

ACUTE LAMINITUS IN HORSES

The term 'laminitis' is used to indicate a spontaneous and diffuse inflammation of the whole of the sensitive structures of the foot, more particularly the sensitive laminae. Usually it occurs in the two front feet, often in all four, and occasionally in the hind alone.

In the early stages of laminitis there is a state of engorgement of the vessels of the keratogenous apparatus generally, but more particularly the laminal portion of it. With the hoof removed at this stage the sensitive laminae are found to be swollen, dark red in colour, and affording a distinct feeling of increased thickness when pressed between the fingers, Incised, there escapes from the cut surface a large flow of dark venous-looking blood. At this stage hæmorrhages of the laminal vessels occur.

The escaping blood infiltrates the surrounding connective tissue, and in many cases destroys the union between the horny and sensitive laminae. This change is most noticeable in the region of the toe and the commencement of the quarters, the os pedis appearing as though pushed backwards by the escaping fluid collected between the wall and the bone. In severe cases, fortunately but rarely seen, the blood so escaping continues to infiltrate, and separate the tissues until it is seen to be freely oozing at the region of the coronet.

The period of exudation marks the outpouring of the inflammatory fluid. This, even more than the hæmorrhages attending the stage of congestion, tends to destroy the intimacy between the sensitive and the horny laminae, leading finally to their complete separation at the region of the toe.

CAUSES OF LAMINITUS

In dealing with the causes of laminitis, we will first dispose of those coming under the heading of traumatic. Correctly speaking, however, lesions of the laminae thus occurring do not present the same symptoms, nor run an identical course with the disease we now purpose describing, and for which we would prefer to entirely reserve the term 'laminitis.' The fact, however, that traumatic causes are detailed in other works on the same subject compels us to give them mention here.

Strictly traumatic causes giving rise to a limited inflammation of the sensitive laminae are violent blows upon the foot, either purely accidental, or self-inflicted by violent kicking.

The tenderness following upon excessive hammering in the forge, or of too long an application of the shoe in hot-fitting has also been described as laminitis.

The specific cause we have indicated as existing can, in the present state of our knowledge, be only vaguely described as a poisoned state of the blood-stream. This, as clinical evidence teaches us, may result from a variety of causes.

Among these, by far the most common is that state of the circulation induced by excessive feeding with too stimulating or too irritating a diet. In any case, where the use of old oats as a staple diet is departed from, and where the quantity and manner of using the substitute is left to the discretion of careless or unskilled attendants, trouble is likely to ensue.

The food more prone, perhaps, than any other to bring about an attack is wheat improperly prepared — that is, uncooked or unground. So much so is this the case that one full meal of this provender to an animal unused to it is sufficient to lead to a train of symptoms often ending fatally.

Beans, peas, barley, rye, new maize, or even new oats, are all liable, if carelessly used, to have the same effect.

It is the laminitis following feeding on new oats that has caused us to apply to the food the adjective 'irritating.' Here, more often than not, the peristaltic action of the bowels is found to be abnormally in evidence, and the excessive use of the diet is always accompanied by a more or less fluid discharge of the intestinal contents.

In addition to the foods we have mentioned, many others might be enumerated, more especially the numerous 'made-up' feeding materials now on the market. Many are composed of substances that may be regarded as absolutely opposed to the correct feeding of a horse, and their use can only be followed by this and other evil results.

Another most fruitful cause of laminitis is a severe and continued inflammatory condition of the system elsewhere. It is the laminitis known to veterinary surgeons as 'metastatic,' and perhaps the two most notable examples of it are the laminitis following a prolonged attack of pneumonia, and the 'Parturient Laminitis' occurring as a concomitant of septic metritis.

Parturient laminitis it is that offers us the most striking illustration of the truth that a poisoned state of the blood-stream is a sure factor in the causation of an attack. From the direct evidence of our senses (namely, manual exploration of the infected womb, and the stench of the exuding discharge) we know that we have in the interior of the womb matter in a state of putrescence.

From the experience of previous post-mortems we know, further, that the putrescent matter thus originating often gains the blood-stream, and forms foci of septic lesions elsewhere — liver or lung. When, therefore, during an attack of septic metritis a condition of laminitis supervenes, we are justified in attributing it to the escape of septic matter from the already infected uterus.

In the same category of laminitis from metastasis may also be placed the laminitis occurring as a result of an overdose of aloes. The enteritis thus set up is often followed by laminitis, and that of a serious type.

Prolonged and excessive work upon a hard road is also apt to induce an attack. When this occurs it in many cases resolves itself into a case of cruelty.

Laminitis from this cause was frequent among coach and carriage horses in the pre-railroad period, and resulted from attempting to obtain from the animal a faster pace and a greater number of miles than he was physically capable of giving.

In our day, however, it is more often a result of gross feeding, combined with only that amount of work which the horse, if ordinarily fed, would be easily able to perform. Passing from these, the more common, we may consider other and less frequent causes of the disease. Congestion of the laminal blood-vessels and consequent laminitis occurs when animals are made to maintain a standing position for prolonged periods, as, for instance, when making sea voyages. A long and painful disease of one foot, necessitating the whole of the weight being borne by the other, ends often in laminitis of the second member. It may thus occur as a sequel to quittor, complicated sand-crack, suppurating corn, and punctured wounds of the feet.

Laminitis has also been known to occur as a result of septic infection of the blood-stream consequent on the operation of castration.

A sudden lowering of the surface circulation at a time when the animal is excessively perspiring is also said to favour an attack, as also is the giving to drink of cold water to an animal just in from a long and tiring journey. Further, laminitis has been described as occurring when the animal is at grass, and when all causes — at any rate, active ones — have appeared to be absent.

Regarding heredity, we may safely say that, as a cause of laminitis, it may be almost totally disregarded. That a bad form of foot, either a flat-foot or a foot with heels contracted, and already thus affected with a mild type of inflammation, did not offer a certain predisposition, we should not like to assert. There must, however, be an exciting cause — namely, a poisoned condition of the blood-stream. This latter cannot, of course, be in any way regarded as hereditary.

In short, the dietetic cause is by far the most common, and, in prosecuting inquiries as to the starting-point of an attack, the veterinarian's attention should be directed in the main to that particular.