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## The Diagnosis of Lameness.

BY "VET."

It never surprises me that horse-owners should hold tenaciously to their own diagnosis of disease, because experts are so often mistaken, but it is not a little curious that those who have seen but very few cases of lameness should deem it an easy matter to decide as to its cause. To the veterinary student there is no more difficult subject, and I have known experienced practitioners make the most egregious errors; nay, I might put it the other way about and say I have never known an honest man who would not confess to them.

I bought a horse for 15s. that had been condemned to death for a broken leg which, instead, had deep-seated matter in the foot—a hind foot, which made him hang it from the hip—"dangle his swinger," as the groom said, and had all the appearance of a broken limb, until, by manipulation of the whole leg, no deformity and no rasping (crepitus) could be discerned. It had been too hastily assumed that a fracture existed because of the total inability of the animal to so much as touch the ground with the foot. The farrier's knife liberated pent-up matter, and the horse went to work ten days later in the town where the much-respected practitioner had condemned it to death. This case is mentioned as an example of the extreme sensibility to pain exhibited by some animals, and as contrasting strangely with others which may have pus within the hoof, and yet so comparatively indifferent as to leave the actual seat of lameness in doubt, until one morning matter is found exuding from a spot at the top of the hoof, and with a diminution of such lameness as previously existed.

To show how little assistance is to be obtained from the patient in diagnosing lameness, it may be remarked that one animal will submit to pressure over the seat of inflammatory action, while another snatches up his suffering members as soon as we approach it.

## ANATOMICAL KNOWLEDGE HIGHLY IMPORTANT.

In no department of veterinary surgery is anatomical knowledge more important; but this is not enough—we must be familiar with the "going" of all sorts of horses, for they do not all move alike. We may learn from Captain Hayes, or from Marie, or Muybridge, how progression is attained in the various paces; how the diagonals and supports follow in rhythmical order, and the various levers elevate the leaping animal. These things have been proved by instantaneous photography, but they do not assist us in the diagnosis of lameness; they describe the normal movements which we had all misapprehended before highly sensitized plates had been introduced. We thought that horses galloped with all four legs extended to their full extent at the same time, never asking ourselves upon what they rested while getting their feet under the center of gravity again. The artist and the poet owe us much reparation, for they have misled us by their exuberant fancy. Lameness occurs at any time of life, and we have to distinguish between the stiffness of what is commonly called a "screw" and the perverted action which in a young horse would be designated lameness. A horse may have suffered from fever in the feet, resulting in structural changes, and not be in pain, not lame in the sense of "lameness being the language of pain," and if, as is most usual, the front feet have been the sufferers, he will have acquired a habit of imposing an undue share of weight on his hypertrophied heels, and will also bring his hind feet further under his belly, to accommodate himself to a shifted center of gravity.

If such an one falls lame, say, of a splint or spavin, and we approach him with preconceived ideas as to action, we shall only introduce a further element of difficulty into our diagnosis. The only way to learn to diagnose lameness is to see numerous cases. For this reason the city practitioner is pre-eminent in this department of veterinary work; he is called to twenty cases of lameness for every one the country man sees.

It is an every-day occurrence for the owner or attendant to mistake the limb in which the trouble exists, and many are the horses I have been called in to that refused to get better for all the famous remedies which had been applied to the wrong leg.

This being a common experience among "vets," I shall be pardoned for pointing out the fact that a lame horse drops on the sound member, not the lame one. A moment's thought will convince the reader that the animal will put the least weight and dwell the shortest time on the painful limb.

## ASCERTAINING THE SEAT OF LAMENESS.

To ascertain which of the front limbs is the subject of lameness, a smooth piece of level road should be selected, and the patient led a distance of forty or fifty yards from the examiner, then turned, and trotted towards him, with a loose bridle or plain halter. The latter detail is of more importance than may at first sight appear, as some horses display what has been called "bridle lameness."

It is not contended that the effect of any bridle can make a horse lame, but there are some which lean towards a groom with a bridle tightly held, and so "nod" in his direction from the mere fact of being restrained from going in a straight line, with equal freedom and length of stride, the limb nearest the groom taking a shorter one than its fellow. Again, the dealer's man who is showing a "screw" will get the best pace out of him by a

severe bit, the head held up, and the attention of the horse being diverted from some less painful ailment in the limb to the greater discomfort of his mouth.

With the examiner's attention concentrated upon the animal coming to him, he will see first if it is lame at all, and next be able to decide upon which foot he rests longest.

If a hind lameness is suspected, the reverse method is advised, and the rump or hips watched to see which drops. When it is decided which limb is affected, a careful search should be made from the knee or hock downwards. It may be that a tender spot will be pressed upon, and the patient afford us the help we have said is so often denied. Visible swelling or palpable heat of a part may guide us.

It very often happens, however, that none of these things are discernible, even to the practiced eye and hand of the veterinary surgeon, and it has been well said that "you should have a horse's shoe off if he is lame in his head." The story of the 15s. horse above noted is, perhaps, as good an example of the propriety of having the shoe removed as one can give, but it is within the experience of other veterinarians that a horse may be lame in two places in the same limb, and it is rather disconcerting to find matter break out at the coronet, while one is doctoring a splint or a spavin, without suspicion of mischief going on in the foot. The farrier's shop is often a long way off, and if the animal has been recently shod at his place, he will be none too anxious to find that the lameness is in the foot. He is habitually blamed for every sort of lameness, and never hardly credited for keeping a cripple going by his judicious shoeing, although the latter is much more of an every-day affair than is the laming for which he gets debited. If each particular source of lameness yielded the same set of symptoms invariably, we could note them down, and remember or refer to some authority, but they do not fall into the square so neatly marked out for us by academic professors; indeed, those who lecture so ably and impart much useful information at the colleges are just about as likely to make mistakes as the average practitioner who keeps his eyes open and uses his opportunities.

Here is an example which I quote from a paper read by Mr. Hunting before the Yorkshire Veterinary Medical Society quite recently: "He (a certain horse) had been lame for some months, and had twice been taken to the Royal Veterinary College, where a diagnosis was made of splints." This animal was found to be lame by a method of diagnosis which will be new to our readers probably, and of considerable interest as a negative test. Cocaine was subcutaneously injected into the lamer limb of the two, above the fetlock joint, too far from the splint to act as an anesthetic, but destined to have that effect upon the foot. After an interval of seven minutes, Mr. Hunting told the society, the horse was trotted out and went sound on the limb that had been injected, but lame on the other which had not been so operated upon. Here was proof of foot lameness, and subsequent division of the sensory nerves enabled the animal to go sound, by cutting off sensation from the structures implicated.

## DIAGNOSIS OF LAMENESS.

The diagnosis of lameness may, in some cases, be attained by deductive reasoning and reflection on the cases one has previously seen (oh! what an array of cripples rises to the mind, and what blushes to the cheek, as one thinks of his mistakes!), by the absence of all other apparent causes, and the action or movements which point to a certain class of lameness. In the absence of all heat or tenderness in the joints, tendons, and ligaments, suspicion fastens itself on the foot, and this is often confirmed by the animal's behavior in the stable or out of it. An uneasy foot will be frequently shifted, perhaps "pointed" or placed in advance of the other.

In a front limb a disposition to place one foot in advance of its fellow, and at the same time bring forward the opposite hind one with knuckling of the fetlock, is enough to suggest a careful examination of the hoof, after removing the shoe. The horse obtains most rest by putting his weight on the opposite diagonals. When easing his rear fore, he will bring forward his off hind, and relax the fetlock or let it "knuckle." In this way the off fore and rear hind are made to sustain the whole weight of the animal. If the order above stated is that in which he is most frequently found, and he only reverses it for a short time, it is most likely that his grief is in the rear fore, and vice versa.

Pointing in the stable is too often assumed to be nothing more than a habit, and the subject of it may pull out sound or appear to be slightly "groggy." "Oh, it is only his way, he is as sound as a bell of brass," says the seller, but the experienced "vet." will say, *caveat emptor*. The latter will not pass such a horse until he has stood long enough under lock and key to cool down, and has proved on coming out of the stable again that his step is not shortened or his gait in any way altered. Even then he will suspect incipient navicular disease, unless some reliable evidence of recent injury by a nail or sharp flint can be obtained.

## NAVICULAR DISEASE.

Pointing does not always declare the presence of navicular disease. A horse may point with the uneasiness of a corn or hang the limb from the elbow, with bent knee, and toe resting lightly on the ground. He may assume the latter position when suffering from ringbone or other trouble near the foot, but it may be taken as a broad rule that

foot lameness is oftener expressed by pointing than by any other attitude in the stable. When the diagnosis has been narrowed down, and the positive or negative symptoms lead us to believe it is in the foot, we may not after all find absolute proof. If we have seen the behavior of many horses with pricks or corns, we can make a pretty good guess, and because we find no evidence of pus, no specially tender spot when pressed upon by the pincers, we must not allow our suspicions to be allayed until positive proof is forthcoming that the trouble is to be found elsewhere. These few points in the diagnosis of foot lameness take long to write, yet the practical "vet." sees them all in a moment or two, while the owner is, perhaps, being asked some simple question bearing upon the history of the case.

It is a curious attitude of mind on the part of many owners and attendants of the less intelligent class that makes them behave towards the veterinary surgeon they have called in like reluctant witnesses under cross-examination when everything, however remotely bearing upon the question, should be carefully noted and placed before the man who is desirous of giving aid.

Another broad rule in regard to foot lameness is the diminution of their severity with exercise. The patient, which at first seems glued to the ground and positively unable to move a step, will, when compelled to walk a few yards, regain an astonishing amount of mobility. The horse only a little lame or groggy, as it is called, will altogether throw off the trouble after the first few hundred yards, and deceive even the elect.

This is not so with animals suffering from some bony inflammation, as splint or ringbone, but it applies more or less to the spavin, which is an exception to the general rule, and to be explained by the increased lubrication of the joint from the flow of oil excited by movement. A youngster with a splint forming will probably fall lame on the road, and continue so until stabled. When the owner, suspecting he has trodden on a stone, looks for it and does not find one, he concludes that the foot was bruised, and next day, when the concussion in the splint has passed away (more or less), his opinion is confirmed that it was a stone that caused the horse to go lame. If the animal is trotted out he is satisfied, but if he mounts him for a journey the same difficulty recurs, and the horse is brought home with misgivings.

Some forms of lameness are diagnosed by the abduction or adduction of the limb when in motion. Of this class is the pelvis injury, which Mr. Willis, of the London General Omnibus Company, was the first to make clear. The diagnosis is assisted by clearing out the rectum with a clyster, and then introducing the hand and exploring the sides and floor of the pelvis. The crack in the bone may not be felt at the time perhaps, but a lesion of the kind once suspected, the animal will be watched to see if he displays any of those symptoms usual to cases of the kind, and whose character has been subsequently proved by *post-mortem* examination.

The lameness from this cause is not so great at first as it is a little later, when a growth is felt. This material—a callous is its surgical name—increases the pain of movement by pressure upon the great nerve trunk known as the obturator, until it has done its work of reunion, when, as with other fractures, the superfluous material is gradually removed, and with it the lameness. Without a knowledge of anatomy and of the history of such cases, lameness of this kind could not be diagnosed, nor could a prognosis be made. Knowing, as we now do, that the increase of lameness is but a sign that the split bone is being united, we are able to foretell recovery, and hand over the case to Doctors Time and Green, whose treatment of convalescents may sometimes be slow, but seldom expensive.

## A ROTARY MOVEMENT.

By a rotary movement of the hind limb stifle joint lameness is diagnosed, and by a similar movement of the fore limb some elbow injuries are detected; in each case the arc of a circle is described. One of the most obscure lamenesses is caused by a disease of a large main trunk in the circulatory system, which goes to supply the hind quarters with blood. Invaded by parasites who love to seek a junction of vessels for their home, the lumen presently becomes occluded, and paralysis to a greater or less extent results. Lameness we call it, and it is now sometimes diagnosed during life by the coldness and comparative insensibility of the affected limb.

In the two examples of hind limb lameness above mentioned, the importance of correct diagnosis will be evident: in the one case time and rest will restore the patient to usefulness, and in the other loss will be prevented by slaughter. *Inter alia*, it may be remarked that one may have more unprofitable payments to make than a "vet.'s" account for an animal he could not cure, if he were able to save loss by correct diagnosis of a hopeless case from the beginning.

Let me conclude by quoting one more example of lameness, which shows the desirability of the study of anatomy, of cultivated powers of observation as to animals' movements, of *post-mortem* examinations of incurable cases, and of a habit of comparison of different cases in order to qualify oneself to advise as to lameness, or even to diagnose it correctly. Dropped elbow was carelessly assumed to be due to a variety of causes until Mr. Willis, whose name has been previously mentioned, took the trouble to dissect the connections of the fore