

LAMINITIS IN THE RACEHORSE

BY HARRY J. MARKWELL, BVSC, DACVS-LA
REGISTERED SPECIALIST IN EQUINE SURGERY, WESTVETS ANIMAL HOSPITALS

**LAMINITIS IS WIDELY ACCEPTED AS THE SINGLE
MOST SIGNIFICANT HEALTH CONCERN IN ALL
BREEDS OF HORSES GLOBALLY.**

Typically, the condition of laminitis was believed to only affect older horses and ponies, it is now well accepted that this condition can affect any breed, type, or use of horse. The thoroughbred racehorse is not immune to this risk.

CAUSES OF LAMINITIS

The causes of laminitis are varied and depend on the breed and type of horse. These conditions can be broadly grouped as induced by one of the following: 1) Metabolic Causes 2) Hormonal Induced, 3) Inflammatory Causes, 4) Mechanical, 5) Supporting Limb. Metabolic and hormonal induced conditions are classical for the overweight and older sport horses. In the thoroughbred racehorse, inflammatory conditions (e.g. cellulitis, pneumonia), mechanical conformation related causes (e.g. thin soles), and unilateral weight bearing (e.g. hoof abscess, fracture) are frequent concerns in the racing stable and have the potential to readily induce laminitis.

TYPE OF LAMINITIS

Three clinical forms of laminitis are well accepted:

1. Developmental phase
2. Acute phase
3. Chronic phase

The developmental phase and the acute phase will be the most common signs observed in the racing stable. The developmental phase can be as short as six to eight hours when induced by severe

toxic causes; but many show low-grade signs of inflammatory conditions such as pneumonia and colitis. This phase is difficult to identify but has the greatest benefit for early treatment. Anti-inflammatory therapy, ice, vasodilators, and antibiotics (where required) have the greatest benefit in this period. Increased digital pulse strength and heat may be felt within the foot. As a patient with laminitis progresses through to this phase, blood flow and metabolism is changed within the foot with a variety of inflammatory processes increasing. In the acute phase, horses show characteristic changes in weightbearing with shifting limb lameness. Horses will start to become reluctant to move, noted to lean onto the heels and hind limb. Hoof tester reaction will be markedly positive over the sole. The chronic phase is



seen after management of acute laminitis has been completed. This final phase involves healing of the hoof wall and pedal bone. These horses are always at risk of repeating the development of laminitis but with early care, can return to racing.

DIAGNOSIS OF LAMINITIS FROM GENERAL FOOT PAIN

Cases of developmental laminitis in the racehorse can be extremely difficult to differentiate from generalised sole bruising experienced in many thoroughbreds. Clinical signs such as increased digital pulses, hoof tester sensitivity, soreness on hard footing are not specific for laminitis. Radiographs are essential. Careful assessment of the dorsal hoof wall thickness and monitoring any changes can be an early indicator of severe disease. Judicious use of anti-inflammatories is also indicated. Treatment recommendations for sole bruising are not significantly different to that of developmental laminitis. Advanced imaging techniques such as venograms have been advocated but the benefits of these are minimal.

PREVENTION OF LAMINITIS

Horses with thin soles and a history of foot soreness are at risk of further problems in the future and close management of these cases is essential. Horses with severe inflammatory conditions, those recovering from short term or long-term orthopaedic injury, and horses with poor foot conformation are at the highest risk. ▣