Regardless of the treatment type, a careful rehabilitation program is crucial. Slow to heal and require multiple treatment modalities and an extended rehabilitation period.

Diagnosing hind limb PSD requires a combination of a lameness exam, diagnostic blocks, and ultrasound imaging at the very least. In the past it has carried a guarded prognosis because the efficacy of surgery, ESWT, or a combination of the two in treating horses with hind limb PSD is controversial. Traditional treatment approaches generally involve an extended, expensive period of confinement or inactivity. Surgeons also treat PSD with procedures such as neurectomy of the deep branch of the lateral plantar nerve (cutting or transecting the nerve) and fasciotomy (ligament splitting) or a neurectomy alone. Post-surgical rehabilitation and/or an extended rest period is required.

Horses with PSD have inflammation and tissue damage in the upper part of the suspensory ligament, which is a structure that connects to the top back of the cannon bone, divides into two branches which attach to the proximal sesamoid bones, and lies under the superficial and deep digital flexor tendons and the plantar aspect of the hoof. The cause of PSD is usually unknown, although inflammation and overuse are common factors. The first step in treatment is generally trying a period of confinement or inactivity. If this is not successful, surgical or medical treatment options are considered.

One relatively recent modality is extracorporeal shock wave therapy (ESWT), a non-invasive procedure that uses sound waves to stimulate blood flow and tissue healing. But is it superior to traditional treatments when it comes to healing tendon and ligament injuries? The question is not new, but in recent years, veterinarians have been more open to trying a diverse range of regenerative therapies.

Norvall and colleagues compared ESWT to surgery for treating horses with laser or ESWT. While laser showed a greater return to normal function, there was no statistical difference in the number of horses that returned to their previous level of work or the time taken to do so. However, they represented a lower success rate than previously reported for horses treated with surgery. ESWT showed similar success rates between surgery and ESWT treatments, although some horses treated with ESWT returned faster than those treated with surgery.

On average, horses that underwent surgery alone returned to work in 10.1 months, ESWT horses in seven months, and horses that had to have both treatments returned to work in 18 months. Of the 34 horses treated with ESWT first, 20 returned to their previous level of work, four returned to a lower level of function, and 16 remained lame. Of those that remained lame, 12 were treated with ESWT alone and four were treated with a combination of surgery and ESWT.

Of the 15 horses in which the primary treatment failed and the second treatment modality was used, seven returned to their previous level of work. Of the 50 horses treated for PSD with laser or ESWT, 14 remained lame after treatment, 24 returned to a lower level of work, and 10 remained lame. Of those that remained lame, 12 were treated with ESWT alone and four were treated with a combination of surgery and ESWT.

Some veterinarians use ESWT to treat horses with PSD, so Norvall and colleagues compared the outcomes of horses treated with ESWT or surgery. While laser showed a greater return to normal function, there was no statistical difference in the number of horses that returned to their previous level of work or the time taken to do so. However, they represented a lower success rate than previously reported for horses treated with surgery. ESWT showed similar success rates between surgery and ESWT treatments, although some horses treated with ESWT returned faster than those treated with surgery.

In conclusion, ESWT is a viable treatment option for horses with PSD, but it is not a replacement for surgery in all cases. Further investigation is warranted to determine which cases might be more suited to ESWT, surgery, or a combination of the two.