**Ileal impaction**

The ileum is at the end of the small intestine and connects to the cecum. The ileum is more muscular than the remainder of the small intestine (duodenum and jejunum) and one of its functions is to control the amount and frequency with which feed material enters the cecum through the ileocecal valve.

Impaction of the ileum with feed material is a cause of colic in the horse. While some mild impactions will resolve with aggressive medical therapy, many cases require surgery to push the impaction through into the cecum (Fig. 1) or to bypass the obstruction if particularly severe. Interestingly, there are two areas of the world where ileal impaction is reported to be more common. In the United Kingdom an association has been found between infection with tapeworm (specifically the species *Anoplocephala perfoliata*) and ileal impaction. Tapeworms live around the ileocecal valve and cause inflammation and abnormal motility. The resulting narrowing of the lumen and thickening of the muscle can result in acute obstruction of the ileum with feed material. Tapeworm infection in the horse can be removed by treatment with either pyrantel pamoate or praziquantel dosed according to the manufacturer’s recommendations.

In the South Eastern USA for many years there has been speculation that feeding Coastal Bermuda Hay may be a cause of ileal impaction, but until recently there were no controlled studies to confirm these isolated case reports.

Drs Dianne Little and Anthony Blikslager wanted to determine if feeding Coastal Bermuda hay was indeed a risk factor for horses treated surgically for ileal impaction, and also to determine if tapeworm may also play a role in development of ileal impaction in the South Eastern USA.

In a study published in Equine Veterinary Journal 2002 (34:464-468) and presented at the 7th International Colic Research Symposium in Manchester, England 2002, they evaluated the clinical case records from different groups of horses admitted to the Veterinary Teaching Hospital at NCSU between 1986 and 2000. One group comprised horses that had were found to have ileal impaction at colic surgery. Another group of horses was treated medically for colic but did not have a diagnosis of ileal impaction. Information extracted from the case records of all groups included feeding and de-worming history. For horses that had ileal impaction additional data that were extracted from the medical record included details of the surgery, postoperative complications and survival to discharge from the hospital.

Horses were found to be nearly 6 times more likely to develop ileal impaction requiring surgical correction if they were fed Coastal Bermuda hay when compared to horses that were treated for medical colic. Additionally, horses that had not had access to a pyrantel de-wormer in the 3 months prior to
admission were 4 times more likely to develop ileal impaction when compared to horses treated for medical colic. When horses admitted to the hospital with colic not associated with ileal impaction were compared to horses that were admitted for reasons unrelated to colic (orthopedic, reproductive or eye problems), there was no increased risk of colic found with feeding Coastal Bermuda Hay or failing to administer a pyrantel salt.

Horses that are treated surgically for ileal impaction were found to have good prognosis for survival to discharge from the hospital – in this study 96% of horses survived to discharge from the hospital.

As a result of this study, Drs Little and Blikslager have obtained funding from the North Carolina Horse Council to investigate the specific characteristics of Coastal Bermuda Hay that may predispose a horse to develop ileal impaction. Owners or trainers of horses that are admitted to the NCSU-VTH or the Colleges of Veterinary Medicine, University of Florida and University of Georgia with colic of any type are being asked to provide a hay sample and complete a short questionnaire. The hay samples will be analyzed and the information used to determine the characteristics of certain types of hay that predispose horses to colic. In addition, hay samples are being sought from the horse owners of North Carolina, in which their veterinarian has diagnosed colic. It is hoped that this study will more closely analyze the issue of hay type and its association with colic.