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Popular Article

Therapeutic Management of Fetal Mummification in Cow: A Case Report

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Introduction

The occurrence of fetal mummification typically takes place after the formation of the placenta and the fetal ossification process, which happens around the 70th day of gestation. This phenomenon is more commonly observed between the 3rd and 8th months of gestation in ruminant animals such as cattle, buffalo, sheep, and goats. Multiparous and polytocous species like swine have a higher incidence of mummification. In cattle, fetal fluid is reabsorbed, and the fetus becomes surrounded by a viscous, chocolate-colored material. The incidence of mummified fetuses in cattle is relatively low, ranging from 0.13% to 1.8%. This condition can affect both indigenous and exotic cattle breeds. Interestingly, if a cow has experienced fetal mummification in a previous pregnancy, the likelihood of it happening again in subsequent pregnancies increases, with a prevalence rate of around 30%.

Case presentation and clinical findings

A five-year-old crossbreed Jersey cow in her third parity was presented to a mobile ambulatory veterinary clinic in Tuni, Kakinada district, AP because she showed no signs of parturition even after completing a full-term pregnancy. The owner reported that the cow was inseminated 310 days prior, and pregnancy was confirmed at the 90th day after insemination. On clinical examination, the body temperature of cow was 39.5°C, respiratory rate was 33/minute, heart rate was 72/minute and the conjunctival mucus membrane was pink and moist. Vaginal examination revealed a tightly closed cervix. Per rectal palpation indicated the presence of a compact, firm, and immobile mass without fetal fluid and placentomes (Figure 1). The overall general condition of the cow appeared normal.



Figure 1: Mummified fetus

Diagnosis

Tentative diagnosis: Fetal mummification

Differential diagnosis

Fetal mummification needs to be differentiated from fetal maceration. In fetal maceration intermittent straining with a foul, reddish grey vulval discharge and on per rectal examination distended, swollen fetus where fetal bones floating in pus or crepitating against each other noticed.

Treatment and management

The decision was made to induce parturition by using dilation therapy. The cow was administered synthetic prostaglandin $\text{PGF}_{2\alpha}$ (Vetmate 2ml), inj. Epidosin vet (Valethamate bromide 50 mg), inj. Progynon depot 3ml (estradiol valerate 30mg), and inj. Betnesol 5ml (Betamethasone 20mg) through intramuscular injection and was closely monitored. Vaginal examinations were performed every 12 hours to assess cervical dilation. After 54 hours of post-treatment, cervical dilation was satisfactory, but the uterus and birth canal were dry. To facilitate delivery, liquid paraffin was applied for lubrication, followed by gentle traction on the approaching fetal parts. This resulted in the delivery of the entire fetal mass, covered by a thick, chocolate-colored membrane. The crown-rump length measured 38cm. To manage pain and to prevent secondary bacterial infections, the cow received a course of antibiotics (inj. Intacef 3 g), along with anti-inflammatory (inj. Melonex 20 ml) and antihistamine (inj. Anistamin 10 ml) medications via intramuscular injection for five days.

Conclusion

The preferred treatment for cases of fetal mummification is luteolysis achieved through the injection of $\text{PGF}_{2\alpha}$. However, some animals may not expel the dead fetus even with this treatment alone. Estrogens can stimulate regression of the corpus luteum, induce myometrial contractions, relax the cervix, and promote the expulsion of the mummified fetus in cows. Some reports suggest that a combination therapy of estradiol and $\text{PGF}_{2\alpha}$ yields better results. In this case, a combination treatment involving prostaglandin, estradiol, valethamate bromide, and corticosteroid was administered. This approach mimics the hormonal changes that occur during natural parturition and resulted in cervical dilation and successful delivery of the mummified fetus through lubrication of the birth canal.

