

Strangulating Lipoma in Horses: The Silent Killer¹

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Introduction

Strangulating lipoma is one of the most common causes of colic in horses and requires prompt surgical treatment to prevent irreversible injury, an expensive surgery, and a poor outcome. It can develop in older horses of any breed. Because old horses seem to tolerate pain, the cardinal clinical indicator of this disease might not be apparent. This reduces the sense of urgency and leads to potentially fatal delays before surgery. Added to this is a strong but erroneous sense of pessimism brought on by misconceptions about old horses and surgery. As with any surgery for colic, the sooner the diagnosis is made and surgery is performed, the better the prognosis and the lower the cost of treatment.

In surveys conducted between 2005 and 2018 by the American Association of Equine Practitioners, the National Animal Health Monitoring System, and the American Horse Council, equine veterinarians and horse owners identified colic as a common cause of death and the equine health care problem most in need of answers. In the general equine population, approximately 1.4% to 17.5% of horses with colic require abdominal surgery (Tinker et al. 1997; Traub-Dargatz et al. 2001). Small intestinal strangulating diseases can account for approximately 30% of all colic cases and most of these require surgery (Rudnick, Denagamage, and Freeman 2022).

Horse owners and veterinarians need to understand the importance of lipoma as a cause of life-threatening colic and to know about the complex nature of the clinical condition it causes. Pedunculated lipoma is a well-known cause of surgical colic in horses (Rudnick, Denagamage, and Freeman 2022). The lipoma is a benign fatty tumor suspended by a pedicle or peduncle that can wrap securely around a segment of small intestine (Figure 1), presumably an aberrant event caused by normal intestinal movements (Freeman 2025). The pedicle gradually tightens until the encircled intestine loses its blood supply and becomes necrotic. The typical appearance of a lipoma

is a smooth and golf ball-sized or larger mass of fat that is attached by a long, slender stalk or pedicle to the mesentery, a sheet of tissue that supports the small intestine and its blood supply.

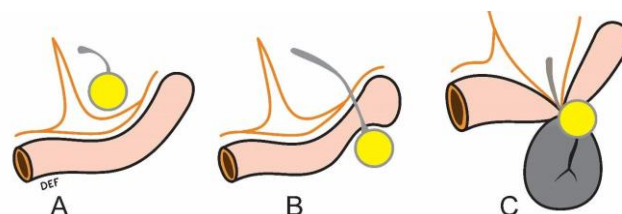


Figure 1. (A) Segment of small intestine and its blood supply (orange lines) and lipoma (yellow circle) attached to the mesentery by a long stalk. The mesentery is not shown but is a thin sheet of tissue that attaches the intestine and its blood vessels to the abdomen. (B) A long stalk on the lipoma allows it to pass around the small intestine. (C) The lipoma continues to wrap around the small intestine until it strangulates it (dark-gray segment). The strangulated segment can be short as in this image or could be several feet long.

Credit: David E. Freeman, UF College of Veterinary Medicine.

Strangulation by lipoma is a common cause of surgical colic, especially in older horses (>10 years), presumably because of the time needed to develop this slow-growing tumor. Ponies, Arabian horses, American Saddlebreds, and Quarter Horses have been reported to be at a higher risk, although any type of horse can be affected (Freeman 2025). Excessive body fat could increase the risk of lipoma development, but thin horses can also be affected.

Diagnosis

Although mild diseases that cause colic (impactions, nonstrangulating displacements) might not require surgery, they do outnumber diseases that require surgery and can be difficult to distinguish from them. Strangulation by lipoma should always be considered the most likely cause of colic in old horses, until clinical assessment and diagnostic tests demonstrate otherwise. The diagnostic challenge arises because clinical signs are milder than expected. In many cases, the first sign of a problem might be lack of interest in feed. Also, the horse can be quiet, not showing any signs of discomfort. Some telltale findings might be raw skin abrasions on the head

and hip where underlying bone is not protected by muscle and other soft tissue. These abrasions are caused by repeated rolling in the recent past. Passage of a nasogastric tube does not produce the expected reflux of gastric contents. Also, cardiovascular indicators of intestinal strangulation, such as dark-pink to red oral membranes and elevated heart rate (>48 beats/minute), might not be evident in early stages or with every horse.

The mild signs of abdominal pain can be explained by the stoic nature of old horses, so advanced diagnostic methods might be needed. If the primary care veterinarian can do an ultrasound examination on the farm, this should demonstrate distended small intestine and possibly an excess of free intra-abdominal fluid in horses with strangulating lipoma. Sampling of this fluid can allow measurement of lactate, a marker of reduced intestinal blood flow, or ischemia. Many veterinarians and owners might prefer to take the horse to a hospital for these procedures. If these diagnostic procedures are performed on the farm, they will be repeated in the surgical hospital to confirm findings and to assess progression.

If the owner is reluctant to send the horse to a hospital for financial reasons, medical treatment is a viable option, but only if abdominal pain is manageable by sedation. However, the primary care veterinarian needs to recheck the horse frequently during treatment at home to assess response, recognizing that such an approach is expensive and can be slow to yield information. If the horse is treated with flunixin meglumine (Banamine) and intravenous fluids, most clinical indicators of intestinal strangulation will improve; however, this improvement can be deceptive. The owner should be aware that these steps can be expensive and time-consuming and can delay surgery if needed.

If the owner eventually selects surgery after ineffective medical treatment, the time and money consumed to this point can lower prospects for a successful outcome compared to an earlier decision for surgery. For example, if a horse has surgery early in the course of intestinal strangulation, a resection and anastomosis might not be needed because ischemia (loss of blood supply) in the affected segment will be mild and reversible (Rudnick, Denagamage, and Freeman 2022). Such segments recover well and without complications if left in place (90% survival; \$6,000 cost in 2026). If the strangulation extends into the period when irreversible changes require

resection and anastomosis, a poorer outcome, more complications, and greater cost can be expected (70% survival; >\$10,000 cost in 2026).

Misconceptions

The decision for referral for surgery is a difficult one for the owner of a horse with a suspected strangulating lipoma, particularly in horses with a relatively short remaining lifespan. However, this is the owner's decision, and many owners are happy to give these older horses some additional years. A more troubling decision is the selection of medical treatment over a recommended surgery, based on the owner's misconception that "horses are never the same after colic surgery" or the belief that "old horses cannot handle anesthesia and surgery." These are fallacies. Many studies from different hospitals have shown that old horses can handle these procedures as well as younger horses, with similar complication and survival rates. Another misconception is that horses with colic will not travel well. They do, and the trailer ride might even be therapeutic to some.

Discussion

Strangulating lipoma is regarded as the silent killer because the clinical signs of pain can be deceptively milder than would be expected for the severity of injury to the small intestine. This reduces the sense of urgency and leads to potentially fatal delays before surgery. This is further complicated if the owner has financial limitations and consequently delays the decision to send the horse to a surgical facility. Added to these issues are misconceptions about potential outcomes with anesthesia and surgery, all of which combine to delay referral and lead to a more complicated and expensive surgery compared to a prompt surgical intervention.

Much of the stress associated with a horse at risk of a strangulating lipoma can be addressed by planning and decision-making before disease development. This preemptive approach can address all concerns that can be difficult to resolve early in the disease, such as financial limitations, emotional issues, family involvement, access to transport, and availability of veterinary care. The following are guidelines that should provide humane and effective treatment of the horse with strangulating lipoma.

- Inquire about the cost of colic surgery in the nearest equine hospital(s).

- Improve your understanding about different types of colic, especially strangulating lipoma.
- Prepare for transport at short notice through discussion with your barn manager or neighbors who might be willing to help. If you have a trailer, make sure to always keep it roadworthy.
- Establish your financial limits for medical and surgical treatments.
- Be prepared to stay the course if you decide against surgery. A change of mind is every owner's prerogative, but every owner must understand the consequences of delayed surgery.
- Have a physical examination performed on your horse by your primary care veterinarian to ensure that your horse does not have other diseases (comorbidities) that might be exacerbated by surgery and complications. These include metabolic syndrome, laminitis, musculoskeletal diseases, equine asthma, and pituitary pars intermedia dysfunction (PPID). Keep your horse in optimal health through veterinary recommended preventative health measures (vaccination, deworming, dentistry) and routine physical examination by your primary care veterinarian. Discuss with your veterinarian any other diseases your horse may have and how they would be affected should your horse need colic surgery.

The same approach is recommended for all types of colic that might require surgical treatment. Many advances in colic surgery and anesthesia during the last 50 years have improved survival rates considerably. However, the most important step in managing these cases is to be prepared. All efforts should be made to ensure that a horse with the deadliest forms of colic receives prompt veterinary attention and is sent to a hospital with a surgical facility as soon as you decide that surgery is an option. Continued medical treatment with intravenous fluids and other treatments at the farm will only prolong the critical preoperative period while providing no benefit to ultimate outcome following surgery.

Specific guidelines to prevent lipoma development and strangulation are lacking, but routine veterinary care,

health maintenance, and minimal changes in management probably are important, as with any diseases. There is very new evidence that horses with metabolic syndrome might be at greater risk, which underscores the broad health implications of this disease.

References

- American Association of Equine Practitioners. 2019. "Survey Results Establish Equine Research Priorities." <https://aaep.org/news/survey-results-establish-equine-research-priorities>
- Freeman, D. E. 2025. "Diseases of the Small Intestine." In *Colic Surgery in the Horse*, edited by D. E. Freeman. John Wiley and Sons. <https://doi.org/10.1002/9781119104230.ch2>
- Rudnick, M. J., T. N. Denagamage, and D. E. Freeman. 2022. "Effects of Age, Disease and Anastomosis on Short- and Long-Term Survival after Surgical Correction of Small Intestinal Strangulating Diseases in 89 Horses." *Equine Veterinary Journal* 54: 1031–1038. <https://doi.org/10.1111/evj.13558>
- Tinker, M. K., N. A. White, P. Lessard, C. D. Thatcher, K. D. Pelzer, B. Davis, and D. K. Carmel. 1997. "Prospective Study of Equine Colic Incidence and Mortality." *Equine Veterinary Journal* 29: 448–453. <https://doi.org/10.1111/j.2042-3306.1997.tb03157.x>
- Traub-Dargatz, J. L., C. A. Kopral, A. H. Seitzinger, L. P. Garber, K. Forde, and N. A. White. 2001. "Estimate of the National Incidence of and Operation-Level Risk Factors for Colic among Horses in the United States, Spring 1998 to Spring 1999." *Journal of the American Veterinary Medical Association* 219: 67–71. <https://doi.org/10.2460/javma.2001.219.67>
- USDA APHIS. 2016. *Baseline Reference of Equine Health and Management in the United States, 2015*. http://www.aphis.usda.gov/animal_health/nahms/equine/downloads/equine15/Eq2015_Rept1.pdf
- USDA APHIS. 2001. "Incidence of Colic in U.S. Horses." https://www.aphis.usda.gov/animal_health/nahms/equine/downloads/equine98/Equine98_is_Colic.pdf

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