



COLIC

In response to a number of recent deaths from colic, Grayson-Jockey Club Research Foundation reached out to a prominent researcher to comment on the status of research for this age-old problem.



By Anthony Blikslager, DVM, PhD

Diplomate, American College of Veterinary Surgeons
Professor of Equine Surgery and Gastroenterology
North Carolina State University

Are we making progress in saving horses from colic?

Colic is a disease of horses that can relate to changes in feed, management, de-worming program, dental care, and bad luck. The latter would be medically termed an ‘intestinal accident,’ such as an intestinal twist (torsion). Veterinarians usually estimate that in excess 90% of horses with colic will get better with medical treatment alone, leaving less than 10% in need of further medical or surgical treatment. It can be difficult to estimate how much progress we have made, because the numbers, populations of horses, and management techniques change with time, but here is my opinion:

- We have made tremendous strides in reducing the number of horses that get colic by feeding good quality forage and grain, instituting routine and proficient dental care, developing advances in parasite control, and understanding that horses need to be able to graze forage (grass or hay) and exercise daily to stay healthy. I am often asked about the best management to reduce colic, and I generally say that increased turnout with increased grazing are the way to do this, but not all breeds – including Thoroughbreds – can live on grass alone because of their energy needs.
- We have also made a great deal of progress with the more severe 10% of colic patients, many of which need to go to surgery. Veterinarians will point to advances in anesthesia, pain management, surgical technique and critical care techniques. We can now safely say that at least 75% of patients that go to surgery for colic will be discharged from surgical facilities.

What is the next step in saving more horses from colic?

What about the horses that do not survive colic – what is the next great advance? Here I would say that if only we could figure out which horses with colic were in need of more intensive treatment earlier, I think we could increase our survival percentages even further. Veterinarians are always on the look out for new ways of detecting those horses that need to be sent to a hospital, such as measurement of markers of severe colic. This started with measurement of endotoxin in the blood, but this is too inaccurate because it is only intermittently 'showered' from damaged intestine. However, a horse will react to bacterial toxins from damaged intestine with an immune response and measures of metabolic function. While we do measure a couple of factors like this, such as lactate, we need the full picture. This indicates a possibility of using techniques such as metabolomics - a screening of all of the by-products of intestinal function during colic. We need a panel of markers of impending severe colic that could be obtained from a blood sample in the field. That way, we wouldn't have to rely on a horse 'showing us' that it's time to go to the hospital.