

# Uterine Prolapse in Cattle

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Eversion of the uterine horns from the vulva is commonly referred to as uterine prolapse, uterus, with or without the vagina and cervix, through the vulva, usually very soon after delivery, and hanging out with the innermost. All animal species have been known to experience uterine prolapse, although cows are the most common to get it soon after giving birth. The incidence is higher in multiparous cows than in primiparous cow and dairy cows than meat cows. Although extremely diverse, the prevalence of uterine prolapse is generally modest in the population of cows. Uterine prolapse can happen to any animal; however, it is more prevalent in dairy and beef cows and ewes and less often in sows. In bitches, queens, rabbits, and mares, uterine prolapse is uncommon. Contributory factors have included uterine atony, hypocalcaemia, traction to relieve dystocia or retained foetal membranes, invagination of the uterus tip, and inactivity. Sheep grazing on estrogenic pastures could potentially be a cause.

The reproductive system must operate normally for regular breeding to take place. The cow must have functioning ovaries, exhibit oestrous behaviour, mate, conceive, support the embryo during gestation, calve, continue her oestrous cycle, and regain uterine function following calving to reproduce consistently. All these components of reproductive function can be impacted by sickness, care, and the animal's genetic makeup. When the reproductive system is

compromised, cows are unable to consistently give birth to a calf.

Prolapse usually happens within a few hours of an otherwise typical second-stage labour, though it can sometimes happen several days later. Uterine eversion of the gravid horns and subsequent full uterine prolapse upon delivery may be caused by manual extraction of the calf and retained foetal membranes. There have been several proposed risk factors for uterine prolapse in cows, including the following: foetal oversize, foetal traction, retained foetal membranes, chronic vaginal prolapse, paresis, delayed cervical closure, and, lastly, an excessive laxity of the perineal tissues. Nonetheless, the tensile forces used to retrieve the foetus and the intraabdominal pressure forces the abdominal push applies to the uterus are the trigger elements.

The cervix is open and the uterus is toneless when prolapse of the uterus happens soon after or within a few hours of parturition. Most of the affected cows experience prolapse of the entire post-gravid uterine horn, and the uterine mass may hang below the tarsi. With close inspection of the surface of the prolapsed organ, one can find the contralateral horn's invagination, which is shielded from prolapse by the robust intercornual ligament. When unborn piglets in one horn of a sow prevent further prolapse, the other horn may become everted. It is typical for tiny animals to have complete prolapse of both uterine horns. To save the life and future reproductive potential of

the injured animal, uterine prolapse is a serious emergency that needs to be treated right away.

Clinical signs and diagnosis of uterine prolapse are defined as a huge mass of tissue

hanging from the vulva, often past the level of the hocks. The amount of prolapsed tissue, as well as the presence of numerous caruncles (the discrete mushroom-like lumps of uterine tissue that adhere to the placental cotyledons), allow for the differentiation of uterine prolapse from retained foetal membranes and rectum or vaginal prolapse.



Fig.01: Uterine prolapse in cattle

When treating cows, the placenta (if still attached) is removed, the uterine surface is meticulously cleaned, and any lacerations are surgically repaired. Prolapse can be lessened and oedema reduced by rinsing with hypertonic saline or applying sugar to the uterus's surface. The uterus should not be attempted to be returned to its usual position without first receiving an epidural anaesthetic. 2% lignocaine hydrochloride (5 to 10 mL) was used as a caudal epidural block to induce analgesia. Straw-filled gunny bags were positioned behind cow's rear quarters to facilitate the simple replacement of the prolapsed mass. After being properly cleaned with a cold (<math><15^{\circ}\text{C}</math>)

potassium permanganate solution (1:1000), the prolapsed mass was greased with sterile Vaseline, massaged, and replaced after being held up with lubricated gloved hands and pushed into the cow's pelvis. Rotation of the uterus was prevented during repositioning. 70% alcohol was used to sterilise the whole perineal area, including the vulvar lips. The cleaned uterus should be raised to the level of the vulva on a tray or hammock held up by helpers if the cow is standing. If the patient is in a supine position, it is best to place it sternally, with the cow resting on its stifles and its hind limbs extended caudally. To facilitate the replacement of the uterus, this position tilts the pelvis ventrally and cranially. To avoid straining and laceration of the uterine artery, caution must be used when raising the prolapsed uterus with the hindquarters to extend the cow's hindlimbs caudally. Applying constant pressure starting at the cervical section (or at the level of the non-prolapsed uterine horn's invagination) and progressively progressing towards the apex will reduce the prolapse. To prevent piercing the uterus, apply pressure with a closed fist or palm instead of your fingertips. A hand should be inserted to the tips of both uterine horns after the uterus has been replaced to make sure there is not any invagination left that can cause abdominal straining or further prolapse. It is helpful to install a warm, sterile saline solution to guarantee total replacement of the uterine horn tip without injury.

Following appropriate prolapse relocation and the use of a sterile infusion (drip) set as suture material, Bühner's approach was modified and applied as follows: Without puncturing the vulvar surfaces, an unthreaded, sterilized Bühner needle was inserted on one side of the vulvar lip, 2 to 3 cm from the vulvar edge and 3 to 4 cm dorsal to the ventral commissure, in an upward orientation. The midpoint between the anus and the dorsal edge of the vulvar orifice is where the needle tip first appeared. The needle's hole was used to insert sterile infusion set tubing. The threaded needle was extracted from its site of insertion. The needle was removed and then put back in the same direction on the opposite side of the vulva keeping

similar distances from the corresponding vulvar edge and its tip was pushed out through the previous hole above the dorsal commissure.

The prognosis for life is regarded to be good with immediate veterinarian intervention and the detection and treatment of secondary problems. Typically, producers should consider the cost-effectiveness of treatment decisions.