

## **COLIC: When should I refer and what is the prognosis?**

Frank M. Andrews, DVM, MS, Diplomate ACVIM  
LVMA Equine Committee Professor and Head  
Director, Equine Health Studies Program  
Department of Veterinary Clinical Sciences  
School of Veterinary Medicine  
Louisiana State University  
Baton Rouge, LA  
Email: [fandrews@lsu.edu](mailto:fandrews@lsu.edu)

### **INTRODUCTION**

Deciding when to refer a horse with colic can be a difficult decision and involves careful evaluation of clinical and laboratory parameters, surgical considerations, probability of survival, and other considerations that include worsening of clinical condition, unresolved pain, or to obtain a second opinion. The decision to refer also involves the willingness of the client to transport the horse and financial constraints, as referral can be a substantial economic investment for the client.

The most common reason for a veterinarian to refer a horse with colic is the presence of a surgical lesion. Certain clinical and laboratory parameters are important in making this decision. However, the other obligation that the referral veterinarian has is to determine if the horse has a reasonable probability of survival if transported. A careful and thorough examination of the horse and selected laboratory parameters can give the veterinarian important information regarding whether the horse should be referred for surgery and what are the chances that that horse will survive. This presentation is based on the following references (see end of page 3).

### **CLINICAL AND LABORATORY PARAMETERS (NOTES)**

MAKING A DECISION TO REFER FOR SURGERY

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_

MAKING A DETERMINATION OF SURVIVAL

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_

OTHER REASONS FOR REFERRAL

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_

CLINICAL COLIC CASES: UTILIZING A SPREADSHEET TO MAKE DECISIONS

Surgery Model	
FOR DATA ENTRY HELP HIT <Pg Dn>	
<b>Variables</b>	<b>Enter Data</b>
Age in years	13
Sex	g
Breed	STB
Rectal	2
Frequency of pain	3
Peripheral pulse	1
Frequency of abdominal sounds	1
Prevalence of surgery (%) =	20
Likelihood ratio for surgery =	8.79
Post-test odds surgery =	2.20
Post-test probability surgery =	0.69
DATA CODING INFORMATION - SURGERY MODEL	
AGE: Enter age in years	
SEX: Type "S" for stallion, "G" for gelding or "F" for female	
BREED: Type "Arab" for Arabian = 1	
"App" for Appaloosa = 2	
"AmSB" for American Saddlebred = 3	
"Morg" for Morgan = 4	
"Qtr" for Quarterhorse = 5	
"STB" for Standardbred = 6	
"TB" for Thoroughbred = 7	
"Other" for any other breed = 8	
RECTAL EXAM: Normal= 1, Abnormal= 2	
FREQ PAIN: Absent= 1, Intermittent= 2, Continuous= 3	
PERIPHERAL PULSE STRENGTH: Normal= 0, Weak= 1	
FREQ ABDOMINAL SOUNDS: Normal= 1, Increased= 2, Decreased= 3, Absent= 4	
Prognosis Model	

VARIABLES	Enter data
Age in years	12
Sex	s
Breed	qtr
Peripheral pulse strength	1
Heart rate beats/min	50
Surgical or medical treatment?	med
Packed cell volume %	58
Self-inflicted trauma	0
Capillary refill time /sec	3.0
Prevalence of death (%)	5
Likelihood ratio for death	1.67
Post-test odds of death	0.09
Post-test probability of death	0.08
DATA CODING INFORMATION - PROGNOSIS MODEL	
AGE: Enter age in years	
SEX: Type "S" for stallion, "G" for gelding or "F" for female	
BREED: Type "Arab" for Arabian = 1	
"App" for Appaloosa = 2	
"AmSB" for American Saddlebred = 3	
"Morg" for Morgan = 4	
"Qtr" for Quarterhorse = 5	
"STB" for Standardbred = 6	
"TB" for Thoroughbred = 7	
"Other" for any other breed = 8	
PERIPHERAL PULSE STRENGTH: normal= 0, weak= 1	
TREATMENT?: Type "med" for medical or "surg" for surgical	
SELF-INFLICTED TRAUMA: absent= 0, present= 1	

## REFERENCES:

1. Reeves MJ, Curtis CR, Salman MD, et al. A multivariable prognostic model for equine colic patients. *Prev Vet Med* 9:241-257, 1990.
2. Reeves MJ, Curtis CR, Salman MD, et al. Multivariable prediction model for the need for surgery in horses with colic. *Am J Vet Res* 52(11): 1903-1907, 1991.
3. Van der Linden, MA, Laffont CM, and van Oldruitenborgh-Oosterbaan, MMS. Prognosis in equine medical and surgical colic. *J Vet Intern Med* 17:343-348, 2003.
4. White NA. Equine Colic: How to make the decision for surgery. In *Proceedings: AAEP Focus Equine Colic*. Quebec City, Canada. 2005, 119-128.