

Practical Fluid Therapy and Treatment Modalities for Field Conditions for Horses and Foals with Gastrointestinal Problems



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KEYWORDS

- Intravenous fluids • Pain management • Antimicrobials • Oral fluids • Hypovolemia • Colic

KEY POINTS

- Fluid therapy should use both the oral and the intravenous route when possible, but a functioning gastrointestinal system is required to effectively use oral fluids.
- Fluid therapy (oral or intravenous) can be administered by bolus or continuous infusion, and each method has specific advantages and disadvantages.
- Pain management is an essential aspect of field treatment and should be initiated early and allow for additional diagnostic testing and treatments to be completed.
- In neonatal foals, antimicrobial coverage may be appropriate in most, if not all, cases of gastrointestinal disease.
- In older animals, greater than 2 to 3 months of age, routine antimicrobial use for gastrointestinal disease should be avoided unless a specific bacterial focus exists that is likely to respond to antimicrobial administration.

INTRODUCTION

In many equine practices, there is increasing demand for higher levels of diagnostic testing and treatment services in the field. Point-of-care laboratory testing, ultrasound machines, and endoscopy and radiography systems all have portable options. In many instances, a diagnosis can be made without ever leaving the farm. Similar expectations for treatment also exist, and ambulatory practitioners should be familiar with the options and controversies surrounding the field management of the horse or foal with gastrointestinal (GI) disease.

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There are many practical considerations for the field treatment of GI disease, but this article focuses on 3 areas whereby the field practitioner will often be required to make decisions:

1. Fluid therapy
2. Pain management
3. Antimicrobials

Although these same concepts apply to the management of horses in both hospital and field conditions, there are some unique considerations in the field that must be addressed. The major limitation in the field is often the availability of facilities and personnel. Rapid fluid administration can be challenging without appropriate height for hanging fluids, and catheters can easily be damaged or dislodged in stalls that are not appropriate for horses receiving intensive care. Safety of the personnel handling the horse is important and affected by adequate pain control in horses that are rolling or repeatedly getting up and down. The decision for antimicrobial use is often made without the benefit of complete laboratory testing results. Despite these limitations, field treatment has benefits, including familiar surroundings for the horse and more rapid initiation of treatment. The remainder of this article examines these 3 main areas of consideration when initiating field treatment of GI diseases in horses and foals.

SECTION 1: FLUID THERAPY

The need for fluid therapy in the field will often be determined using a combination of the following:

1. Physical examination findings
2. Historical information
3. Owner preferences

Physical Examination Findings

Some of the simplest physical examination findings of dehydration can be easily evaluated:

1. Prolonged skin tenting
2. Dry/tacky mucous membranes
3. Urine concentration

However, recognition of dehydration using clinical examination findings is unreliable.^{1,2} Even with increased experience and training, clinicians are often unable to accurately quantify the degree of dehydration. The clinical signs of hypovolemia/hypoperfusion may be easier to detect as compared with those of dehydration. Although these are rarely used to determine an exact amount of fluid loss (or volume needed for replacement), they are excellent markers to suggest that fluid therapy is warranted:

1. Heart rate
2. Pulse quality
3. Mucous membrane color
4. Capillary refill time
5. Mentation
6. Extremity temperature
7. Jugular refill time
8. Urine output

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