

Surgical Procedures of the Genital Organs of Cows



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KEYWORDS

• Bovine • Cow • Surgery • Genitalia • Fertility

KEY POINTS

- Injuries affecting the reproductive tract of cows can cause pathologic changes that result in substantial economic and genetic losses to beef or dairy producers.
- Cows with conformational abnormality of the genitalia are candidates for reproductive surgery if the results of a breeding soundness examination indicate that the procedure is likely to restore fertility.
- Different surgical techniques are commonly used by practitioners/clinicians of theriogenology to treat and restore fertility, which preserves genetic potential and economic productivity for the owner.

PRESURGICAL CONSIDERATIONS

History

Most abnormalities of the reproductive tract causing infertility are easily diagnosed from the cow's history and physical examination. The history should include the cow's current reproductive status, prior drug therapy, behavioral changes, conception rates, duration of the condition, previous injuries or illnesses, and prior treatments and urogenital surgery performed. Information may also include any incidence of abortion, twinning, dystocia, and neonatal death.

Examination of the Genital Organs of the Cow

Findings during physical examination are the most helpful indicators for surgically correcting abnormalities of the reproductive tract causing infertility. The general conformation of the perineum, vulvar seal integrity, and shape of the perineal body should be evaluated visually.

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Vaginal examinations are performed with a speculum with a light source. The perineum should be washed before the speculum is inserted, and an epidural anesthesia is indicated. The vulvar lips are parted, and the lubricated speculum is introduced into the vestibule and directed dorsocranially, avoiding the external urethral orifice. It is passed through the vestibule and redirected horizontally into the vaginal vault (Fig. 1).

Digital palpation of the vagina and cervix is an important part of the genital examination (Fig. 2). Palpation and ultrasonographic examination of the reproductive organs are important means of evaluating the reproductive tract (Fig. 3).

Other tools to evaluate the reproductive tract include vaginoscopy, endometrial cytology, hysteroscopy, and reproductive hormonal profile. Karyotyping is indicated when infertility cannot be explained.

Abnormalities that can be corrected by reconstructive surgery to restore fertility include the following:

- Pneumovagina: accumulation of air in the vagina
- Urovagina: pooling of the urine in the cranial vagina
- Perineal injury: caused by fetal malposture during calving
- Cervical lacerations: caused by insufficient dilation of the cervix during parturition

Surgical procedures on the reproductive tract (with the exceptions of cesarean section, uterine torsion, vaginal and uterine eversions, and ovariectomy) are performed to correct urogenital abnormalities. This article discusses the most common surgical procedures performed to correct vulvar and vestibular abnormalities, as well as vaginal and uterine eversions and ovariectomy. Readers should refer to veterinary surgical texts for more detailed descriptions of these and other surgical procedures involving the reproductive tract of the cow.^{1,2}

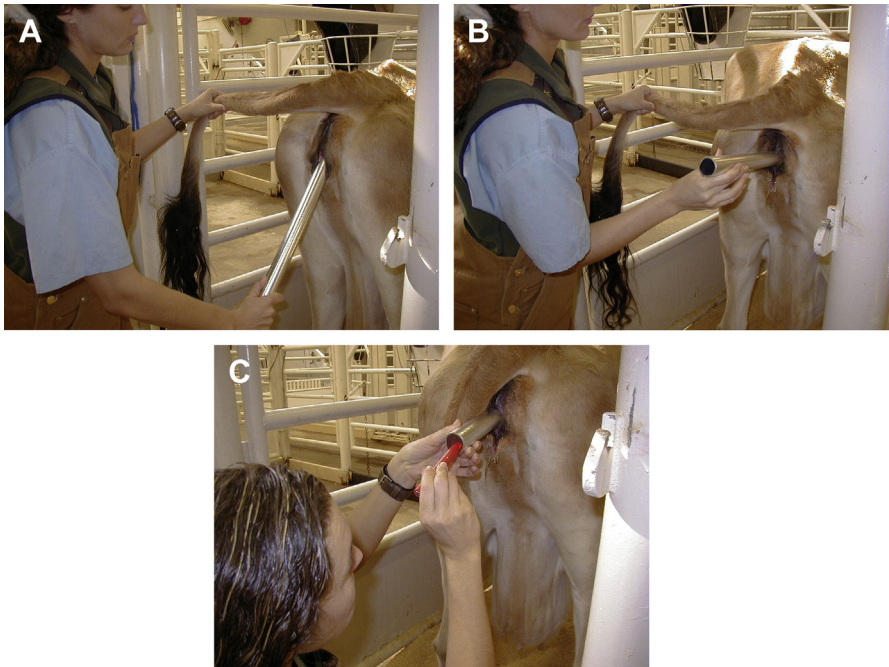


Fig. 1. (A) Inserting a vaginal speculum through the labia. (B) The speculum is repositioned horizontally to enter the vagina. (C) The vagina and cervix are observed through the speculum.

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