



Case Report

Management of Vaginal Prolapse in Crossbreed Cattle (Simmental-Bali) in Mico Village, Palakka District, Bone Regency.

Andi Azifah Cahyani^{a*}, Muhammad Ardiansyah Nurdin^a

^aVeterinary Study Program, Faculty of Medicine, Hasanuddin University, Makassar 90245

*corresponding author: andiazifahc@gmail.com

Abstract

Vaginal prolapse is a common reproductive disorder in cattle and buffalo. This is considered an emergency condition that must be treated immediately to avoid complications. This case study reports on the incidence of vaginal prolapse in crossbreed cows and the treatment performed when the prolapse is due to gestational age which has entered the third trimester where there is an increase in abdominal pressure due to the increasing size of the uterus. From the results of clinical signs obtained in the field, namely the vagina that looks hanging out of the vulva so that the animal feels uncomfortable and the cow with an arched back position because of whooping. The treatment is cleaning the vagina with antiseptic liquid, repositioning it manually and then suturing it by giving epidural anesthesia to prevent the organs from coming back out and administering antibiotics and vitamins.

Keywords: prolapse, reposition, cow, uterus, vagina

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Introduction

Cows are a type of large ruminant livestock that are widely kept by the community, because it has properties that are beneficial to farmers. Cattle are easy to maintain and easy to reproduce and the productivity is quite high. Cows in Indonesia are also used as livestock producing meat, milk or both (dual purpose). Cattle do not require a large capital and spacious place. However, cattle breeders in Indonesia are still experiencing many obstacles that cause livestock productivity to be low. One of these problems is the disruption of the reproductive organs in livestock, the incidence is still high (Putra, 2017). Reproductive disorders that commonly occur in cows include vaginal prolapse, secondary retention, difficulty giving birth (dystocia), miscarriage (abortion), and premature birth. This problem causes a very large impact for farmers, namely economic losses so that farmers' income decreases. This is generally caused by several factors, including reproductive diseases and poor maintenance systems (Asri, 2017).

Genital prolapse is most common in ruminants, especially cattle, buffalo, sheep, goats (Patra et al., 2014). It can be defined as the exit of one or more pelvic structures (bladder, uterus and vagina) from their normal anatomical position through the genital opening (vagina). Among all prolapses, uterine and vaginal prolapse are frequently observed in the bovine reproductive tract. Vaginal prolapse is most common in crossbreed cows before giving birth, usually in the last trimester of pregnancy (Hasan et al., 2017). Vaginal prolapse is an abnormal condition in which vaginal mucosa discharges from normal conditions (Yin et al., 2018). Vaginal prolapse in cows usually occurs when a cow is pregnant in the third trimester, but it can also occur in non-pregnant cows. Non-pregnant cows can experience vaginal prolapse due to genetic factors as well as a lack of macro and micro minerals (Yotov et al., 2013).

Vaginal prolapse is one of the cases found and treated by a veterinarian or field officer. As it is known that reproductive disorders have an impact on farmers from a financial perspective and at the level of small livestock businesses, they are still less concerned with handling reproductive disorders. Thus, it is deemed necessary to write about cases of vaginal prolapse so that the handling of these cases in the field can be maximized and can be a source of information for readers, especially breeders so that they can reduce losses experienced and increase quality livestock.

Materials and Methods

Anamnesis

A female Bali x Simmental cow located in Mico Village, Palakka District, Bone Regency. The mating status of this cow has been twice artificial insemination and has never mate with nature. First pregnancy from artificial insemination and never parturition.

Clinical Sign

The clinical signs obtained were that there was a visible vagina hanging out of the vulva so that the animal felt uncomfortable and the cow with an arched back position due to continuous pushing. Clinical signs found in cases of vaginal prolapse include a cow experiencing fever and a higher respiratory rate than normal, and the vaginal mucosa is exposed to the outside of the vulva. Vaginal prolapse appears as a mass of tissue protruding from the vulva. Affected animals may be seen with arched backs due to frequent straining (Rahmawati et al., 2020).

Diagnosis

Based on the anamnesis and clinical signs found, the diagnosis can be drawn that the animal has vaginal prolapse, where the cow's vaginal genital organs hang out at the vulva (Figure 1).



Fig. 1 Cow's vagina is seen hanging from the vulva.

Treatment

The tools used are needle holders, sharp needles, syringes, gloves, buckets. The materials used are clean water, silk/nylon thread, needles, medicines (lidocaine, iodine povidone 10%, limoxin-25 spray, medoxy-1 and vitamin B complex). Wash hands thoroughly. Before repositioning the uterus, the officers' hands were given ice cubes to help shrink the organs so that they could easily enter the abdominal cavity and then the organs were washed with clean water and antiseptic. Anesthesia using lidocaine 5-6 ml intraepidural, injection is done in the lumbosacral area. The vagina is manually repositioned onto the abdomen through the vulva again, after returning to its normal position (Figure 2).



Fig. 2 Vaginal repositioning.

After all the vaginal organs are inserted, suturing is done. After the suturing was completed (Figure 3), the part of the vulva where there was a needle puncture and bound by thread was given 10% povidone iodine antiseptic and then sprayed using Limoxin-25 spray and 7 ml of Medoxy-1 antibiotic injection containing Oxytetracycline which has a broad spectrum of action and is effective against most bacteria. The mechanism of action is by inhibiting bacterial protein synthesis. As well as giving 8 ml of vitamin B complex intramuscularly (IM) to improve the body's defense system and play a role in metabolic processes



Fig.3 Sutures on the vulva to hold the vagina back out.

Results and Discussion

Vaginal prolapse is a condition in which the vaginal mucosa protrudes from the vulva with the inner lining out. In crossbreed cattle, prolapse can occur due to the size of the fetus and the increasing strength of contractions from the mother at the end of pregnancy. In this case the prolapse occurred in a cow that was pregnant. This is in accordance with the

opinion of Powell (2014) that vaginal prolapse often occurs before birth due to increased pressure in the abdominal cavity during the last stage of pregnancy or after delivery. According to Padheriya et al. (2016), vaginal or cervical prolapse most commonly occurs during the last trimester of pregnancy when placental estrogen production increases. The increased estrogen causes an increase in the production of relaxin, which causes relaxation of the pelvic ligaments and related structures. There is further edema and relaxation of the vulvar muscles and vulvar sphincter. Other factors that predispose to utero-vaginal prolapse are uterine atony, open cervix, slack pelvic ligaments and abdominal tension in cattle. In addition, the hormone estrogen suppresses blood calcium levels causing relaxation of the pelvic ligaments, hypocalcemia is considered one of the factors that interfere with the tone of the genital organs causing genital prolapse.

The risk factors, description, and occurrence of vaginal prolapse were reviewed. Vaginal and uterine prolapse is a common problem in cattle, an occasional problem in sheep, but less commonly seen in goats. Acute vaginal prolapse may be seen prepartum or postpartum. Animals suffering from vaginal prolapse before giving birth should be selected for culling after weaning the offspring. Dietary factors involved in vaginal prolapse include poor forage quality, hypocalcemia, high estrogenic content of foodstuffs, such as nuts and soybean meal (Miesner and Anderson, 2008). In the condition of vaginal prolapse, in this case, the cattle were also given a diet high in crude fiber content. Estrogen is a strong inhibitor of bone calcium resorption and a reasonable increase in levels, although not scientifically proven, increases the risk of uterine prolapse. The individual animal risk factors included obesity, chronic cough, chronic straining to urinate or defecate.

There are several methods of handling prolapse, starting from adjusting the position of the cow before repositioning, the cow should be externally lying with both hind legs pulled out or the cow just left standing. Then an ice cube compress is applied to help shrink the organ so that it can easily enter the abdominal cavity and then the process of returning the organ to its original position is carried out carefully by cleaning the prolapsed organ first using clean water. According to Widodo (2015) before repositioning, the vaginal condition must be clean. For that first done cleaning with antiseptic or warm water. Avoid vaginal contact with the cage wall or dirt before repositioning, provide a clean base to put the cleaned vagina. Carefully reposition the vagina while pushing, hold if the uterus is contracting and keep inserting it until the vaginal reposition is good then suture.

Vaginal and cervical eversion before calving can be a confusing and troubling issue for both breeders and veterinarians. Some attempts by producers to remedy the situation can have many unintended consequences and may inflict unnecessary pain and injury on the animal (Hopper, 2015). If the handling of cases of prolapse is carried out in an unhygienic manner and treated too late, it can cause infection in the uterus. If treatment is not carried out, complications can occur causing severe metritis to infertility (Miesner and Anderson, 2009). Vaginal prolapse is a recurring event. If the animal is prolapsed again and can be repaired, there will be a repeat case within a year. This type of prolapse can also be an inherited trait. For this reason, cows that have experienced vaginal prolapse should be rejected because they have a high probability of recurrence (Powell, 2014).

Conclusion

Vaginal prolapse occurs due to gestational age which has entered the third trimester where there is an increase in intra-abdominal pressure due to the increasing size of the uterus. The treatment for vaginal prolapse is cleaning the vagina with an antiseptic solution, repositioning and injection of antibiotics and vitamins and performing suturing. To prevent vaginal prolapse, it is recommended not to place pregnant mothers in cages that have a slope of more than 450c, consider brooders and seedlings when they want to do AI, and pay attention to feeding should reduce feeding with high crude fiber content.

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