

Genital Prolapse in domestic animals

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Genital prolapse means distal displacement and eversion of the pelvic genital organs such as vagina, cervix or the uterus as a protrusion through the external genitals (Vulva)

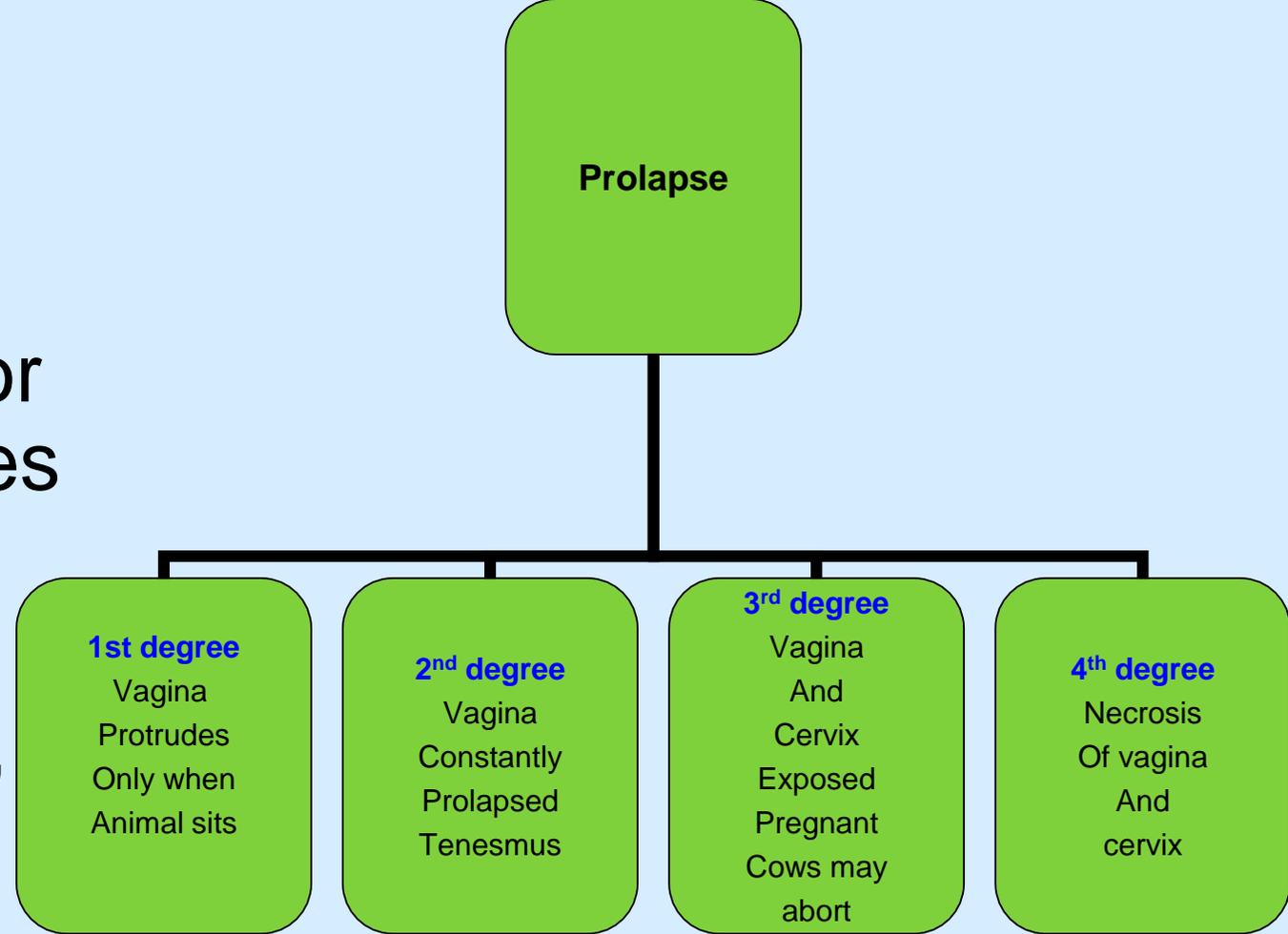
- Vaginal prolapse occurs during gestation, post-partum period, sometimes in non-pregnant animals and rarely during estrus in cattle, buffalo and sheep. Uterine prolapse occurs during the post-partum period only.

Cervico-vaginal prolapse

(basically because of incompetence of constrictor vestibuli and vulvar muscles also called casting of withers)

Common in cattle, buffaloes, sheep and Boxer breed of dogs during estrus

Common in pluriparous cows and in Hereford, Santa Gertrudis, Rathi breed



Etiology:

High estrogenic feeds during gestation

Peri-vaginal fat deposition

Rising levels of estrogen during last trimester

Vaginal/vulvar injury, poor conformation

Cold weather

↑intra-abdominal pressure due to high bulk diet and pregnancy

Cystic ovaries

Hormone therapy

Prolapse In young, brachycephalic dogs, prolapse of vagina at the time of estrum is fairly common.

Consequences

Edema, inflammation, difficulty in urination, infection, tenesmus (constant straining)

Differential diagnosis

Tumors of the vulva, vagina, cervix, prolapse of the bladder

Therapy

Wash with cold water and soap use alcohol/sugar to reduce edema

Wash with antiseptics

Raise the organ to relieve pressure so that the animal urinates

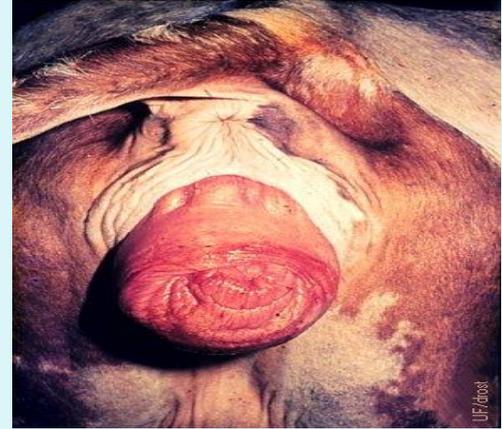
Use epidural anesthesia 2-4 ml of 2% xylocaine if straining is more

Replace back in standing animal after lubrication can use bottle for replacing

Lower fore limbs

Apply Truss in cows and retainers in sheep

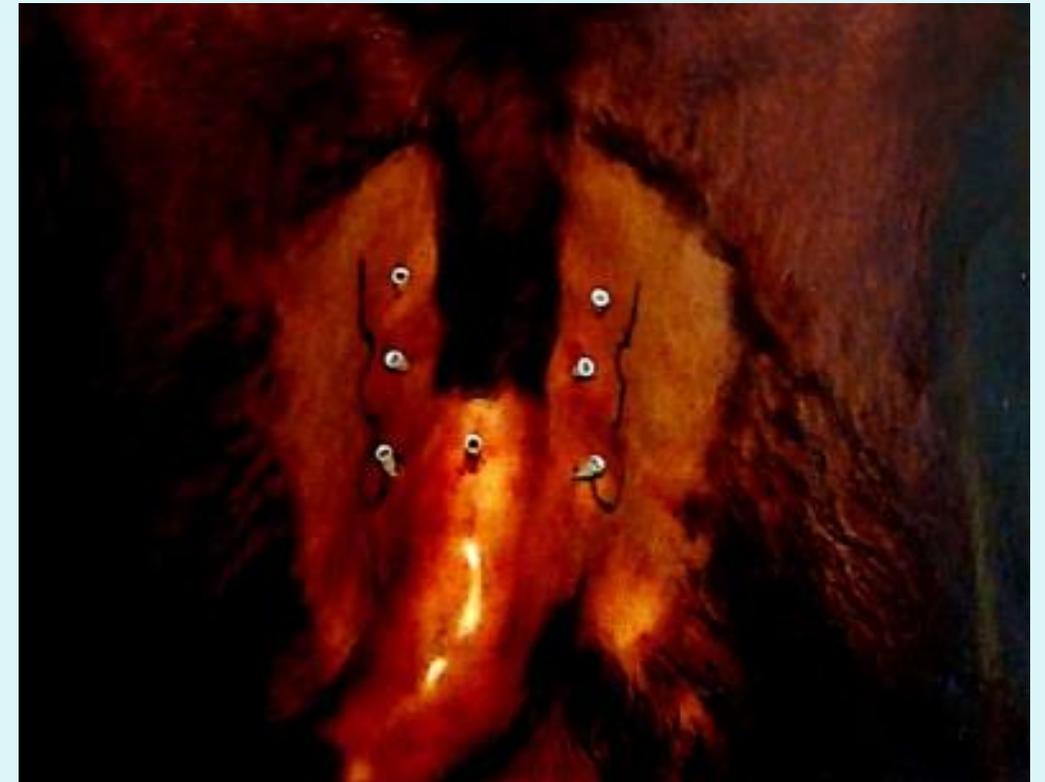
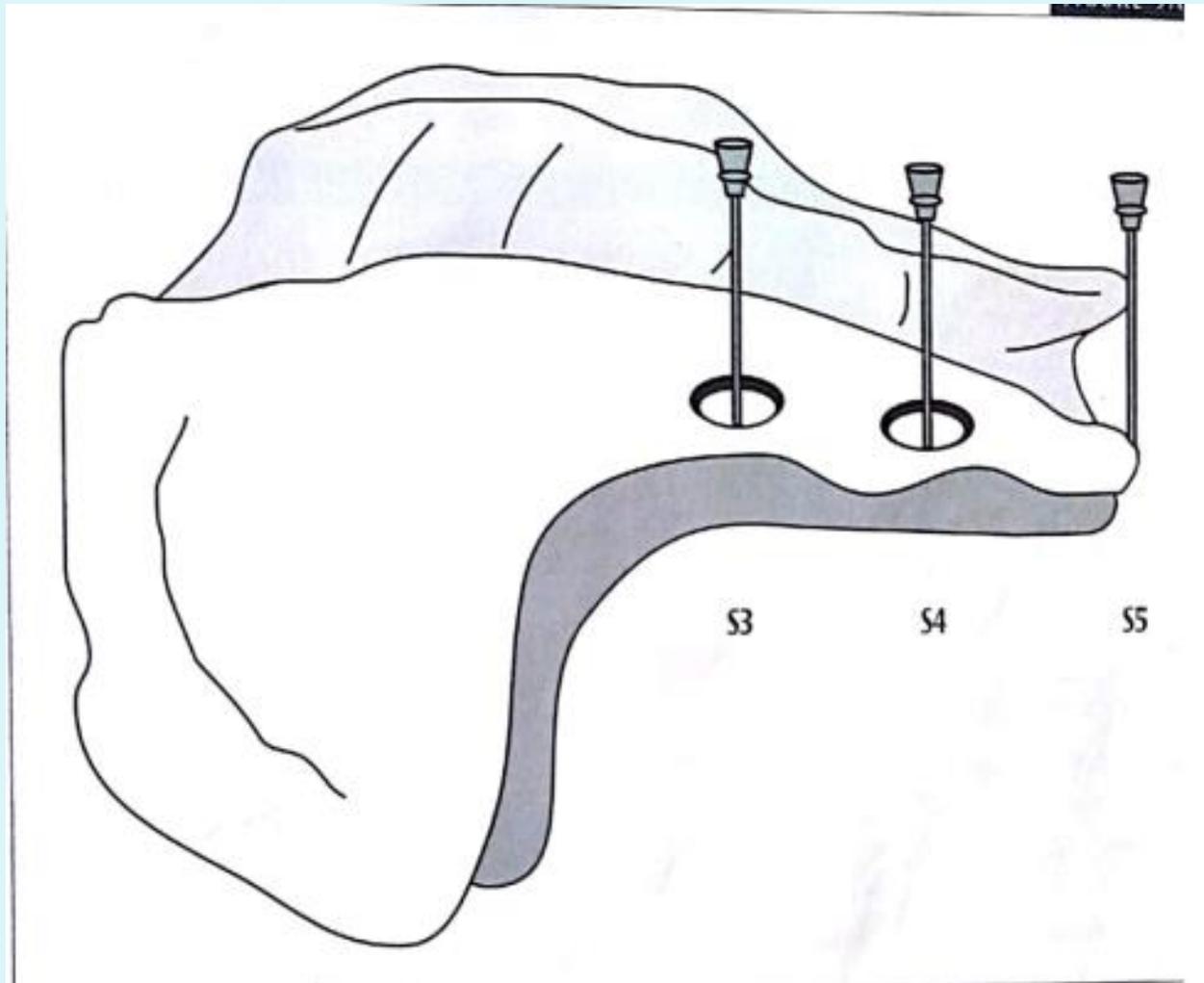
Reduce tenesmus by → Siquil injection



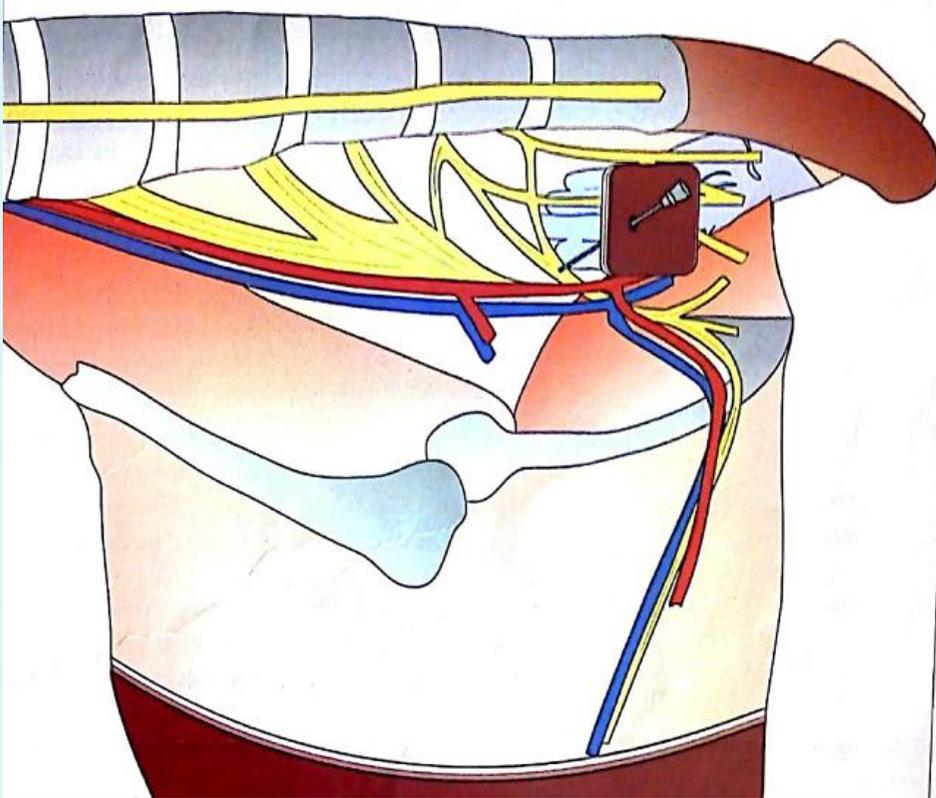
Regional anesthetic techniques to reduce straining

- Caudal Epidural anesthesia 0.5-1 mL/220 Kg will provide regional anesthesia for 2-3 hrs
- Aseptically prepare the skin dorsal to sacrum and 1st coccygeal vertebra
 - Block the 5th sacral nerve at the caudal border of the sacrum (in the sacrococcygeal space) 1-1.5 cm dorsal to the midline.
 - Insert a 18 gauge 7.5 cm needle into the foramen and inject 10 mL of 2% lidocaine at each site. Perform the procedure bilaterally. For prolonged anesthesia use 2-3 mL of 70-95% isopropyl alcohol at each site.
 - This procedure avoids loss of tail tone and sciatic nerve paralysis

→ Sacral paravertebral anesthesia



Pudendal nerve block



Continuous caudal epidural anesthesia

Alcohol epidural anesthesia- 3-4 mL of 95% ethyl alcohol or 4-6 mL of 70% of isopropyl alcohol is sufficient for a 400 Kg cow.

Desensitization results from de-myelination of nervous tissue with subsequent loss of sensation of the perineum and tail. However, accidental overdosage can result in limb paralysis and permanent tail paralysis. Regeneration of nervous tissue may take 2-3 months.

Retention sutures

Purse string

Buhner suture

Button sutures

Vertical mattress

Interrupted horizontal mattress

Bootlace

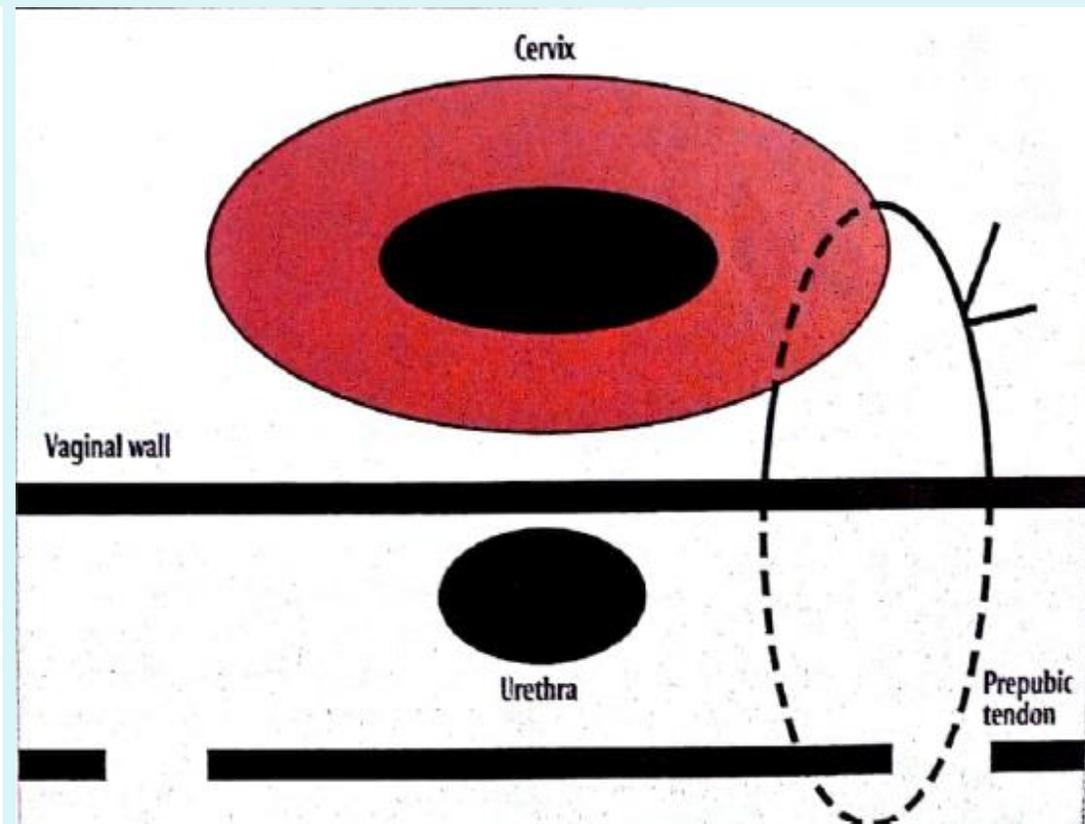
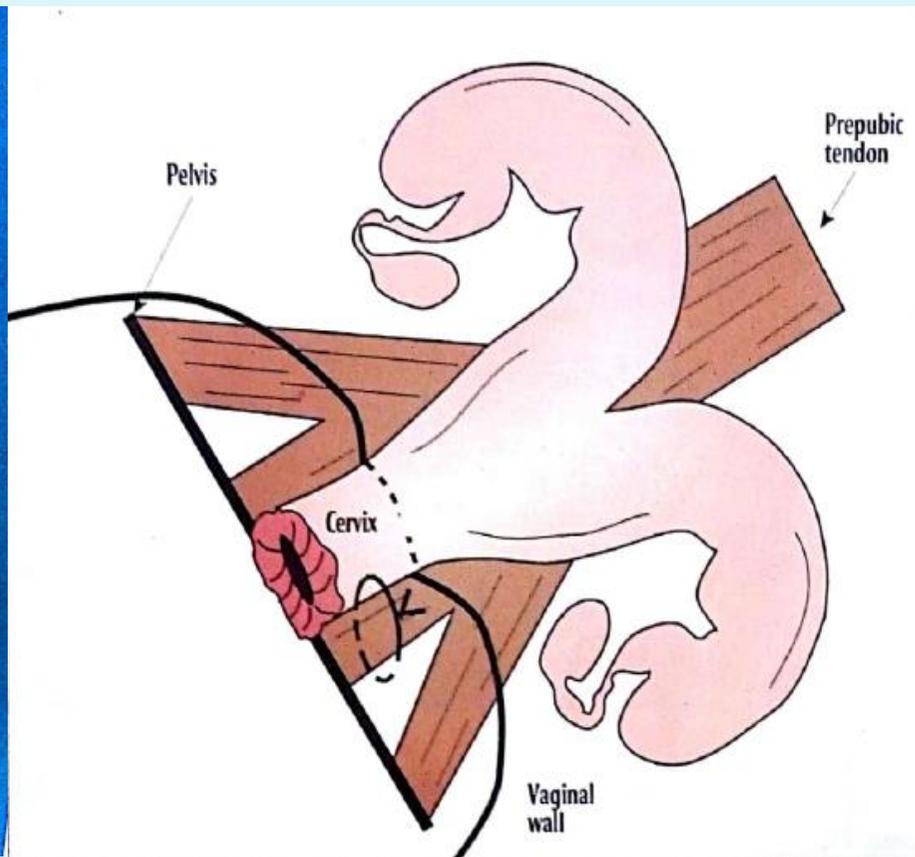
Surgical management

Whipple's operation and reefing operation → submucous resection

Caslick's operation → only in 1st degree prolapse

Cervicopexy (Winkler's operation) Fixation of cervix to the prepubic tendon through the vagina or the abdomen

Vaginopexy (Modified Minchev method) Fixing of vagina with the hip by passing a specialized needle from the vagina to the hip



Cervicopexy (Winkler's operation) Fixation of cervix to the prepubic tendon through the vagina or the abdomen

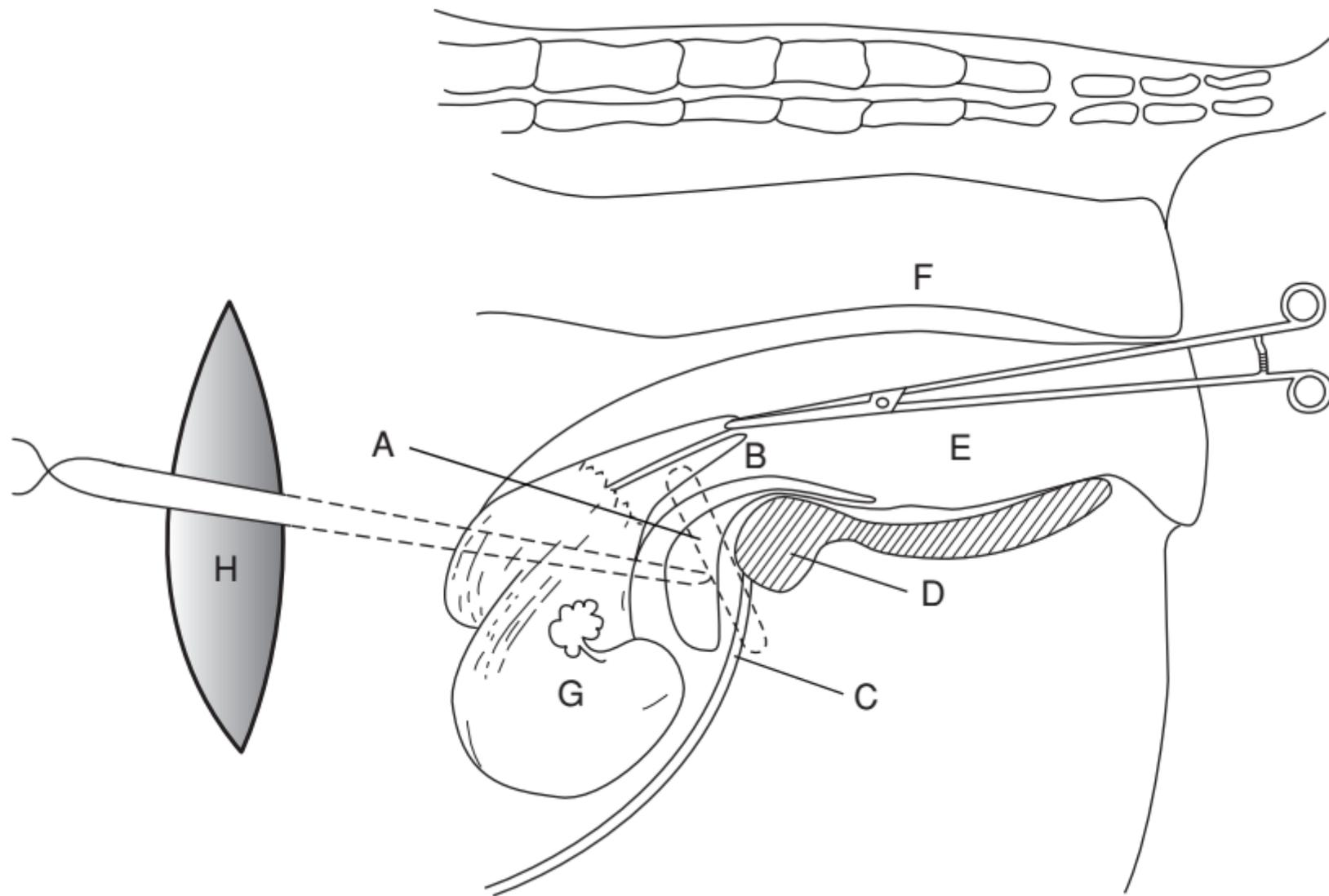


Figure 4.4 Cervicopexy through left flank laparotomy (vertical view). A. suture through ventral part of cervix (B) which is fixed and manipulated by assistant holding long-handled uterine forceps (E) in vagina; C. point of insertion of suture through prepubic tendon; D. pubis and ventral part of pelvis (shaded); F. rectum; G. uterus; H. flank incision and suture throw; J. bladder.

Vaginopexy (Modified Minchev method) Fixing of vagina with the hip by passing a specialized needle from the vagina to the hip



Puncturing anterior to left sacroschiatic ligament with gerlac's needle

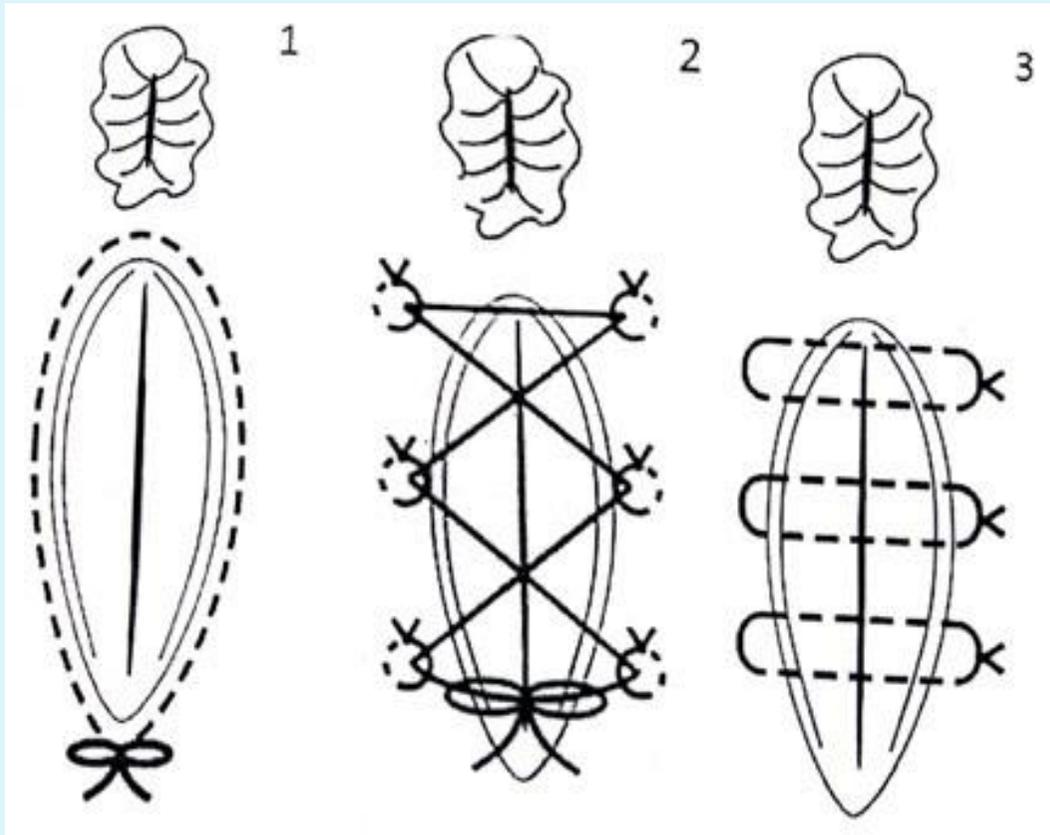


Fixing of the dorsal vaginal wall with the gerlac's needle eve

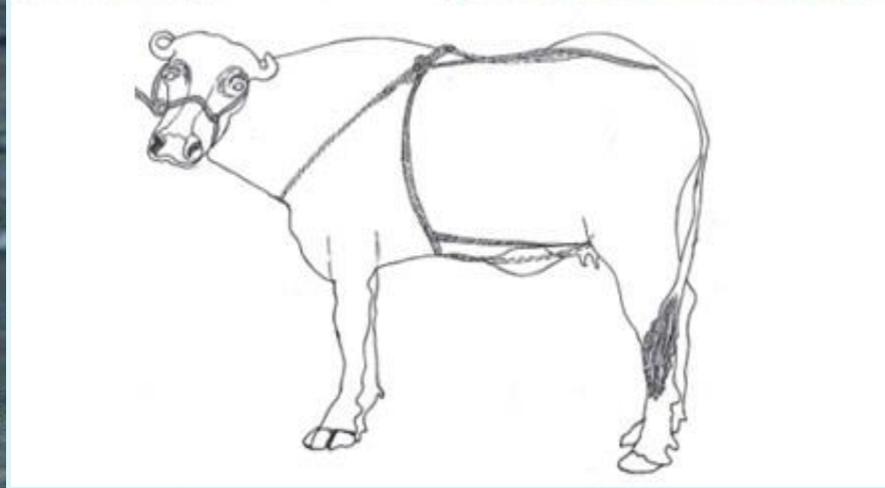


Modified Mintchews Method - Dorso VaginoPexy with a rubber anchorage





The three types of sutures commonly used for retaining vaginal prolapse the Purse string (1), Bootlace (2) and Horizontal mattress (3).







UF / drost

Vaginal prolapse in bitches

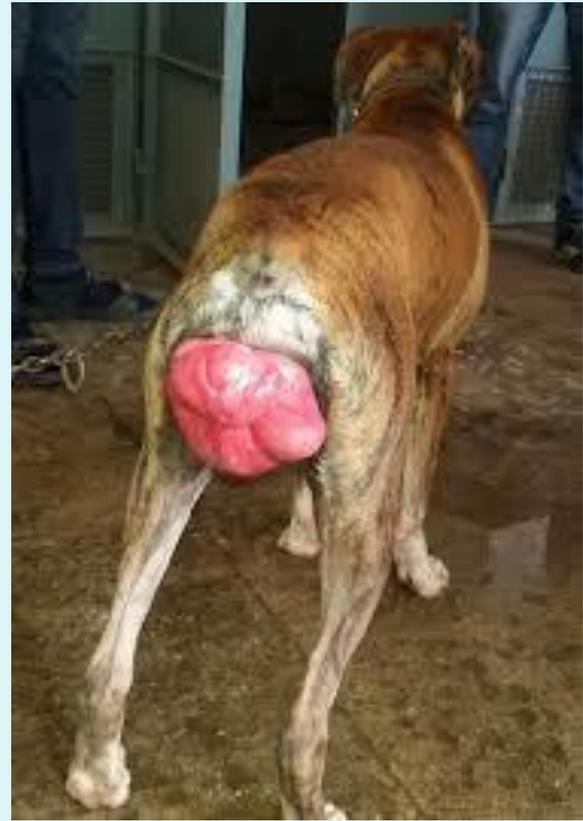
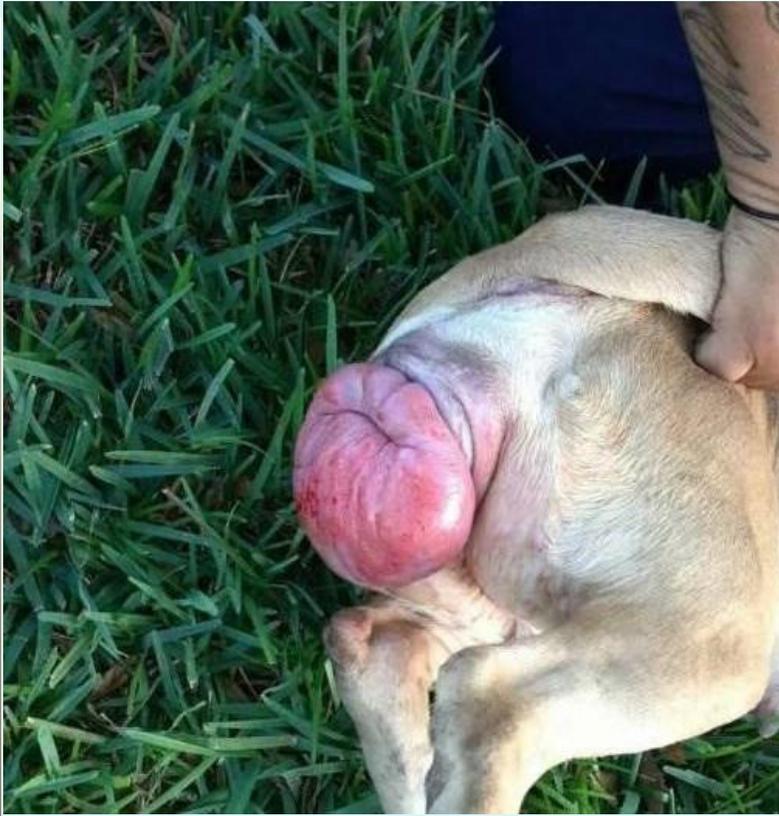
- Vaginal prolapse commonly occurs in female dogs that have not been spayed.
In vaginal prolapse, the swollen, protruding vaginal tissue resembles what's often described as a “donut-shaped” mass. While the primary cause of vaginal prolapse is estrogen stimulation, other causes include vaginal hyperplasia (a proliferation of the vaginal mucosa) and genetic predisposition.
- Other causes of prolapse are prolonged straining resulting from a difficult labor and delivery, or an interruption during coitus before mating can occur.

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- While the condition affects a range of dogs, breeds most commonly affected include Labrador and Chesapeake Bay retriever, English Bulldog, German Shepherd, St. Bernard, Mastiff, Springer Spaniel and Weimaraner.

- When serious, vaginal prolapse may prevent urination. The condition is almost always diagnosed just before or during estrus (heat). While the outcome is positive for most animals, the chance of the condition recurring throughout pregnancy, or at the delivery is quite possible. Because breeding may place the dog at further risk for the condition, spaying the animal may be recommended

- Unless the vaginal prolapse is blocking the urethra completely so that the dog cannot urinate, the condition is not a medical emergency. If the bitch is unable to pass urine, she will likely require hospitalization, surgery to remove the blockage and enable an assessment of the prolapsed tissue, and if required, a urinary catheter will be utilized. Spaying is often suggested.



Prolapse of uterus (Also called casting of withers, casting of calf bed)

More in confined cows and buffaloes with little exercise

Incidence 6-14%

Calcium deficiency predisposes to uterine prolapse

Dystocia handling and forced extraction can lead to prolapse

A constant sitting posture and loose genitals

Replacement should be done under epidural anesthesia after washing by pressure inwardly taking care not to rupture the cotyledons. In bitches replacement is done under general anaesthesia. In long standing cases with gangrene hysterectomy is suggested

Risk factors

- Pre-partum vaginal prolapse
- Dystocia
- Low serum calcium

- ETIOLOGY
- Decreased myometrial tone is a logical predisposing mechanism for the occurrence of uterine prolapse in cows. Unlike a vaginal prolapse, the heritability or additive individual susceptibility with subsequent pregnancies is not apparent in cattle with uterine prolapse. Vaginal tears or fistula can result in uterine prolapse in buffaloes as a result of strong contractions.
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- **Diagnosis:** The prolapse of the uterus can easily be diagnosed by visual observation of the everted reddened mass and exposed placentomes

Prognosis

- Uterine prolapse is an emergency and unattended cases may turn fatal. For easy replacement, uterine prolapse cases must be attended to with priority because of rapid development of edema, contamination, mucosal trauma and cervical closure may render the replacement difficult. Moreover, severe haemorrhage may occur from the exposed placentomes which when coupled with septicemia may prove fatal
- The mortality rates in large studies in cows were 20-25%

Treatment

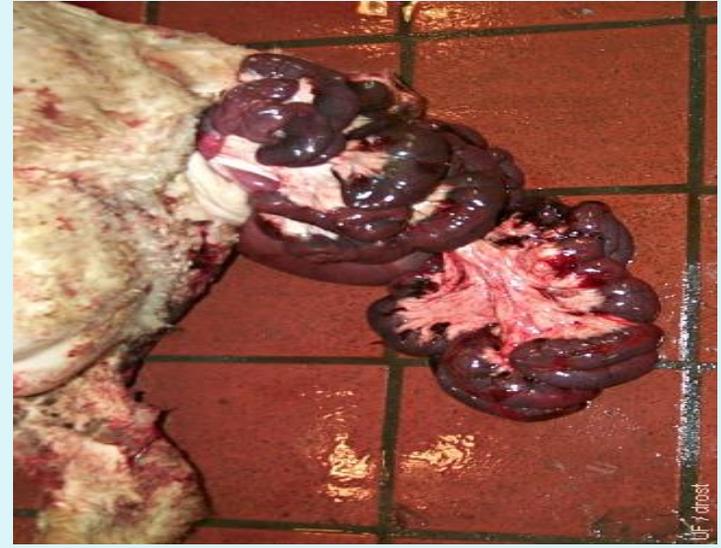
- Manual replacement
- Wash with water and saline or 1:1000 pp
- Application of sugar/salt solutions or alcohol to reduce edema
- Lift the organ for urination and suture any tears
- Lower the fore quarters
- Manual replacement of the uterus with gentle eversion starting at the base and continuing up to the apex is suggested.
- Vulvar sutures and oxytocin post replacement.

Uterine prolapse in mare

- **Uterine prolapse** is a medical emergency in the **mare** and is often fatal as a result of complications such as peritonitis following **uterine** laceration, **uterine** artery rupture or systemic shock. **Mares** of all types from draught breeds to ponies appear susceptible to **uterine prolapse**.
- Manual replacement under epidural anesthesia using bupivacaine is suggested.







Prolapse of uterus in a camel



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