

Surgical and supportive management of bilateral perineal hernia in a shih tzu dog

Salsabila Ayuningtyas Sukma¹, Ida Tjahajati², Muhammad Zulfadillah Sinusi^{1,3,*}

¹ Veterinary Professional Program, Faculty of Medicine, Hasanuddin University, Makassar, Indonesia

² Faculty of Veterinary Medicine, Gadjah Mada University, Yogyakarta, Indonesia

³ Study Program of Veterinary Medicine, Faculty of Medicine, Hasanuddin University, Makassar, Indonesia

ABSTRACT: Perineal hernia is a condition characterized by weakening and separation of the muscles and fascia that support the pelvic diaphragm. The formation of a hernia ring may result from a congenital defect during embryonic development or traumatic injury. The standard treatment for this condition is hernioplasty, a surgical procedure aimed at repairing and reducing the size of the hernia ring caused by muscle weakness. A 12-year-old Shih Tzu presented to Klinik Hewan Jogja, Yogyakarta Indonesia with a history of constipation. Physical examination revealed a mass in the dorsal pelvic region, which was identified as an abnormal accumulation of fecal material. Comprehensive diagnostic evaluations, including hematology, serum biochemistry, and radiography, were performed to confirm the diagnosis of bilateral perineal hernia. Surgical correction through hernioplasty was performed to close the hernia ring. Postoperative management consisted of antibiotic and analgesic therapy, supportive supplementation, and dietary regulation.

Keywords:

bilateral perineal hernia, dog, hernia, hernioplasty, shih-tzu

■ INTRODUCTION

A perineal hernia is defined as the displacement of abdominal or pelvic organs through a weakened pelvic diaphragm into the perineal region. The condition may be congenital in origin or develop secondary to underlying disorders, such as prostatitis, cystitis, urinary or colorectal obstruction, and chronic constipation. It occurs predominantly in male dogs, representing approximately 94% of the reported cases (Apatiya *et al.* 2020). Clinically, affected animals often present with tenesmus, dyschezia, and dysuria, which are primarily associated with fecal accumulation and impaired evacuation (Bojrab *et al.* 2014).

The definitive management of perineal hernias is surgical, with hernioplasty being the treatment of choice. Several techniques have been described to reinforce the weakened pelvic diaphragm, including anatomical repair, internal obturator muscle flap (IOMF), and semitendinosus muscle flap (SMF) (Rianto *et al.* 2024, Hobbs *et al.* 2014). These procedures aim to restore anatomical integrity, alleviate clinical signs, and minimize the risk of recurrence.

This report describes a case of bilateral perineal hernia in a geriatric Shih Tzu, outlining the diagnostic approach, surgical management, and postoperative care to highlight the clinical challenges and therapeutic outcomes.

■ CASE

Anamnesis and Signalment: A 12-year-old male Shih Tzu (9.6 kg) presented with constipation and a firm perianal mass.

Clinical examination revealed pink mucous membranes, CRT <2 s, a temperature of 38.5°C, and fecal accumulation. Pre- and postoperative blood counts showed anemia with reduced hemoglobin, erythrocytes, and hematocrit, elevated RDW, and leukocytosis, indicating inflammation. Serum biochemistry revealed increased ALT levels (Table 1). **Radiographic Examination:** Lateral radiographs showed intestinal translocation with fecal accumulation in the pelvic cavities, indicating bilateral perineal hernia (Figure 1). **Treatment:** Premedication used 0.13 mL atropine subcutaneously, followed by anesthesia with 1.0 mL ketamine and 0.4 mL medetomidine intramuscularly. Surgery was performed through a dorsal-to-ventral incision along the medial tuber ischii. The semitendinosus muscle was mobilized using the semitendinosus muscle flap (SMF) technique. Polyglactin 910 sutures with a vertical mattress pattern were used for skin closure (Figure 2). **Postoperative Care:** Antimicrobial therapy included metronidazole and enrofloxacin, with tramadol for analgesia. Topical Ikamicetin 2% was applied for wound management. Supportive therapy included orinipural, vitamin B-complex, striatamine, and sangobion for hepatic function and hematopoiesis. A Simlax dose was administered as a laxative to ensure recovery and healing.

Received: 01-05-2025 | Revised: 05-06-2025 | Accepted: 11-06-2025

Copyright © 2025 CC-BY-SA. This is an Open Access article distributed under the terms of the Creative Commons Attribution ShareAlike 4.0 International License (<https://creativecommons.org/licenses/by-sa/4.0/>).

Table 1 Complete blood count and blood chemistry findings in a shih tzu with bilateral perineal hernia

Parameter	Surgery		Reference
	Pre-	Post-	
Complete blood count			
Hemoglobin (g/dL)	13.3	10.00 ↓	12.0 - 18.0
Erythrocyte (10 ⁶ /μL)	5.56	4.44 ↓	5.5 - 8.5
Hematocrit (%)	38.1	29.4 ↓	37.0 - 55.0
RDW (%)	14.4 ↑	14.6 ↑	12 - 14.2
Leukocyte (μL)	18,100 ↑	33,100 ↑	6,000 - 17,000
Granulocyte (10 ³ /μL)	14.7 ↑	26.1 ↑	3 - 11.5
Lymphocyte (10 ³ /μL)	2.9	5.5 ↑	1 - 4.8
Monocyte (10 ³ /μL)	0.5	15 ↑	0.18 - 13.5
Thrombocyte (10 ³ /μL)	6.03 ↑	3.35	2-5
Blood chemistry			
BUN (mg/dL)	13.81	n.t.	12.0 - 18.0
Creatinine (mg/dL)	0.77	n.t.	5.5 - 8.5
AST/SGOT (mg/dL)	54.36	n.t.	37.0 - 55.0
ALT/SGPT (mg/dL)	89.34 ↑	n.t.	12 - 14.2

Note: RDW= red cell distribution width, BUN= blood urea nitrogen, AST= aspartate aminotransferase, SGOT=serum glutamic-oxaloacetic transaminase, ALT= alanine aminotransferase, SGPT=serum glutamic pyruvic transaminase, n.t.=not tested

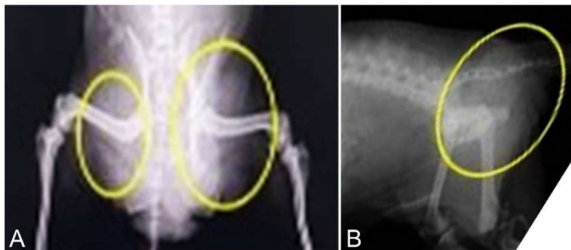


Figure 1 Radiographs of the shih tzu with bilateral perineal hernia: (A) dorso-ventral and (B) lateral views.

RESULTS AND DISCUSSION

A diagnosis of bilateral perineal hernia was established through anamnesis, clinical examination, and diagnostics. The patient's advanced age (12 years) may have contributed to the reduced muscle tone and hernia formation. Radiographic evaluation confirmed intestinal translocation and fecal accumulation in both pelvic regions (Figure 1).

A complete blood count (CBC) before surgery (Table 1) showed elevated leukocyte, granulocyte, RDW, and platelet counts, indicating inflammation. Metronidazole was administered to prevent postoperative infections. Follow-up CBC revealed anemia with decreased red blood cell indices and elevated RDW and leukocytes. Antibiotic therapy was changed to enrofloxacin (Interflox), which inhibits bacterial DNA replication. Serum biochemistry revealed elevated ALT levels (Table 1), indicating hepatocellular dysfunction. The patient received an ornipural hepatoprotective agent for detoxification and liver regeneration.

Postoperative pain management included tramadol hydrochloride administration, serotonin inhibition, and norepinephrine reuptake (Figure 2). Topical Ikamicetin 2% prevented infection by inhibiting bacterial protein synthesis.



Figure 2 Healing progression after surgery of the shih tzu with bilateral perineal hernia at day 1 (A), day 3 (B), and day 14 (C).

Supportive therapy enhances healing, whereas striatamine from snakehead fish stimulates tissue regeneration. Anti-inflammatory drugs were avoided owing to age and liver issues. Patients with SAIDs are at risk for osteoporosis, gastric ulcers, and increased intraocular pressure. NSAIDs are contraindicated because they worsen hepatic and renal dysfunction and increase the risk of complications. The risk of drug toxicity increases in geriatric dogs owing to reduced hepatic metabolism (Idacahyati *et al.* 2019).

Similar findings were reported in a 13-year-old male Jack Russell Terrier with bilateral perineal hernia, where the bladder, prostate, and intestines were displaced caudally (Adeyanju *et al.* 2011). Hernioplasty with orchidectomy reduces recurrence, whereas colopexy may prevent colon displacement into the hernial sac.

CONCLUSION

A bilateral perineal hernia requires hernioplasty. Age and constipation were risk factors, whereas hepatic dysfunction required careful postoperative management. Diagnostic evaluation-guided therapy and minimized complications.

AUTHOR INFORMATION

Corresponding Author

*MZ: muhammadzulfadillahsinusi@unhas.ac.id

Study Program of Veterinary Medicine, Faculty of Medicine, Hasanuddin University, Jl. Perintis Kemerdekaan KM. 10, Tamalanrea, Makassar City, South Sulawesi, 90245, INDONESIA

REFERENCES

- Adeyanju JB, Yakubu AS, Jibril A, Buhari S, Alayande MO. 2011. Bilateral perineal hernia with bladder retroflexion in a 13-year-old intact Jack-Russel dog: Case report. *Sokoto Journal Veterinary Science*. 9(1):50-53.
- Apritya D, Widyawati R, Aritonang EA, Djawa MNL, Saputra F, Danyanti IAA. 2020. Bedah reposisi hernia perineal pada kucing betina. *Jurnal Medik Veteriner*. 3(2):277-282.
- Bojrab MJ, Waldron DR, Toombs JP. 2014. Surgical techniques for treatment of perineal hernia. In: *Current Techniques in Small Animal Surgery*, fifth edition. Teton New Media. China.
- Hobbs SJ, Demetriou JL, Ladlow JF. 2014. *Feline soft tissue and general surgery*. China: Elsevier.
- Idacahyati K, Nofianti T, Aswa GA, Nurfatwa M. 2019. Hubungan tingkat kejadian efek samping antiinflamasi non steroid dengan usia dan jenis kelamin. *Jurnal Farmasi dan Ilmu Kefarmasian Indonesia*. 6(2):56-61.
- Rianto V, Ali NRA, Wulandari ML, Hendriansah AB, Sampurna ABP, Fitus FKY, Bora GC, Paramesthi AD, Apatiya D, Rahman MN. 2024. Penanganan hernia inguinalis dengan hernioplasty pada kucing. *Prosiding Seminar Nasional Kusuma III*. 2(3):110-118.