Veterinary Letters
ISSN 2581-2416
DOI: https://dx.doi.org/10.29244/avl.9.4.93-94
https://journal.ipb.ac.id/index.php/arshivetlett

Incisional hernia following ovariohysterectomy in a mixed-breed domestic cat

Anggieta Ratuyustiarany[1], Muhammad Farid Rizal[2,3,*], Hadrianus Lau[2], Donna Marie Leo[2], Hilma Luthfia Sudarsyah[2], Rahmadhani Angger Syahputra[1], Reinier Melvern[4]

[1] Program of Veterinary Medicine, Faculty of Veterinary Medicine, Brawijaya University, Malang, East Java, Indonesia
[2] Klinik Hewan Urban Animal, Bandung, West Java, Indonesia
[3] Program of Primatology, School of Postgraduate, IPB University, Bogor, West Java, Indonesia
[4] Program of Veterinary Medicine, Faculty of Medicine, Padjadjaran University, Sumedang, West Java, Indonesia

ABSTRACT: An incisional hernia is a postoperative complication that arises when the abdominal wall fails to achieve adequate closure following surgery, allowing abdominal tissues or organs to protrude through the incision site. This report describes a case of incisional hernia in a 3.4-kg female cat that developed an abdominal mass one month after ovariohysterectomy. Diagnosis was established based on a thorough physical examination of the patient. Surgical management consisted of repositioning the herniated tissue and layered closure of the abdominal wall. Postoperative care included the administration of antibiotics and analgesics to prevent infection and to manage pain. Clinical evaluation on postoperative day 7 revealed complete wound healing without complications, indicating favorable outcomes.

Keywords:
abdominal protrusion, incisional hernia, cat, ovariohysterectomy

■ INTRODUCTION

An incisional hernia is a postoperative complication characterized by the failure of the abdominal wall to heal adequately following laparotomy, resulting in protrusion of the abdominal contents through the surgical incision. Common clinical manifestations include pain, discomfort, cosmetic concerns, skin complications, and varying degrees of functional impairment (Caglià *et al*. 2014, Luijendijk *et al*. 2000).

Animals with incisional hernias may present with abdominal wall defects accompanied by additional traumatic or postoperative lesions, such as superficial wounds at other anatomical sites. Although some patients may initially appear clinically stable, incisional hernias carry a substantial risk of serious complications, including intestinal lumen obstruction and ischemia of the herniated tissues, which necessitate timely surgical intervention (Caglià *et al*. 2014, Mudge & Hughes 1985).

Despite limited reports on incisional hernias in small animal practice, particularly in cats after ovariohysterectomy, comprehensive evidence integrating clinical findings and outcomes is lacking. With only a few case reports available, including those by Lima *et al*. (2021) and Sewoyo *et al*. (2023), this case report addresses the knowledge gap by documenting the clinical presentation, surgical management, and outcomes of an incisional hernia in a cat following ovariohysterectomy, thus contributing to evidence-based veterinary practice.

■ CASE

Anamnesis and Signalment: A spayed female cat presented with a history of decreased appetite, superficial wounds on the hind limb, and protrusion of peritoneal tissue through the abdominal wall. **Physical examination**: A defect in the umbilical region, consistent with an umbilical incisional hernia. **Treatment**: Surgical management was performed following standard aseptic preparation. The protruding peritoneal tissue was initially cleaned and assessed for viability and then carefully repositioned into the abdominal cavity. The abdominal wall was closed using a layered suturing technique involving the abdominal musculature and skin. Postoperative management included antibiotic therapy with amoxicillin (20 mg/kg, twice daily) and analgesic administration (Alvita albumino, mg/kg, twice daily), both of which were continued for 7 days. Clinical follow-up revealed progressive wound drying and complete healing by postoperative day 7, with no complications.

■ RESULTS AND DISCUSSION

An incisional hernia occurs when abdominal organs protrude through a previous surgical incision owing to incomplete healing (Sewoyo *et al*. 2023). Impaired wound healing, influenced by surgical site infections and mechanical stress

Received: 28.06.2025 | **Revised:** 30.07.2025 | **Accepted:** 06.08.2025

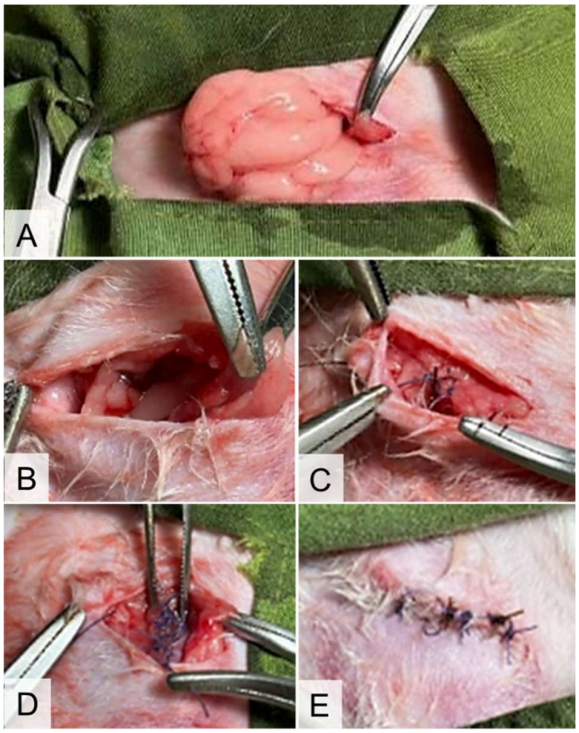

Figure 1. Surgical procedure of incisional hernia in a cat. (A) Protrusion of peritoneal fat through the abdominal wall, (B) intra-abdominal repositioning of the herniated tissue, (C) closure of the musculus abdominis internus, (D) closure of the musculus abdominis exsternus, and (E) skin closure.

from obesity or physical activity, is the main cause. Systemic conditions such as diabetes, renal failure, obesity, and immunosuppressive medications increase the risk of hernia, with morbid obesity being a primary factor (Bhardwaj *et al*. 2024).

Although incisional hernias are well documented in human medicine, they are infrequently reported in veterinary practices. A retrospective study of 550 dogs and cats reported only one case of incisional hernia (0.18%), highlighting its low incidence (Crowe 1978). Multilayer abdominal closure with postoperative activity restriction is essential for preventing the development of hernias. Incisional hernias may cause pain and digestive disturbances, and in severe cases, tissue strangulation, requiring immediate surgery (Sasmita *et al*. 2019). The limited veterinary literature on incisional hernias emphasizes the relevance of this case. Few case reports exist, including those by Lima *et al*. (2021) and Sewoyo *et al*. (2023). This case report documents the presentation, surgical management, and outcomes of an incisional hernia in a cat, supporting the evidence-based veterinary surgical practices.

The initial treatment involved aseptic cleansing and repositioning of the herniated peritoneal fat into the abdominal cavity. The abdominal wall was reconstructed by suturing the musculus abdominis internus and obliquus, followed by skin closure. Postoperative therapy included amoxicillin (20 mg/kg body weight every 12 h for 7 days) and Alvita albumino (mg/kg body weight every 12 h for 7 days) for infection prevention. Activity restriction for 1–2 weeks maintained wound integrity. Wound healing involves hemostasis, inflammation, proliferation, and remodeling. Hemostasis occurs via clot formation, followed by the inflammatory phase (1–7 days) of wound decontamination. The proliferative phase involves granulation tissue formation, whereas the remodeling phase continues as the scar tissue matures (Wallace *et al*. 2023). Postoperative care included the use of an Elizabethan collar, restriction of activity for 10-14 days, and monitoring of surgical sites for dehiscence, inflammation, or seroma. Tension-free suturing, appropriate suture selection, and minimal movement are essential to reduce the risk of recurrence.

■ CONCLUSION

Incisional hernia after ovariohysterectomy can be managed through surgical intervention, including tissue repositioning, multilayer closure, and postoperative care. Prevention relies on optimal surgical techniques, postoperative monitoring, and owner education to minimize complications and reduce the risk of recurrence.

■ AUTHOR INFORMATION

Corresponding Author

*MFR: faridrizal46@gmail.com

Klinik Hewan Urban Anima, Jl. Cibeunying Kolot no 66, Cigadung, Cibeunying Kaler Bandung, West Java, INDONESIA.

■ REFERENCES

Bhardwaj P, Huayllani MT, Olson MA, Janis JE. 2024. Year-over-year ventral hernia recurrence rates and risk factors. JAMA Surgery. 159(6):651-658.

Caglià P, Tracia A, Borzì L, Amodeo L, Tracia L, Veroux M, Amodeo C. 2014. Incisional hernia in the elderly: risk factors and clinical considerations. International journal of surgery. 12:S164-S169.

Crowe Jr DT. 1978. Closure of abdominal incisions using a continuous polypropylene suture: clinical experience in 550 dogs and cats. Veterinary Surgery. 7(3):74-77.

Lima AJ, Lima WC, Lima DA, Sala PL, Borges TB, Quessada AM. 2021. Incisional hernia in a dog. Acta Scientiae Veterinariae. 49(1):1-5.

Luijendijk RW, Hop WC, Van Den Tol MP, De Lange DC, Braaksma MM, IJzermans JN, Boelhouwer RU, de Vries BC, Salu MK, Wereldsma JC, Bruijninckx CM. 2000. A comparison of suture repair with mesh repair for incisional hernia. New England Journal of Medicine. 343(6):392-398.

Mudge M, Hughes L. 1985. Incisional hernia: a 10 year prospective study of incidence and attitudes. Journal of British Surgery. 72(1):70-71.

Sasmita DA, Sudisma IG, Wirata IW. 2019. Studi Kasus: Hernia Abdominalis pada Kucing Domestik. Indonesia Medicus Veterinus. 8(5):624-636.

Sewoyo PS, Purwitasari MS, Rabiulfa P, Wirata IW. 2023. Incisional hernia case management in a local cat. Journal of Applied Veterinary Science and Technology. 4(2):115-121.

Wallace HA, Basehore BM, Zito PM. 2023. Wound Healing Phases. Study Guide from StatPearls Publishing, Treasure Island (FL).