

PER-VAGINAL DELIVERY OF NON RESPONSIVE BOVINE FETAL MUMMIFICATION

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SUMMARY

The present study reveals successful clinical management and per vaginal delivery of mummified fetus in a primiparous crossbred Jersey heifer following administration of combination of PGF2 α , Valethamate Bromide, Dexamethasone and Diethylstilbestrol.

Key words: Corpus luteum, Fetal mummification, Gestation, Ultrasonography

Fetal mummification is characterized by resorption of fetal fluids following fetal death, with fetus and fetal membranes wrapped by viscous chocolate colored material. Mummification is common sequel to late embryonic death (Noakes *et al.*, 2009). Among various gestational disorders, fetal mummification and maceration impose huge economic impact as a consequence of failure to achieve the targeted reproductive efficiency by extending the inter-calving period as well as increasing the fetal loss (Azizunnesa *et al.*, 2010). Fetal mummification is reported in cattle (Kumar *et al.*, 2010; Kumar *et al.*, 2017), Buffalo (Shivhare *et al.*, 2016) and other domestic species with the highest prevalence in the swine. High prolificacy, an inheritable trait is associated with increased incidence of stillbirths and mummified fetuses (Rosendo *et al.*, 2007). Fetal mummification in bovines can be infectious or non-infectious in origin. Non-infectious attributable causes encompass twisting of umbilical cord, uterine torsion, defective placentation, abnormal

hormonal profiles, and chromosomal abnormalities (Noakes *et al.*, 2009). Incidence of bovine mummification is low and sporadic (Barth, 1986).

A primiparous crossbred Jersey heifer of 1.5 year of age was presented at the clinics of Department of Veterinary Gynecology and Obstetrics with history of prolonged gestation (10 months) and previously treated for anaplasmosis at 6 months of gestation. Per-vaginal examination revealed closed cervix with intact cervical seal. Ultrasonographic evaluation revealed highly vascularized luteal tissue (Fig.1b.) with an average luteal diameter of 22.3mm (Fig.1a.), fetal skeletal tissue held by in the contracted uterus with absence of fetal fluid and placentomes (Fig.1c).

Under the medical interventions, animal was treated with combination of 500 μ m Cloprostenol sodium (Pragma®, Intas Pharmaceuticals, India), intramuscularly and 40 mg Dexamethasone (Zidex®, Laborate, Pharmaceuticals, LTD. India) intravenously (once).

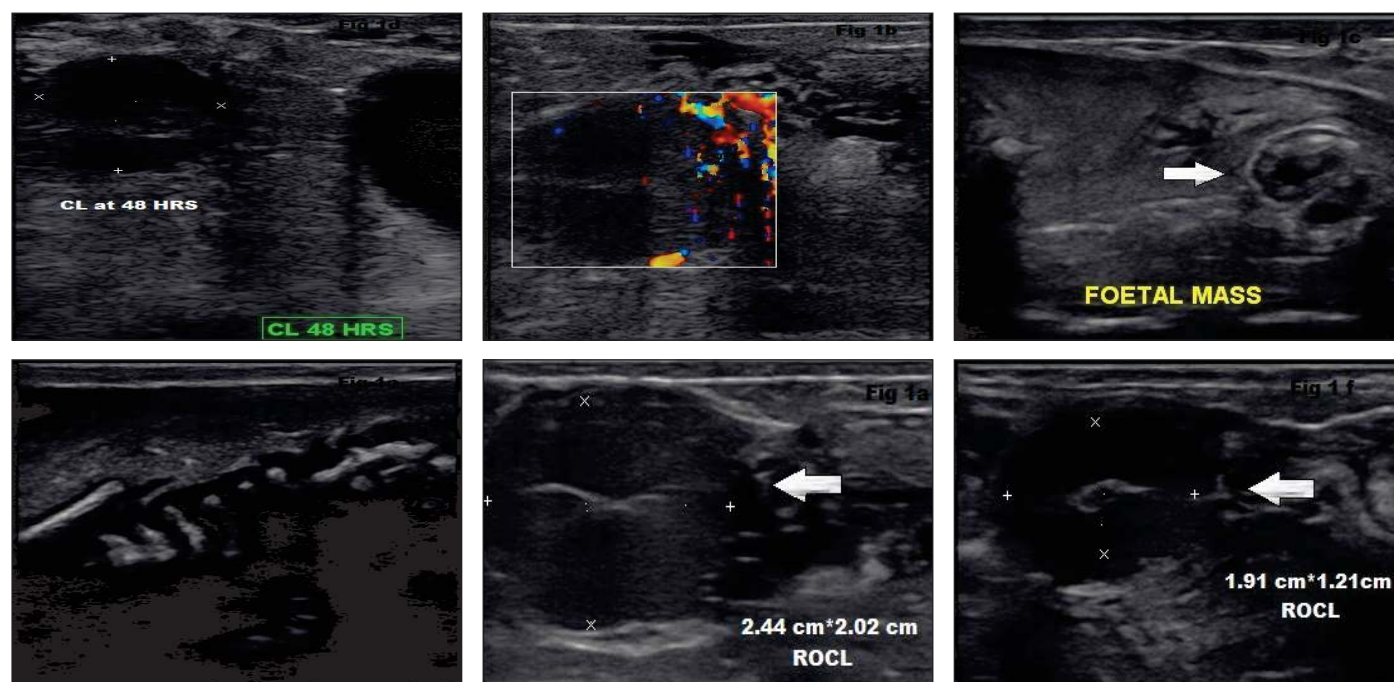


Fig.1a. Corpus luteum right ovary 24.4 X 20.2 mm ; **Fig.1b.** Vascularity of CL; **Fig.1c.** Poorly defined echogenic intra uterine fetal mass; **Fig.1d.** Reduced CL diameter 48 h post treatment; **Fig.1e.** Fetal skeletal mass

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Fig.2. Mummified fetus along with its fetal membranes

Follow up examination 48 hrs later, revealed no cervical dilatation or relaxation with slight reduction in the average luteal diameter to 18.25mm (Fig.1d.). Due to failure of action of Prostaglandin and dexamethasone combination, animal was treated with combination of Cloprostenol sodium 500 µg, Diethyl stilbestrol (DSTL®) Le-Mantus Pharma Ltd, India) 100 mg, Valethamate Bromide (Epidosin®, TTK, Healthcare Ltd., India) 100 mg and Dexamethasone sodium 40 mg I/M. Repeated examination 24 hours post-treatment revealed slightly relaxed and softened cervix. Fetal skeletal tissues were visualized ultrasonographically (Fig.1e.) with further reduction in average luteal diameter to 15.6mm (Fig.1f.). Per-Vaginal hot saline fomentations of the anterior vagina along with repeated administration of Epidosin® continued to accelerate the process. Further observations after 48 hour of combination treatment revealed little improvement, so hot saline fomentation of vagina for 30 minutes at an interval of 1 hour along with manual attempts of dilatation resulted in successful per-vaginal delivery of mummified fetus encapsulated in parchment membrane (Fig.2). The fetus had crown rump length (CRL) of 19.7cm with an estimated gestation age of 101.7 days. Post-operative treatment with mild antiseptic vaginal douching and antibiotics was recommended for 5 days. No further fertility lacuna has been reported by the owner till date.

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