



Lameness or neurological disease?

Martin Furr DVM Dipl ACVIM PhD MA Ed, Specialist in Equine Internal Medicine, Oklahoma State University, US, outlines how to differentiate between lameness and neurological diseases

Determining if a gait abnormality is due to disease of the nervous system or the musculoskeletal (MS) system is one of the more complicated clinical tasks the equine veterinarian faces, and one that is not uncommon.

It is particularly challenging when the gait abnormalities are mild. It is important to recognise that horses, which have MS disease, will 'fail' the neurological examination because proper function of the MS system is required to complete it. The nature of the deficits observed differs slightly, and there are a few rules of thumb that can be used to help make this distinction.

The history and progression of the complaint are somewhat helpful in some cases.

For example, a horse that has a gait abnormality that is responsive to rest and recrudesces with work almost invariably has MS disease – this is simply not a history that is consistent with neurological disease. Response to nonsteroidal anti-inflammatory drugs (NSAIDs) is also a strong indication of MS disease, as is the history of 'warming out' of the lameness.

The next step in the process is to complete a comprehensive physical examination, noting muscle development and symmetry, as well as the presence of enlarged joints or tendons, and a thorough examination and palpation of MS structures.

It is important to include observation of the hooves for abnormal wear, and to evaluate digital pulses in all four feet to rule out laminitis as well as to ensure that there is adequate blood flow to the hindlimbs. Iliac thrombosis will result in decreased pulse quality in the hindlimbs, and can cause gait deficits that resemble neurological disease. Rectal palpation is helpful and may be necessary in ruling out iliac thrombosis, as well as pelvic fractures or injury, which can also lead to clinical signs that may be confused with ataxia.

GAIT ABNORMALITIES

In most cases, a standard lameness examination incorporating palpations, jogging in a straight line and circles, and flexion tests, at minimum, is required, as MS lameness is much more common than neurological disease. In the obviously neurologic horse, this is not necessary or advisable. Following the regular physical examination and lameness evaluation, perform a neurological examination, incorporating an assessment of the cranial nerves, skin sensation and panniculus, anal, and tail-clamp reflexes, as well as an evaluation in motion and at rest.

A few key observations are helpful in differentiating the abnormalities observed in a neurological exam that arise from MS disease as compared to neurological disease. Horses with an MS disorder demonstrate gait abnormalities that are consistent and regular in their nature – the disorder is the same from step to step. Horses with neurological gait abnormalities, in contrast, demonstrate a gait deficit that is irregular – they are incapable of placing the limbs in the same position step after step. Horses with neurological disease demonstrate the gait abnormality in all phases of the examination (walking, turning, downhill, etc.) – the horse that only shows a problem going downhill, for example, but not at other times, most likely has a subtle MS problem. Finally, if in doubt, the limb can be blocked and the neurological examination repeated – failure to block out an obvious lameness could give rise to concern about neurologic disease, while blocking out the lameness eliminates neurological disease as a concern. Remembering that the nervous system is responsible for the rate, range and direction of limb movements helps in interpreting the movements during a neurological examination. If the placing, range and direction of the limb movements is normal, yet the horse 'looks clumsy,' it might simply be in pain.

Regulation of veterinary medicines in Ireland

Hazel Sheridan, senior superintending veterinary inspector, Department of Agriculture, Food and the Marine (DAFM) outlines how human and animal health is protected and monitored by the regulation of veterinary medicines in Ireland by the shared responsibility of the Health Products Regulatory Authority (HPRA) and the DAFM

The HPRA is responsible for the authorisation of products and for controls on manufacturers. The DAFM is responsible for controls on supply and end use. The DAFM carries out official controls (generally, inspections) at all levels from wholesalers to farms as indicated in Figure 1.

Inspections are different from investigations. These are typically carried out by veterinary inspectors coming from DAFM's 16 regional offices. The inspectors belong to two divisions in the chief veterinary officer's (CVO's) business line called area management team (AMT) North and AMT South (see Figure 2).

The purpose of these inspections is to measure compliance with the requirements of the legislation and to provide guidance on how to improve compliance, when required. Investigations are very different and are carried out by staff in the DAFM's Investigations Division, which is a separate division in the DAFM that is also in the CVO's business line.

These investigations are carried out on foot of intelligence received that an offence may have taken place. This may have resulted from the detection of an illegal product by Customs, or from information obtained on another premises. Investigations, by their very nature, are more adversarial than inspections. That said, everyone is entitled to be treated with respect. In the event that anyone believes they have been unfairly treated or that DAFM staff have acted inappropriately, then this should be immediately reported to the DAFM.

The legislation is there to protect human and animal health and to ensure that there is a level playing field for all. DAFM has no desire to impose unnecessary or impractical restrictions on veterinary practices and in the event that this is happening, we are very open to working with industry to devise solutions that work for all, provided these do not lower the overall level of public and animal health

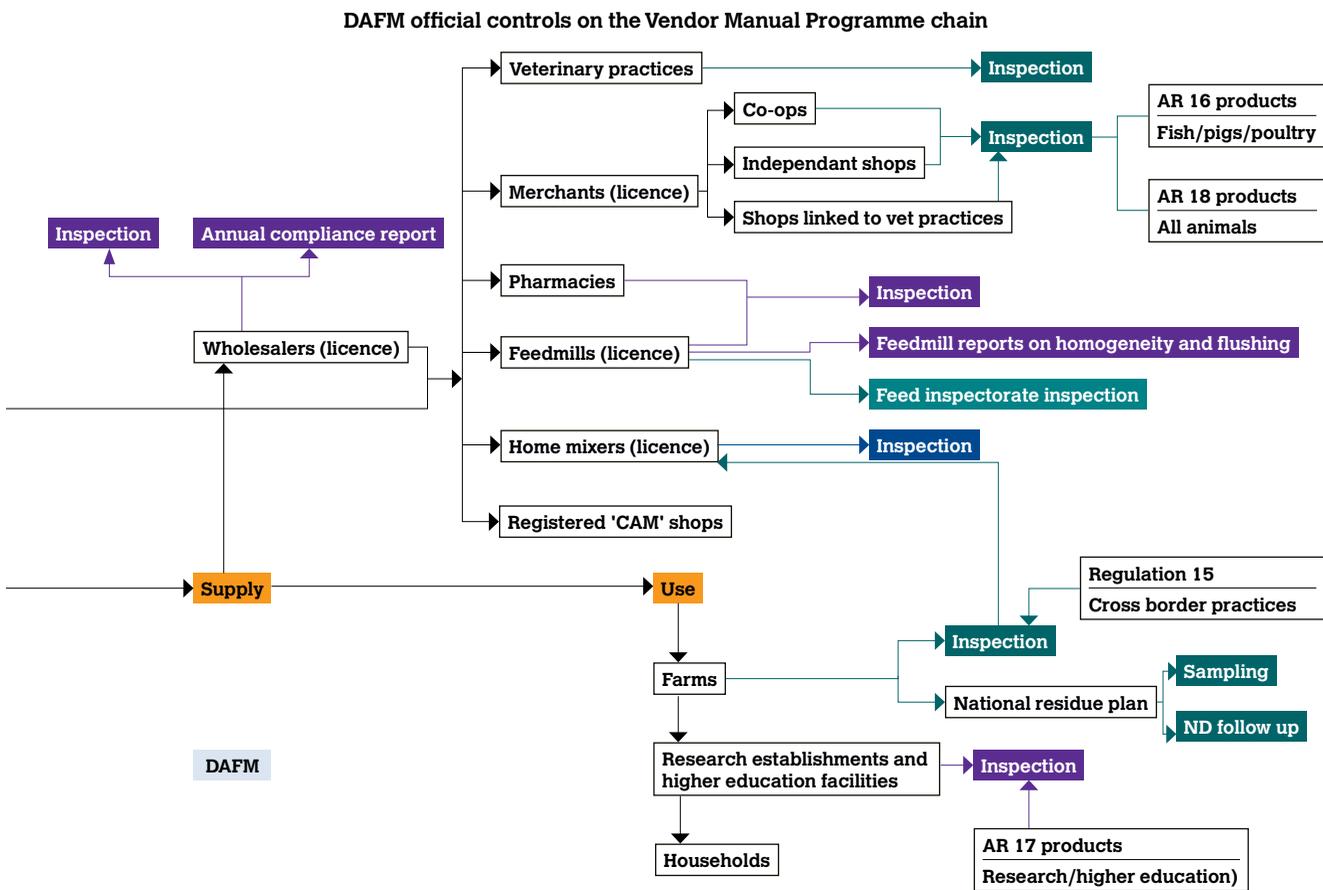


Figure 1. General DAFM inspections.

ASG Cecil Beamish (MB)	CVO Martin Blake (MB)	CI Bill Callanan (MB)	DOL Donal Salmon (MB)	ASG Brid Cannon (MB)	ASG Brendan Gleeson (MB)	ASG Ellis O'Connell (MB)	ASG Sean Keavey (MB)	ASG Kevin Smyth (MB)	ASG Colm Hayes (MB)	ASG Paul Dillon (MB)
	VPHIS DCVO Paula Barry-Walsh (MB) AH & W DIR. Vacant Director of Operations Micheal Sheahan	Director Donal Coleman	Head of Agricultural Labs James Choiseul Head of Veterinary Labs Vacant							
Aquaculture and Foresore Management HOD: John Quinlan	Animal Health & Welfare HOD: Dermot Murphy	Crops, Evaluation & Certification HOD: Vacant	Bacteriology HOD: John Egan	Climate Change & Bioenergy Policy HOD: Edwina Love	Dairy Controls HOD: Nicholas Finnerty	Accommodation, ISO, Health & Safety HOD: Grainne Mulligan	IMT Animal, Customer, Financials & Fisheries Sytem HOD: Joe Hanly	Accounts HOD: Colm McKiernan	Agriculture Environment & Structures HOD: William Fahey	BPS (Inspections; Financial Control; Policy Co-ordination; Risk Management); Beef Data & Genomics Programmes; Commonages; Greening; LPIS Rebuild Project. HOD: Paul McKiernan
Marine Agencies and Programme: HOD: Paschal Hayes	Animal Identification & Movement HOD: Martin Farrell	Crop Policy, Production & Safety HOD: Vacant	Dairy Science Labs HOD: Eoin O'Brien	Economics & Planning HOD: Sinéad McPhillips	Food Industry Development HOD: Marian Byrne	Corporate Affairs, F.O.I, Ministers Office HOD: Kay Ryan	IMT Direct Farm Payment Systems HOD: Alan King	Agriculture Appeals HOD: Angela Robinson	Forest Service HOD: Brigeena Nolan	Basic Payment Scheme (Operations), Areas of Natural Constraint Scheme, Knowledge, Transfer & Innovation Unit HOD: Fintan O'Brien
Marine Engineering: HOD: Noel Clancy	Audit, Enforcement, Ethics, Organisational Governance, Animal Remedies HOD: Hazel Sheridan	Feedstuffs, Fertilisers, Grain & Poultry HOD: Louise Byrne	Pathology HOD: John Moriarty	EU Division HOD: David Buckley	Meat & Meat Hygiene & Animal By-products HOD: Tom Loftus	Human Resources HOD: Sharon Murphy	IMT Infrastructure HOD: Darren Murray	Finance Division & Central Procurement Unit HOD: Heber McMahon	Forest Sector Development/ COSORD HOD: Eugene Hendrick	CAP /Single Payment Entitlements & Financial Controls HOD: Bernie Brennan
Sea Fisheries Administration HOD: Kevin Moriarty	ERAD/ Veterinary Medicines & Regional Office Admin HOD: Vacant	Livestock, Breeding, Production & Trade HOD: Gerry Greally	Pesticides, Seed Testing & Plant Health HOD: AnneMarie Dillon	Brexit & International Trade HOD: Paul Savage	Meat & Milk Policy HOD: Maria Dunne	Legal Services HOD: Derek Elliot	IMT CO-Ordination HOD: Louise Jevens	Horse and Greyhound racing and Teagasc HOD: Rebecca Chapman	Forest Service Inspectorate HOD: Seamus Dunne	Direct Payments Integrated Controls HOD: Thomas Keating
Seafood Policy & Development HOD: Josephine Kelly	Investigations Division HOD: Pat Flanagan	Nitrates, Biodiversity & Engineering HOD: Jack Nolan	Regional Veterinary Labs & Blood Testing Lab HOD: Michael Casey	Perment Representation Brussels HOD: Breffini Carpenter		Management Services HOD: Grainne Mulligan			Forestry International HOD: Stephan FitzPatrick	
	NDCC/Contingency response: Animal Health International HOD: Sally Gaynor	Pesticides Control HOD: Tom Medlycott	Veterinary Public Health Regulatory Lab HOD: Montserrat Guiterez	Agriculture Counsellors & Attachés					Agri Environment and On Farm Investment HOD: Miriam Cadwell	
	Non-Ruminant Animal Health, Animal Welfare HOD: Vacant	Pesticides Registration HOD: Aidan Moody	Virology HOD: Ronan O'Neill						CAP Rural Development HOD: Patricia Kelly	
	Ruminant Animal Health, ERAD, Premises Registration and Animal Identification HOD: Vacant	Plant, Health & Horticulture HOD: Barry Delaney	Biosecurity Padraig Ross							
	TSE, Animal By-products and Animal Health Surveillance HOD: John Griffin	Research, Code & Codex HOD: Richard Howell	Lab Service Admin Unit Vacant							
	Veterinary Area Management HOD (AMT North): Tom McLague HOD (AMT South): Pat Meskall		Longtown Farm Robert Fisk							
	Veterinary Public Health Implementation HOD: Peter Maher									
	Veterinary Public Health Policy & International Trade HOD: Dave Nolan									

Figure 2: DAFM's oronogram.

protection or give an unfair advantage to some over others. That said, there are some things that are redline issues and, as such, we would not be doing our job if we did not tackle these. Sometimes, the most appropriate way to tackle these issues is by way of prosecution.

RED-LINE ISSUES

The first red-line issue is the use of unauthorised medicines, ie. medicines that do not have a Veterinary Product Authorisation (VPA) or EU number. The use of unauthorised medicines can put the health status of the entire country at risk as such medicines can be contaminated with extraneous

agents, some of which are exotic to Ireland. In addition, the use of unauthorised medicines gives an unfair advantage to those who are prepared to break the law compared to those who are doing their best to comply. At the same time, it is recognised that the availability of medicines for equines is a particular problem in that the equine market is not a large market. For this reason, the DAFM does have procedures to enable the import of products in the event that there isn't a suitable medicine on the market in Ireland. So, come and talk to us in the event you are experiencing problems. The second red-line issue is the giving of products that



have been classified as only being suitable to be administered by a veterinary practitioner (VPO) to non-vets to administer. Such products have been classified as VPO because there is a significant risk related to the use or misuse of these products such that it is considered appropriate that these should only be handled by a suitably trained medical professional. Giving such products to others to administer undermines the role of the veterinary profession.

The third red-line issue is the handing out of prescription only medicines without a prescription. The issuing of prescriptions protects your business and your client's business. In the event we carry out an inspection on a premises, and we find a prescription-only medicine (POM) product with no corresponding prescription, then we have no idea as to whether the product was obtained legitimately or illegitimately. Instances of counterfeit products and illegal supply over the internet are on the increase. It is not in anyone's interest that this would go unchecked. Therefore, we need to separate legitimate from illegitimate supply.

The final red-line issue to mention is the removal of expiry dates, something we have seen being done and something that has been the subject of prosecutions.

COMMON GOALS ACROSS AGRI-INDUSTRY

In summary, the DAFM and veterinary practices share a common goal, we both want to ensure a high level of public and animal health protection and fair competition for all. Sometimes, our perspectives are different but let this not blind us to the fact that our common interest lies in working together rather than working against each other.

Hazel Sheridan presented at the Irish Equine Conference 2017, hosted by the Equine Group of Veterinary Ireland, held on November 9-11, 2017.



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