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## Surgical management of dystocia due to fetal emphysema in buffalo: A case report

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### Abstract

A full term non-descript buffalo in its second parity was presented to the Veterinary Clinical Complex, College of Veterinary Science & A.H., Kamdhenu University, Navsari, with a history of difficulty in calving since two days and unsuccessful traction attempts had made eight hours before by Veterinarian. Clinical examination showed animal was recumbent, exhibiting open mouth breathing and pale mucous membranes. Obstetrical examination revealed dry, edematous birth passage with dead emphysematous foetus in anterior longitudinal, dorso-sacral position and right lateral deviation of head and neck. As the uterus tightly wrapped over the dead emphysematous fetus a cesarean section was performed. Postoperatively, the animal was treated with Inj. Streptopenicillin 5g i.m, Inj. Flunixin meglumine 8 ml i.v, and Inj. Chlorpheniramine maleate 10 ml i.m along with Inj. 5% Dextrose normal saline 4 lit i.v. Antibiotics, anti-inflammatory and supportive therapy was continued for subsequent five days and animal had an uneventful recovery.

**Keywords:** Buffalo, caesarean section, dystocia, fetal emphysema

### 1. Introduction

Dystocia is characterized by difficult calving that lowers calf viability, injures the mother, and necessitates assistance (Noakes *et al.*, 2009) <sup>[1]</sup> and It indicates a detrimental effect on dairy cow productivity and reproduction (Kebede *et al.*, 2017) <sup>[2]</sup>. Dystocia in dairy cattle is most commonly caused by fetal malposition (64.08%), with head deviation (20.4%) and limb flexion (19.4%) being the most frequent causes (Purohit and Mehta, 2006) <sup>[3]</sup>. Putrefaction and gas generation in the subcutaneous tissue within 24 to 72 hours after the fetus's demise are the hallmarks of fetal emphysema, a common calving complication that causes the fetus to become mushy, degraded, and swollen with gasses (Sane *et al.*, 1994) <sup>[4]</sup> It is always suspected in dystocia instances that last longer than 24 hours. The most common cause of emphysema in deceased fetuses is ascending vaginal infections. It is not recommended to attempt a fetotomy on an emphysematous fetus with a firmly clenched uterus, inadequate lubrication, an incompletely dilated cervix, or a friable uterus (Campbell and Fubini, 1991) <sup>[5]</sup>. A caesarean section should be performed because very enlarged and emphysematous monstrosities are very difficult to treat via fetotomy (Purohit *et al.*, 2012) <sup>[6]</sup>.

### 2. Case history and Clinical Observation

A full term non-descript buffalo in its second parity was presented to the Veterinary Clinical Complex, College of Veterinary Science & A.H., Kamdhenu University, Navsari, with a history of difficulty in calving since two days and unsuccessful traction attempts had made eight hours before by Veterinarian. Clinical examination showed animal was recumbent, exhibiting open mouth breathing and pale mucous membranes. Per-vaginal examination revealed revealed dry, edematous birth passage with crepitating foul smelling emphysematous dead fetus in in anterior longitudinal, dorso-sacral position and right lateral deviation of head and neck. There wasn't enough space in the delivery canal since the fetus was totally emphysematous. The aforementioned results supported the diagnosis of dystocia brought on by postural deviation, fetal emphysema and a caesarean section was performed.

### 3. Surgical management and Discussion

Caesarean section was done as per the standard procedure by left lower ventro-lateral oblique incision. The gravid horn contained a dead, foul-smelling, emphysematous male fetus (Fig. 1). Cushing inversion sutures were used to seal the uterus following metronidazole flushing. After cleansing the peritoneal cavity with metronidazole solution, the celiotomy incision was closed according to usual protocol. The fetus's crepitating sensation and death were confirmed by gross inspection. The buffalo was treated with injection Dextrose Normal Saline 4 litres as I.V. infusion, Inj. Streptopenicillin 5 gm IM, Inj. Flunixin 8 ml IV and Inj. Chlorpheniramine maleate 10 ml IM and all medication continued for 5 days.

Cattle frequently get dystocia from fetal causes; male calves are more likely to experience this condition and need assistance than female calves (Purohit *et al.*, 2012) [6]. The danger of malpresentation is greatly increased when a calf dies before the expulsive process begins (Zaborski *et al.*, 2009) [7]. The upshot of these situations leading to fetal mortality is that the dead fetus begins to putrefy and gas builds up in subcutaneous tissues, increasing in size within 24 to 72 hours. This should be suspected in prolonged cases of dystocia (Purohit and Mehta, 2006) [3]. As in our situation, the cervix and uterine wall may compress firmly over the dead fetus, causing the vaginal mucous membrane to dry out, swell, and produce foul-smelling vaginal discharge. Before making a deep incision or performing a partial fetotomy to repair any emphysema, gas must be released. It is not advised to attempt a fetotomy on an emphysematous fetus that has a tightly connected uterus, little uterine fluid, an incompletely dilated cervix, or a friable uterus; in these situations, a caesarean section may be necessary (Campbell and Fubini, 1991) [5].



**Fig 1:** Emphysematous foetus

### Conflict of Interest

Not available

### Financial Support

Not available

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