Answering the age-old question: is it medical or behavioural?

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Introduction

Veterinary behavioural medicine addresses a wide range of behavioural issues in animals, including those related to mental health, stress, anxiety, and aggression, recognising that these issues can impact animal welfare and the human-animal bond.

In equine cases, behavioural presentations are often attributed solely to training, temperament, or management issues. However, pain, illness, and other medical conditions frequently underlie or contribute to behavioural concerns (Carroll *et al.* 2023).

In companion animal behaviour cases, studies suggest that 28–82% of referred cases have a painful condition contributing to the presentation (Mills *et al*. 2020). Horses are no different, and a lack of recognition by caregivers of behaviours associated with discomfort or pain may delay appropriate diagnosis and care. Veterinarians should be the first professional to evaluate an animal presenting with a behavioural concern.

How can medical conditions affect behaviour?

Medical conditions may influence behaviour by increasing or decreasing the frequency or intensity of behavioural responses.

- Deficit effects may reduce behaviours such as alertness, social engagement, willingness to move forward under saddle, or appetite.
- Productive effects may increase the expression of behaviours such as aggression towards humans or conspecifics, heightened reactivity (e.g. spooking), or the emergence of stereotypic behaviours.

Pain is subjective, and here is no consistent correlation between the severity of pathology and the intensity of behavioural expression. Low-grade or diffuse pain may cause significant behavioural change in equine patients. 'Ruling out pain' is technically impossible, but a thorough investigation, analgesic trials, and careful observation can help assess its likelihood and impact.

Stress or pain?

Both pain and stress activate overlapping physiological and behavioural responses (Wagner 2010). Behavioural signs such as facial tension, avoidance, reduced sociability, and hypervigilance may be seen in either state. Tools such as the Ridden Horse Ethogram (Dyson 2022) and Discomfort Ethogram (Torcivia and McDonnell 2021) may assist in interpretation, though they must be applied in context as in some cases, the same clinical sign may indicate pain, stress, or both.

What do we mean by ‘behavioural’?

The term ‘behavioural’ is often used as if it rules out medical causes, but an individuals’ behaviour is shaped by a combination of internal and external factors; genetics, temperament, learning history, emotional state,

environment, and physical health. Behaviour that has become established through learning does not rule out an underlying physical or emotional trigger.

Learning

Horses learn through classical (associative) and operant conditioning, as well as social learning. For example, a horse that pins its ears when the saddle approaches may have formed an association between the saddle and discomfort while being ridden. If this behaviour results in the person stepping away, the horse may learn that ear-pinning is an effective strategy for avoiding the saddle. Over time, such avoidance behaviours may become entrenched.

After identifying and addressing the underlying cause, it is usually necessary to retrain an alternative response (Dyson and Thomson 2022). The use of punishment in behaviour modification should be discouraged due to risks such as increased fear, aggression, learned helplessness, and the suppression of useful behavioural indicators of distress. A horse experiencing stress or fear is also unlikely to learn effectively.

Ethological and environmental needs

Meeting a horse's ethological and environmental needs is fundamental to both physical and behavioural health. Horses are social, grazing animals adapted to near-constant movement and forage intake within a stable social group. Common domestic management practices—such as individual stabling, restricted turnout, intermittent feeding, and social isolation—can contribute to frustration, anxiety, and the development of behavioural issues (Carroll *et al.* 2023).

When these needs are unmet, horses may present with signs that mimic medical conditions or training problems. Behavioural concerns such as aggression, reactivity, separation distress, or withdrawal may improve simply by modifying management to better align with the horse's ethological needs. Therefore, a basic assessment of the patients' ethological needs (freedom, forage, and friends) (Phelipon *et al.* 2024) should be included in the clinical work-up.

The behaviour consultation

A behaviour consultation typically begins with evaluation of the horse's medical and behavioural history. Where appropriate, this is followed by further diagnostics, environmental modification, management (prevention of practicing of the behaviour) and the development of a behaviour modification plan. In some cases, behavioural medications may be prescribed to reduce anxiety and facilitate learning. Follow-up assessment is essential to evaluate the effectiveness of interventions and to adjust medical or behavioural plans as the case progresses.

History indicators that pain may be a contributing factor include:
- Older age or a history of relevant medical conditions
- Sudden change in behaviour in a previously compliant horse
- Change in athletic ability/performance
- Lack of improvement despite appropriate training and management.

Conclusion

Behavioural concerns in horses warrant thorough medical investigation, as behaviour is often the first and sometimes only indicator of discomfort. A holistic, biopsychosocial approach improves outcomes, enhances welfare, and fosters client trust.

Veterinarians play a key role in recognising when behaviour may be a symptom of pain or illness. Incorporating behavioural assessment into equine practice can improve patient outcomes and strengthen the veterinarian–client–patient relationship.

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