

The vet examined the collateral ligaments of the coffin joint, just above the coronary band, and could see no abnormalities. It was therefore suggested that an MRI scan should be carried out to try to establish a more definitive diagnosis. MRI often identifies injuries which are invisible when using other techniques such as x-rays or ultrasound, particularly when the problem is in the foot.

The MRI scan, performed at the Animal Health Trust, revealed that Thomas had sustained an avulsion fracture—an injury to the bone in a place where a tendon or ligament attaches to it—at one side of the attachment of the distal sesamoidean impar ligament to the pedal (coffin) bone. Clearly this was a problem that was going to require rest before Thomas would happily swap leads again.

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Damaged DSIL: Deciding to look into the foot in search of a root cause of the lameness was delayed for months with this horse, while the vet treated what might be the horse's problem. This type of injury is relatively rare but can be diagnosed through advanced imaging. The MRI showed that the foot was damaged in the region of the distal sesamoidean impar ligament (DSIL) in the navicular zone. The affected area is circled in yellow. Compare this Hallmarq reference image with the other images of the DSIL in this blog.

Thomas's case study is a sponsored blog post (Fran Jurga—hoofcare.com) in cooperation with Hallmarq Veterinary Imaging.