Colic Surgery: What Are the Chances and How Can we Improve the Odds?

Colic is one of the most common causes for emergency evaluation by the equine practitioner and one of the most common causes of mortality (Ireland et al 2011). Although many times colic can be treated medically, approximately 8% of episodes of colic will require colic surgery for correction (Hillyer et al, Proudman et al). The purpose of this talk is to provide an update, based on the recent literature, on factors affecting survival for patients with surgical lesions and statistics associated with both short and long term survival. As the most important member of your clients/patients health care team clients will often ask for your opinion and providing them with information prior to referral may assist them in making hard decisions during transportation rather than being faced with sudden decisions during a tertiary care evaluation.

Two common questions that clients have are (1) what are the chances that my horse will survive and (2) what are the chances that my horse can return to his previous level of athleticism. Several studies in the past 10 years have attempted to answer these questions in retrospective studies. Christophersen et al looked at long and short-term survival and return to previous level of athleticism. This study found that 95.3% of horses requiring colic surgery were alive at 6 months post discharge, however at 5 years post discharge only 57.6% of horses were still alive. Unfortunately, this study did not determine if the causes of mortality were related to colic surgery or due to unrelated problems. Additionally, he found that of the horses that survived to 6 months post discharge 86.1% (per owner survey) returned to their previous level of athleticism and 89.9% of owners would recommend colic surgery to another horse owner. Specifically assessing a Thoroughbred race horse population, Hart et al found that 76% of Thoroughbreds that underwent colic surgery returned to racing and that these horses did not have a significant decrease in the total number of starts or total earnings. Although for most of us, our average patient is not a young thoroughbred racehorse, this study provides some objective data to qualify “return to athleticism.”

Southwood and colleagues also assessed colic surgery in an older population. In this series of publications they assessed 300 horses greater than 16 years of age that presented to a tertiary care facility for colic between 2000 and 2006. When comparing horses that were greater than 16 years of age (n = 159) to horses less than 16 years of age they did not a significant difference in survival to discharge among the horses treated surgically (59% vs. 70% respectively). However, horses greater than 20 years of age did have a decreased chance of surviving to discharge (53% vs 70%). They did note however that horses greater than 16 years of age were more likely to require a prolonged period of hospitalization post operatively.
Multiple studies have looked at prognostic values predicting horses that will require colic surgery and for those horses that undergo colic surgery those that will survive to discharge (Johnston et al, Southwood et al, Hackett et al). Within these studies and others some of the most important predictors of need for more intensive care, surgery and outcome include degree of tachycardia, hemoconcentration and blood lactate levels. Hand-held lactate meters can be an easy addition to the equine ambulatory practitioner, and can provide information to assist with decision making in less than a minutes time. Elevations in lactate have been shown to correspond with severity of disease, need for surgical intervention and survival to discharge. Additionally, this tool may help to identify more serious problems in the stoic horse and help prompt early referral, which has also been shown to significantly affect survival to discharge in patients requiring colic surgery.

References: