

DIAGNOSIS AND MANAGEMENT OF FETAL MUMMIFICATION IN COW

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Abstract: A six year old non descriptive pregnant cow with fetid and foul smelling discharges from vagina was diagnosed to have fetal mummification. The clinical signs exhibited by the animal; per vaginal and per rectal examination; and ultrasonography aided in diagnosis of the condition. Laprohysterotomy under local analgesia was performed to treat the condition as induction with prostaglandins failed to expel the mummified fetus. The mummified fetus was carefully removed by separating the attachments with the uterine wall and the hysterotomy wound and laparotomy wounds were closed as per the standard procedure. Postoperative antibiotics and analgesics were given which ensured an uneventful recovery in the animal.

Keywords: Fetal mummification, induction of pregnancy, cow, Caesarian section.

Introduction

In cattle, the incidence of fetal mummification is 0.13-1.8% (Arthur et al., 1996) and is considered as a gestational accident. It occurs sporadically in both exotic and indigenous breeds of cattle (Jana and Ghosh, 2014). The condition is characterized by resorption of fetal fluids and presence of chocolate coloured material around the fetus (Arthur et al., 1996). Mummification of fetus occurs following the fetal death during 3rd to 8th months of gestation. The pregnancy is maintained in fetal mummification as the fetal signal for onset of parturition is absent. This condition is usually undiagnosed unless the macerated changes develop in it. Sometimes examination of animal during prolonged gestation may reveal the presence of this condition. The mummified fetus may gain infection through the dilated cervix and may transform into macerated fetus where autolysis of tissues and putrefaction takes place (Jones

et al., 1997). In the present study, diagnosis and management of fetal mummification in a non-descriptive cow was reported.

Case History and Observations:

A six year old non descriptive pregnant cow was presented to the clinics of department of Veterinary Surgery and Radiology, NTR College of Veterinary Science, Gannavaram; Sri Venkateswara Veterinary University, Tirupati, with a complaint of fetid discharges from the vagina for the past one week. It was said to have been inseminated nine months back and treated by local veterinarian for pyrexia during its sixth month of gestation. Animal was given 500micrograms of injection Cloprostenol sodium succinate and 5ml of injection Diethyl stilbestrol by the local veterinarian to induce parturition four days previously. Physical examination of the animal revealed hyperthermia and fetid discharges from vagina (Fig-1). Per vaginal examination showed partial opening of cervix; whereas, per rectal examination disclosed the absence of fremitus, fetal movements and fetal fluids. The size of the calf found to be small and tightly packed in the uterus. Ultrasonography showed the absence of fetal heartbeat and irregularity in the fetal skeletal makeup. Haematological parameters showed leukocytosis and neutrophilia and serum biochemical parameters showed mild elevation of BUN and Creatinine levels. Based on the findings of physical examination, pervaginal examination, per rectal examination and ultrasonography the condition was diagnosed as fetal mummification and decided for medical management.

Treatment and Discussion

The animal was given intramuscular injections of Epidosin at the dose rate of 20mg/100Kg body weight and Oxytocin at the total dose of 25IU to induce expulsion of fetus. It was decided to perform caesarian section as the medical management failed to expel the fetus. Animal was stabilized with intravenous administration of fluid, antibiotics and alterative drugs and prepared for aseptic surgery. Under local analgesia with 2% Lignocaine Hcl laparotomy was performed at lower left flank region with the animal in right lateral recumbancy. The omentum appeared icteric (Fig-2) whereas the gravid uterus appeared as tightly packed structure. The uterus was carefully brought to the laparotomy site (Fig-3) by holding the extremities and the gap between the laparotomy wound and uterus was packed to avoid contamination of peritoneum. Hysterotomy was performed and the mummified fetus was removed along with its necrosed fetal membranes. The uterine lumen was irrigated with normal saline and hysterotomy wound was closed as per the standard procedure. The peritoneum was lavaged with normal saline and administered 400ml of metronidazole

solution into the abdomen. The laparotomy wound was closed as per the standard procedure. Fetus appeared shrunken covered with foul smelling brown discharges (Fig-4). Postoperatively, the animal was given intravenous injections of Ciprofloxacin at the dose rate of 5mg per Kg body weight and Metranidazole at the dose rate of 10mg per Kg body weight for seven days; and Normal saline at the dose rate of 10ml/kg body weight and Ringer lactate at the dose rate of 10ml/kg body weight for 3 days. Injection Meloxicam was given at the dose rate of 0.2 mg per Kg body weight subcutaneously for three days. Other alterative drugs like injection Mecobal was given for five days. Pyrexia and fetid discharges from vagina were noticed till the fourth postoperative day and the animal able to ruminate normally by fifth postoperative day. Skin sutures were removed on 12th postoperative day by which time complete healing of wound was noticed.

The present condition was diagnosed in a non-descriptive cow in its ninth month of gestation. Arthur et al., (1996) opined that this condition may be seen in indigenous and exotic breeds of cattle and their crosses. The pyrexia which was said to have been noticed in the present case during sixth month of its gestation might be due to an infectious disease and assumed to be an etiological factor for fetal death. Drost, (2007) stated that, infectious agents like *Leptospria*, *Campylobacter* and BVD-MD virus may cause fetal death without abortion resulting to mummification in cattle. Usually, fetal mummification is difficult to diagnose as the condition is asymptomatic, but in the present case foul smelling fetid discharges from vagina aided in suspecting the case as gestational abnormality. Laprohysterotomy was performed in the present case to remove the fetus as the medical management was failed in expelling the fetus from the uterus. Azizunnesa et al., (2010) opined prostaglandins as drug of choice for fetal mummification in cattle and caesarian section in cases of prostaglandin failure. Azizunnesa et al., (2010) performed caesarian section directly to treat the present condition in a cow, without opting for medical management and obtained a satisfactory result. Arthur et al., (1996) opined that treatment with prostaglandins may result in transformation of mummified fetus to macerated fetus. The failure in cloprostenol therapy in the present case may be due to advanced age of the mummified fetus. Similar observations were also made by Jackson and Cooper (1977) in pregnant cows; and Kumar et al., (2017a) in a pregnant doe with mummified fetus. The foul smelling fetid discharges noticed in the present case suggest the beginning of macerated changes in the fetus. Kumar et al., (2017b) observed foul smelling purulent fluids in the abdomen of a dog with ectopic fetal mummification and maceration. In the present case, the surgical treatment given and

postoperative care given to the animal ensured a good recovery and no postoperative complications were observed.

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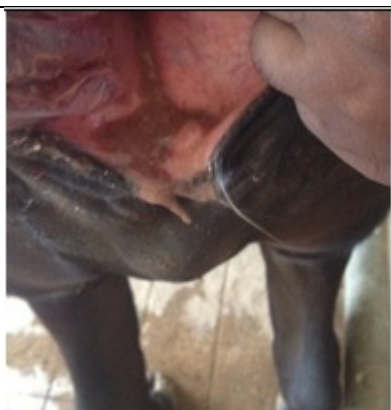


Fig-1: Photograph showing fetid discharges from vagina



Fig-2: Intraoperative photograph showing icteric omentum



Fig-3: Intraoperative photograph showing packed uterus at the site of laparotomy



Fig-4: Photograph showing mummified fetus covered with brown coloured fluids