Clinical Minute: Iliopsoas Injuries

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Introduction

Iliopsoas injuries are seen with some regularity in canine athletes and companions. The iliopsoas is a muscle formed by the psoas major and iliacus muscles. This muscle is an important stabilizer of the hind limbs and lumbar spine. Traumatic incidents that result in active, eccentric muscle contraction, such as slipping into a splay-legged position, jumping out of a vehicle, or roughhousing with other dogs are often behind an accute lameness. This may be due to an imbalance between muscle groups, or due to weak core muscles that stabilize the body during athletic activity. Dogs with iliopsoas strains may have concurrent orthopedic problems, or may have recently undergone surgical treatment for an orthopedic condition.

Clinical Signs

Iliopsoas strains most commonly occur at musculotendinous junctions, and are graded from grade I (mild) to grade III (severe). Changes in gait can be sublte in dogs with iliopsoas injuries, or can present as a severe, toe-touching lameness. Dogs can be affected on one or both sides, and lameness can be acute, chronic, or recurrent. A shortened stride in the affected hind limb is often noted due to decreased hip extension. Agility dogs may also have a tucked appearance and may knock bars, take wide turns, or exhibit a lack of drive from the rear when weaving.

At exam, direct palpation of the iliopsoas muscles and points of insertion by your veterinarian may elicit a pain response. Palpation of the muscle body may also cause discomfort.

Diagnostics

Radiographs
Pelvic radiographs are typically unremarkable, but occasionally changes may be seen. It is possible that tendon avulsions can be appreciated on radiographs. Regardless of the diagnostic potential, radiographs should be performed to rule out concurrent orthopedic conditions of the pelvis, lower spine, and/or stifle.

Ultrasound
Ultrasound is extremely useful in diagnosing iliopsoas injuries, and can be used to follow the healing process and response to therapy. Ultrasound offers many advantages over other diagnostic tools, including its non-invasive nature and ability to image some areas without the need for general anesthesia. The cost-effective nature of ultrasound also allows for repeated monitoring. During the scan, a dog is placed onto its back, and the ultrasound probe is used to visualize the muscle body, origin, and insertion points.

MRI/CT
Other advanced imaging, such as MRI and CT, are not used as frequently to diagnose iliopsoas injuries as these modalities are cost-prohibitive and require general anesthesia. The iliopsoas muscle injuries are also poorly identified on MRI and CT scan images. However, MRI and CT are useful in ruling out concurrent neurologic conditions.

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Treatment Options

Conservative Treatment
An overwhelming majority of iliopsoas injuries are treated conservatively, that is without the need for surgery. Rest and rehabilitation therapy are critical for successful conservative management. A typical course of conservative management includes 8-12 weeks of rehabilitation therapy modalities, such as laser therapy, manual therapy, and underwater treadmill therapy. Medications may include muscle relaxants, pain medications, and anti-inflammatories (NSAIDs), based on the severity and duration of the injury.

Regenerative Therapy
Dogs with grade II or III strains seen on ultrasound, or dogs who do not respond to conservative management, may benefit from regenerative medicine therapies. This type of therapy includes platelet-rich plasma, stem cell therapy, or a combination of both. This therapy helps to re-initiate the inflammatory response which is lacking in these dogs. By stimulating blood flow to the iliopsoas area, and providing precursors for healing, remodeling and regeneration can be promoted. Rehabilitation therapy after regenerative medicine therapies can promote the appropriate healing, resulting in new tissue formation rather than the formation of scar tissue. Regenerative therapies do require the dog to be placed under general anesthesia at least once to collect and inject the necessary components for platelet-rich plasma or stem cells therapy.

Surgical Management
Rarely, dogs that fail to respond to both conservative and regenerative therapies may require surgical management. Surgical options include transection of the tendon, or reattachement of the iliopsoas. This results in rapid improvement of clinical signs and discomfort, but can result in some degree of decreased performance.

Summary

Iliopsoas injuries are common in both companion and performance dogs, and awareness of soft tissue injuries among veterinarians is increasing. Through appropriate diagnostics, as well as conservative and regenerative treatment plans, VOSM has been able to return many patients back to full function and happy lives.

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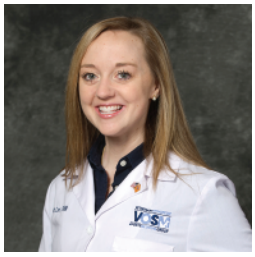

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