

Surgical repair of a rectocutaneous fistula in a cat with skin avulsion wound

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ABSTRACT: Rectocutaneous fistulas are rare in cats. This paper reports a case of rectocutaneous fistula due to a skin avulsion wound in the dorsolateral dextra anus area in a local cat. Three days after the trauma, an open wound was found in the ventral tail area and was hit by a flowpot in the pelvic area and hind legs. The cat was diagnosed with a rectocutaneous fistula based on physical examination and observation, where feces were found coming out of the vulnus area during defecation. Fistula therapy was performed with skin flap surgery on the avulsion vulnus and systemic treatment during healing for seven days. Healing of the skin wound also increased, and hair in the ventral tail area grew better two months after surgery.

Keywords:

fistula, rectum, rectocutaneous, skin vulnus avulsion, female cat

INTRODUCTION

The rectum is a segment of the large intestine that traverses the pelvic canal and terminates in the anus. The cranial portion attaches to the sacrum, whereas the caudal portion is supported medially by the levator ani muscle and laterally by the coccygeus muscle. The external anal sphincter marked the caudal boundary of the rectum. In cats, the rectum measures 3.00–4.50 cm in length, averaging 3.46 cm (Santos *et al.* 2011). Rectal injuries in cats are caused by trauma, neoplasia, or infections. A potential complication is a rectocutaneous fistula, defined as an abnormal epithelial-lined tract connecting two surfaces. Gastrointestinal fistulas may be congenital or acquired (e.g., due to infection or trauma) and can form between the intestine and adjacent organs or skin (Pickhardt *et al.* 2002).

Rectocutaneous fistulas are rare in small animals (cats) and their prevalence is predominant in dogs (Tobias 1994). They arise secondary to rectal trauma, iatrogenic injury (e.g., rectal perforation during anal gland procedures), or surgical complications (e.g., perineal hernia repair or anal saccullectomy for anal sacculitis). Pelvic trauma increases the risk of inflammation and infection, which may lead to abscess formation and avulsion wounds that damage tissues, creating a fistula between the skin and the rectal lumen. Common avulsion injuries involve skin tearing, exposing deeper structures such as muscles or bones (Fossum 2019). This report describes the clinical presentation and surgical management of a rectocutaneous fistula in a cat, emphasizing the importance of early intervention to prevent systemic complications.

CASE

Anamnesis and signalment: A female cat named Aken, aged 1 year and 6 months, complained of difficulty in moving and pain in the pelvic area. **Physical Examination:** Avulsion vulnus in the dorsolateral area of the anus measuring 2.5 x 3.0 cm, tissue avulsion penetrated the subcutaneous layer and feces were found coming out of the channel connected to the rectal lumen, tissue tear measuring 0.5 x 1.0 cm (Figure 1). **Diagnosis:** Rectocutaneous fistula due to skin vulnus avulsion. **Prognosis:** Fausta. **Therapy and Management:** Closure of the fistula, skin flap on the avulsion vulnus, and systemic treatment.

RESULTS AND DISCUSSION

Rectocutaneous fistula is a form of gastrointestinal perforation, which is the formation of a hole in the digestive tract, precisely in the rectal area, and is also described as a sequela of rectal perforation. Diagnostic imaging with contrast radiography can be used to detect fistulae (Łojczyk-Szczepaniak *et al.* 2014). Most cases of rectal perforations in dogs and cats are associated with pelvic fractures. Other causes of rectal perforation include penetration of bites that penetrate tissue, trauma due to swallowing foreign objects or intraluminal foreign objects that enter through the anus, and iatrogenic trauma during physical examination of the rectal area (Fransson 2008).

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Rectal perforation in dogs and cats generally occurs due to fractures in the pelvic region. Rectocutaneous fistula cases are secondary to external injuries and trauma in the pelvic region, especially in the rectal area (Görücü *et al.* 2021). This paper reports a fistula incident in the rectal area secondary to avulsion vulnus in an Aken cat with a skin tissue tear measuring 2.5 x 3.0 cm. The cat was found to be crushed by a large flowpot in the pelvic area and hind legs. Three days after the injury, the owner noticed abnormalities in the Aken's movement and an open wound at the base of the tail.

Physical examination revealed an avulsion vulnus located in the dorsolateral dextra of the anal canal (Figure 1A). Severe tissue damage with deep tears formed a fistula tract in the caudal rectum that was clearly visible from the lateral side of the anus, which came out of the hole that penetrated the rectal lumen (Figure 1B). This made the procedure easy to perform during the surgical process (Riggs *et al.* 2019). Suturing was performed using a simple continuous suture to close the channel connecting the rectal lumen with the subcutaneous tissue (Figure 1C). Meanwhile, a skin flap was performed to close the tissue due to avulsion of the vulnus in the skin, which was quite wide. The cat's vital conditions in terms of temperature, respiratory rate, and pulse rate after surgery were found to be stable. The Aken cat had no appetite problems, the defecation process took place normally through the anus, and there were no complications in the post-surgery suture wound. Healing of the skin wound also improved, supported by systemic treatment in the form of antibiotics, anti-inflammatories, and additional supplementation that was routinely given for seven days and hair growth in the ventral area of the tail two months post-surgery (Figure 1D) and earlier than reported (Kilic & Yaygingul 2010).

■ CONCLUSION

Rectocutaneous fistulas are uncommon in small animals and typically develop secondary to rectal traumas. Pelvic injuries may lead to abscess formation and avulsion wounds, potentially resulting in fistulous tracts between the skin and the rectal lumen. In this case, the surgical intervention achieved successful outcomes with no postoperative complications. The patient showed complete wound healing and normal defecation.

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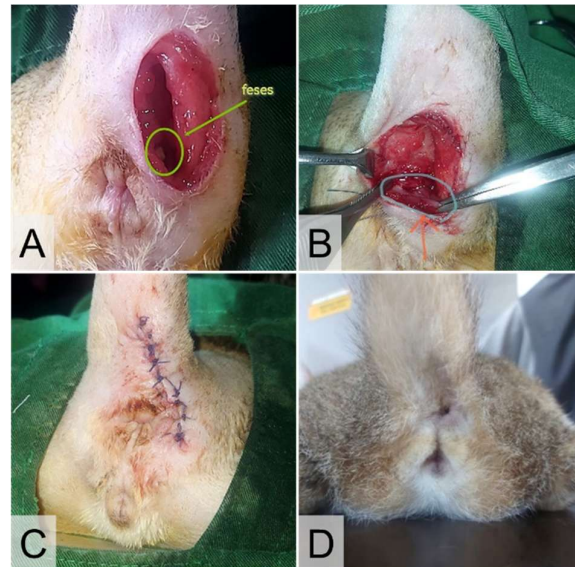


Figure 1 Management of rectocutaneous fistula in a local cat. (A) Feces exiting the channel that penetrated the rectal lumen. (B) The fistula in the caudal rectum is 2.5 cm cranial to the anal canal, and the channel is torn 0.5 x 1 cm. (C) Post-surgery, closure of the fistula channel and skin flap on the avulsion vulnus. (D) Hair growth in the ventral area of the tail two months post-surgery.

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