Complications and Recurrence After Perineal Hernia Repair by Internal Obturator Muscle Transposition in 48 Dogs

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I have no financial interest to declare

Introduction

- **Perineal hernias** occur when the pelvic diaphragm muscles fail to support the rectal wall
- Occurs mostly in **intact male dogs over 5 years old**
- Etiology not completely understood, probably multifactorial
- **Hormonal influence** seems to be associated with perineal hernia
- Multiple surgical techniques have been described, **internal obturator muscle transposition being one of the most prominent** in the veterinary literature

Introduction

Objective of the study:

To describe complications associated with internal obturator muscle transposition for perineal hernia repair and identify risk factors for recurrence

Methods

Retrospective study

- Inclusion criteria: dogs that underwent a perineal repair by transposition of the internal obturator muscle in our teaching hospital between 2016 and 2023
- Diagnosis performed by **rectal palpation** and all dogs had an **abdominal and hernia ultrasound**
- Exclusion:
  - Dogs with recurrence from a surgery performed elsewhere
  - Dogs where the internal obturator muscle transposition could not be performed

Methods

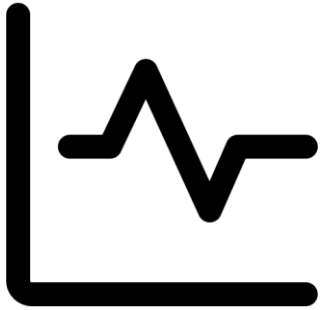
- **Procedure**
  - Before surgery: **all dogs had lactulose and received a gastrointestinal diet between appointment and surgery**
  - Surgery performed in sternal recumbency
  - **Prescrotal castration** performed in all intact males
  - **Organopexy** performed at the same time of the surgery if needed
  - Surgery performed by an **ECVS diplomate or a resident** in small animal surgery under direct ECVS Diplomate supervision
  - Postoperative treatment: cefazolin for 2 weeks, lactulose and hyperdigestible diet until recheck. Elizabethan collar for two weeks until stitches removal

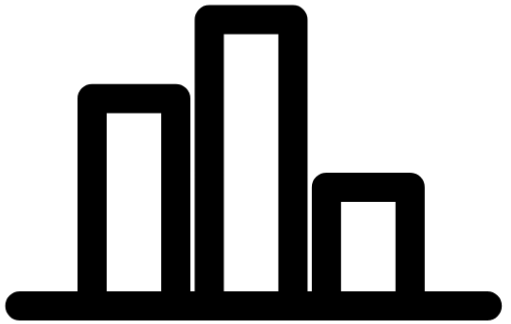
Methods

- **Data**
  - Signalment (age, breed, neutering status)
  - Clinical signs
  - Complications (immediate, short-term, long-term)
  - Follow-up:
    - Clinical follow-up at 4-6 weeks postoperatively
    - Owner questionnaire for long-term

Methods

- **Statistical analysis**
  - Chi-Square test performed to identify risk factors for recurrence, including testicular and prostatic pathologies, organopexy, surgeon experience, postoperative tenesmus and unilateral versus bilateral hernias.





Results

Cohort

- **48 cases** included in our cohort
- All dogs were **male dogs** with a median age of **8.7 years** [6 – 13]
- **79%** (38/48) dogs were intact male dogs,
- **Various breeds**: Maltese 19%, cross-breed dogs 19%, Chihuahua 8%, Yorkshire terrier 8%, Boder Collie 6%, …

Results

Clinical signs

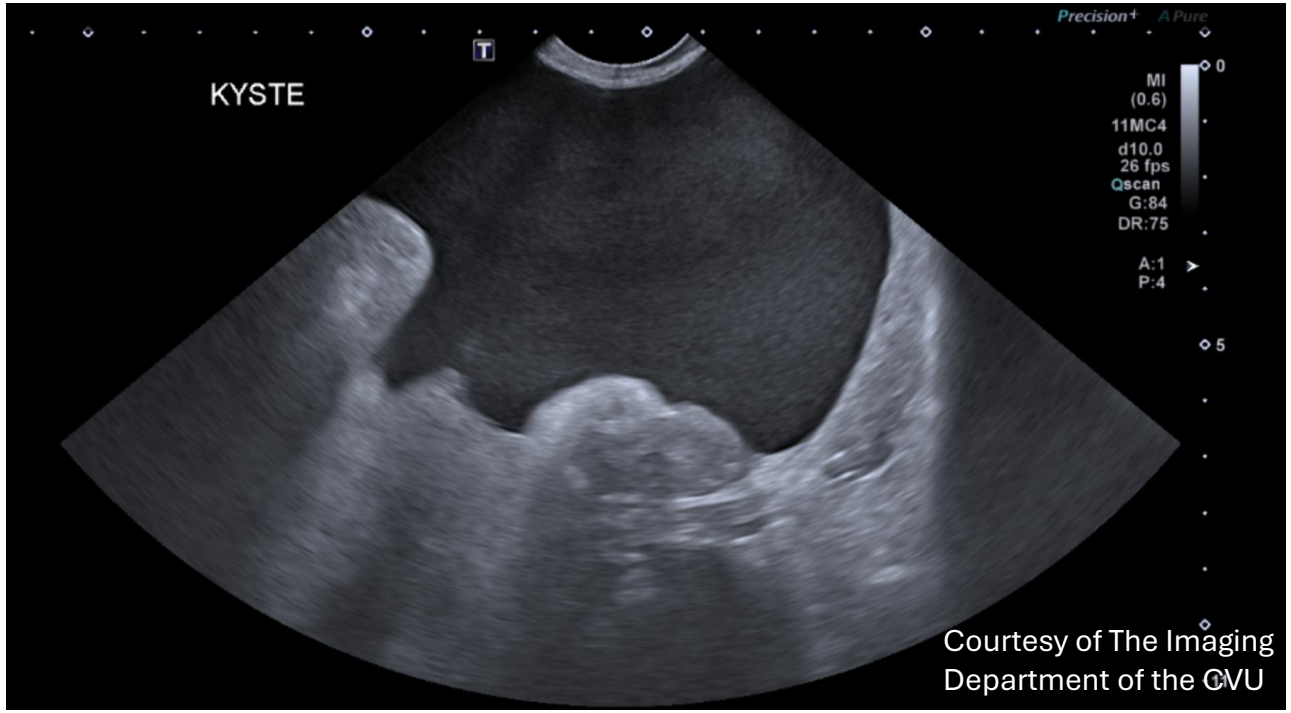
- 100% dogs had a perineal mass effect
- Most common sign: **tenesmus in 69%**
- Bilateral in 63% cases
- When unilateral, right hernia in 89% cases

	Number of cases	Percentage (%)
Fecal tenesmus	33	69
Constipation	11	23
Lethargy	8	17
Pain	8	17
Diarrhea	7	15
Stranguria	6	13
Anorexia	5	10
Hematochezia	4	8
Pollakiuria	3	6
Vomiting	3	6
Hematuria	2	4
Dysorexia	2	4
Hypothermia	1	2
Rectal Prolapse	1	2
None	4	8

Results

Abdominal ultrasound

- **Prostatic finding in 83% cases** ((para)-prostatic cysts mainly)
- **Testicular nodules in 13% cases**
- **Hernia content**: small bowels (58% cases), prostate (42%), urinary bladder (33%)

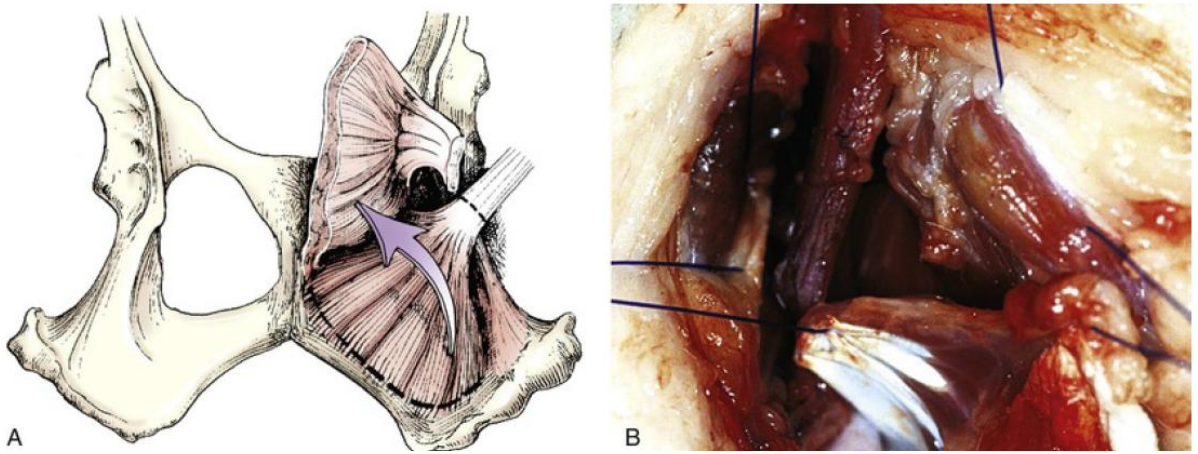


Paraprostatic cyst

Results

Treatment

- Medical treatment :
  - **67% of dogs** received lactulose preoperatively
  - Others were presented in an emergency setting
- Surgical treatment:
  - **89% had a neutering** procedure at the time of the Internal obturator muscle transposition
  - **92% cases had no organopexy** (colopexy nor cystopexy)
  - 1 dogs had a **polypropylene mesh** added to the transposition of the internal obturator muscle
  - All dogs had NSAIDs, lactulose and hyperdigestible diet postoperatively



From Tobias and Johnston, Veterinary Surgery in Small animals

Results

Complications

Immediate (48 cases)

- 81% had no complication
- Tenesmus 4%, rectal prolapse 8%, dysuria 2%
- 1 dog with pain and paraparesis with a thrombus

Short-term (35 cases)

- Median time to follow-up 1 month
- **Complication rate 31%**
- **9%** had tenesmus, 9% had dysuria

Long-term (20 cases)

- **35% had tenesmus for a median of 318 days**
- 10% had dysorexia

Results

Recurrence

- **26% dogs** had a recurrence in medium to long term
- In 50% cases, recurrence occurred between **3 to 4 months** postoperatively
- None of the tested risk factors (prostatic pathology, organopexy, tenesmus, surgery performed by a resident, bilateral pathology) were significantly associated with recurrence
- **Dogs with testicular pathology had a higher recurrence rate (OR 3.33)**

Discussion

Moderate recurrence rate

- Transposition of internal obturator muscle is a successful technique for perineal hernia repair
- Recurrence rate in literature between 8-33%
- No systematic organopexy: debatable outcomes in literature

Use of Laparotomy in a Staged Approach for Resolution of Bilateral or Complicated Perineal Hernia in 41 dogs

Hervé N. Brissot DrVet, Gilles P. Dupré DrVet, Diplomate ECVS, Bernard M. Bouvy DrMedVet, MS, Diplomate ACVS & ECVS

Effects of urinary bladder retroflexion and surgical technique on postoperative complication rates and long-term outcome in dogs with perineal hernia: 41 cases (2002–2009)

Jean-Guillaume Grand DVM, Stéphane Bureau DVM, and Eric Monnet DVM, PhD, DACVS

View Less —

Discussion

Surgical technique

- Just one technique studied here
- **Traditional herniorraphy** had a higher recurrence rate than internal obturator muscle transposition
- **Fascia lata graft** non inferior
- Ideally, prospective cohorts comparing surgeries

Discussion

Factors for recurrence

- **Surgeon experience** here not a factor for recurrence
- Bladder retroflexion : here no influence on recurrence
- Here **testicular pathology** seems to have influence on recurrence → Hormonal influence on healing ?
- BUT recent study

Dogs neutered prior to perineal herniorrhaphy or that develop postoperative fecal incontinence are at an increased risk for perineal hernia recurrence

Abigail L. Hatch BS, Mandy L. Wallace DVM, MS, DACVS, Kenneth A. Carroll BVetBiol/BVSc, DACVS, Janet A. Grimes DVM, MS, DACVS, Brian J. Sutherland DVM, DACVS, and Chad W. Schmiedt DVM, DACVS

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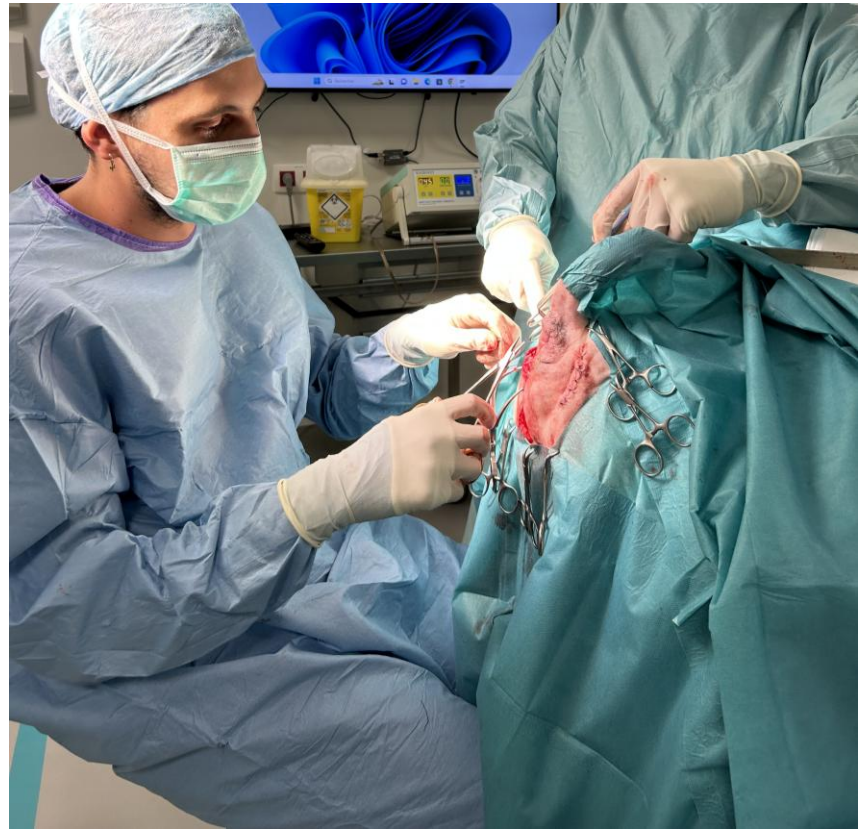
Discussion

Other limitations

- Retrospective nature of the study
- Small sample of cases
- Questionnaire follow-up (lack of global follow-up)

Conclusion

- Internal obturator muscle transposition for perineal hernia repair is associated with a moderate rate of complications and recurrence.
- Testicular pathology may increase the risk of recurrence, possibly due to hormonal factors.
- Further studies are needed to confirm these findings and identify strategies to improve outcomes



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