Surgical resolution of a papayraceous mummified fetus in a 5 year old Brahman cow

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A 5-year old Brahman cow used for oocyte and embryo collection presented for a suspected mummified fetus after a prolonged gestation of 397 days. Physical examination indicated an asymmetrically enlarged uterus with a 7 month fetus. The remainder of the examination was unremarkable. Transrectal ultrasound, transabdominal ultrasound, and electrocardiography were unsuccessful in detecting a fetal heartbeat. A BioPRYN serum pregnancy test also indicated the cow was not pregnant.

A recumbent ventral midline hysterotomy was performed to remove a large papayraceous mummified fetus without complications. Two milliliters of oxytocin was administered intramuscularly post-operatively. The cow was discharged twenty days following hysterotomy.

Fetal mummification can be caused by a variety of infectious, genetic, or metabolic conditions that can occur during gestation and result in fetal death. Fetal dessication and absorption of the placental and fetal fluids occurs, and the uterine walls pull close against the mummified fetus. A corpus luteum and closed cervix are present, and the cow may have a prolonged gestation if not identified earlier via palpation. Papayraceous mummified fetuses, those with parchment thin skin and absence of putrefaction, are the most common type.

Treatment of most mummified fetuses is by administration of dinoprost tromethamine and manual extraction of the fetus. Hysterotomy is performed when dinoprost tromethamine is unsuccessful. The ventral midline approach is preferred for a large mummy.

For many cases of mummified fetuses, the cow will be culled due to the cost and loss of pregnancy. Medical and surgical treatment can be pursued for valuable cows. Ventral midline hysterotomy when performed under strict aseptic techniques can result in both the removal of the mummy and successful return to fertility. This case illustrates the value of good surgical technique when using hysterotomy to remove a mummified fetus, and the emerging value of electrocardiography in determining fetal viability.

Keywords: Fetal electrocardiography, fetal mummification, pregnancy-associated glycoprotein, bovine

References