

# Successful Management of Mummified Foetus in a Non-Descript Buffalo

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## Abstract

*The present case report explicates the therapeutic management of foetal mummification in a pluriparous non-descript buffalo which was characterized by prolonged gestation. The case was successfully handled with combination therapy using hormones and corticosteroids, which recovered without any post-operative complications by preserving the future fertility.*

**Keywords:** Foetal mummification, non-descript buffalo,  $PGF_{2\alpha}$ , corticosteroids

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## INTRODUCTION

Mummification of bovine foetus is a rare gestational disorder of cattle in which the foetus dies in-utero without termination of gestation. Generally, the foetus is not expelled owing to the intact cervical seal and the pregnancy proceeds beyond the normal gestation period because of presence of functional corpus luteum. After the death of the foetus, amniotic and allantoic fluids are resorbed, dehydrating the foetal tissues and membranes leaving out cadaveric appearance. The immature, unkeratinized skin of the foetus may hasten the mummification process, which eventually lead to loss of body tissues [1]. Two types of mummifications have been reported in domestic animals, the hematitic and the papyraceous type based on the type of transudate adhered to and the appearance of foetal cadaver. The former type is seen only in cattle [2] and the papyraceous type occurs in all other species [3, 4]. However, occurrence of such gestational disorder in bovines is less common. Studies by various authors reported the incidence of foetal mummification as sporadic ranging from 0.43-1.8% [3] and may be as high as 5% [5].

Spontaneous expulsion of foetal mummies may be seen but most of them were retained inside uterus till medically or surgically intervened [6]. Foetal mummification can be satisfactorily treated with drugs like  $PGF_{2\alpha}$  [7], estradiol, repositol diethyl stilbestrol,

along with cortisones [2] or manual removal of CL [3] and if failed, surgically managed [8]. Few times only 80% success was reported with single injection of estrogen (80 mg of stilbestrol or 5 mg of estradiol  $17\beta$ ) [3]. Deficiency of uterine tonicity and natural lubricating mechanism fails to expel the foetus through the birth canal leading to the conditions akin to maceration and pyometra owing to the patent cervix which paves entry for pathogenic organism [9]. Perusal of available literature revealed meager reports on the occurrence of foetal mummification in buffaloes. Hence, the present communication reports a case of protracted foetal mummification and its successful therapeutic management in a non-descript buffalo.

## CASE HISTORY AND OBSERVATIONS

A non-descript pluriparous buffalo weighing around 300 kg was presented to the veterinary dispensary with an anamnesis of extended gestation length of 11 months and absence of calving signs. The breeding history revealed that animal was served and subsequently conceived by communal bulls; pregnancy was verified by the local veterinarian by 3<sup>rd</sup> month of gestation and previous deliveries were normal. On general examination, the animal appeared to be poor and active except for the lowered body condition score (BCS) and all the physiological parameters were in normal range. Per rectal examination revealed a solid,

firm mass of foetus inside the tightly contracted uterus in the abdominal cavity. Per vaginally the cervix was found to be tightly closed and no vaginal discharges were observed. The case was diagnosed as foetal mummification.

### TREATMENT AND DISCUSSION

Animal was stabilized with parenteral fluid therapy of DNS 2 lit, calcium borogluconate 450 ml and medicaments like 10 ml of nerve tonic, 10 ml of chlorpheniramine maleate, 25 mg of Dinoprost tromethamine and 25 mg of dexamethasone I/M. The animal was not presented to the clinic for more than 7 days; however, the owner reported that brownish discharge observed after 3 days of treatment. For manual retrieval, epidural analgesia was achieved using 2% lignocaine hydrochloride and per vaginal examination revealed the foetal head was obstructing the birth canal with tightly contracted uterus over the foetus. After thorough lubrication of birth canal with carboxy methyl cellulose, manual traction was endeavored to extract a male dead foetus devoid of any anomalies packed in brownish leathery placenta with discharges tarnish all over the body surface. Mild streaks of blood seen along with autolytic changes which were characterized by softened hoof, lack of dermal hairs and sunken orbits, foetus age was about 7 months assessed based on the crown rump length (10). Malodorous placental remnants and chocolate coloured blood clots were removed followed by douching the uterine cavity with diluted povidone iodine and metronidazole. Animal recovered uneventfully and conceived without any complications.

Many reasons contribute to foetal mummification like umbilical cord compression, foetal overcrowding, twins, anomalous hormonal concentrations [2] and infectious agents such as bovine viral diarrhoea. However, we can not exactly determine the causative agent [3]. A combinational therapy of natural prostaglandin (PGF<sub>2</sub>α) Dinoprost tromethamine and corticosteroid dexamethasone was used for luteolysis and to expel the foetus ageing 150-280 days was indicated [10,11]. In our study, owing to treatment and concurrent low plane of nutrition, negative energy balance and subsequent lack of uterine tone the foetus was

partially expelled and got stuck in the birth canal. This condition was in accordance with the report of Arthur *et al.* [9]. On exposure of mummified foetus to the exterior, it might have got infected and maceration started giving out bad odour [12]. The immature, keratinised skin of the foetus also might have contributed to slow resorption of body fluids [1] and hence the foetus appeared moist.

To conclude, combinational therapy for treatment of mummified foetus with dinoprost and dexamethasone at late gestation is better indicated. But, if neglected, it may lead to complications like foetal maceration, post-partum pyometra, endometritis and ultimately culling of animal.



**Fig. 1:** Retrieved Mummified Foetus with Autolytic Changes. Note the Sunken Orbits, Leathery Skin, absence of Hair, Bloody Streaks and Brown Exudate.

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