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## Management of dystocia due to Cyclopic and Arhinia fetal monster with fetal anasarca in a sahiwal cow: A case report

**Shraddha Sinha, Neeti Bante, Renuka Mishra, Brahmendra Reddy, Suryakant Sahu, Sunita Patel and Richa Chourasia**

### Abstract

A case of pregnant cattle was brought to Teaching Veterinary Clinical Complex (TVCC), Anjora, Durg. Which was near term pregnant and having excessively enlarged abdomen. On clinical examination, it revealed hydrops amnion and was subsequently treated with Cloprostenol and Dexamethasone to induce parturition as the animal was close to calving. Parturition started within 24hrs, but the foetus lodged at the brim of pelvis resulting in dystocia. The dystocia was corrected by manual manipulation, repulsion and traction. On parturition, the fetus was found to be dead and had monstrosities. The foetus had incomplete fusion of eye orbit and absence of upper jaw, facial and nasal bones and incomplete bifurcation of tongue. Based on the above characters the foetus was identified Cyclopic and arhinia fetus.

**Keywords:** Hydrops amnii, cloprostenol, dystocia, Cyclopic, Arhinia

### Introduction

Hydrops amnii, also known as hydramnion and about 10% of cows with hydrops of the foetal membranes have hydramnios, or hydramnios. (Noakes *et al.*, 2009) [5]. Hydramnios results from fetal abnormalities that prevent swallowing or intestinal transport of amniotic fluids. The condition is most commonly seen between 6-8 months of pregnancy. The exact cause of the condition is not known (Peek Simon, 2007) [7]. Foetal anasarca, ascites, edema of the allantochorion, hydrops of the amnion or allantois or both, and other dropsical diseases of the foetus might cause foetal oversize. Foetal anasarca is a generalised edema of the fetus's subcutaneous tissue that can happen either on its own or in conjunction with other defects. (Roberts, 1971) [8]. Foetal anasarca is a disorder that causes the foetus to have subcutaneous edoema as a result of an excessive buildup of fluid in the subcutaneous tissues. Although it typically affects cattle, it can also affect other animals including buffalo and sheep (Sloss and Dufty, 1980) [11]. Usually, either infectious ailments or foetal developmental abnormalities are linked to the disorder. An autosomal recessive gene is cited as the cause (Roberts, 2004) [8]. Foetal anasarca is a rare side effect of mild amnion and/or allantois hydrops and/or placental edema (Arthur *et al.*, 2001) [1]. Cyclopia is an uncommon type of congenital birth disorder characterised by an improper division of the eye's orbits into two cavities by the embryonic prosencephalon, primarily found in pigs and sheep (Roberts, 1971) [8] is also reported in goat (Kantharaj, 2010) [3] and cattle (Gupta and Anand, 2002) [4]. Similar to congenital arhinia, this extremely rare disorder is characterised by the absence of the nasal tube and external nasal features.

### Case history and observations

A 6 year old near term pregnant Sahiwal cow was brought to Teaching Veterinary Clinical Complex, college of veterinary science and A.H, DSVCKV, Anjora, Durg, with the history of excessive distension of abdomen. Owner complained about the excessive distension of abdomen over a period of time. The cow was otherwise active and appetite was normal. When admitted to the clinic, the heart beat was 96/minute, temperature was 102 °F, and estimated body weight was around 350 kg. Auscultation of abdomen revealed fluid sound on both the sides of the abdomen. Rectal examination revealed excessively distended uterus with fluid.

### Treatment and Discussion

Considering the health and closeness to parturition, it was decided to induce calving. PGF<sub>2α</sub>

analogue, Cloprostenol (2 mL), together with Dexamethasone (10 mL) was given intramuscularly. She was expected to deliver within 24-48 hour of treatment. The owner was asked to wait until then. After 30 hour of treatment, parturition started with expulsion of large quantity of fluid and lodging of both the fetal forelimbs in the birth canal. The animal was unable to deliver the fetus even after 12 hour of rupture of the first water bag. The animal was seen lying on the floor in sternal recumbency with the fore-feet of the fetus visible outside the vulva. Lubricated hand was inserted per-vaginally to examine the calf and was found to have bilateral hock flexion with anterior presentation and dorso-sacral position. Amniotic sac was intact which was burst and a large quantity of fluid (around 40 litres) escaped. Then the posture was corrected by repulsion, manipulation and traction which resulted in the successful delivery of the dead fetus. The dam was treated with antibiotic Ceftriaxone @ 10 mg/kg b.wt. i/m, and analgesic Meloxicam @ 5 mg/kg b.wt. i/m.

There were primitive visible fused eyeballs and the skin over the forehead was open, showing a muscular mass that was also present in unremarkable cows (Gupta and Anand, 2002) [4] (Ozcan *et al.*, 2006) [6] reported an abnormal cyclopia in a brown Swiss cross calf, along with other important malformations such as prosencephalic aplasia, brancygnathia superior, and arhinia. The most notable anomaly was the existence of the medium orbia-like orifice without an eyeball. A German Fleckvieh calf with arhinia and cyclopia of a similar type reported by (Schulze and Disti, 2006) [10]. (Khasatiya *et al.*, 2009) [2] reported a cross-bred cow with a cebocephalus monster and said that the ephtheliogenesis across the forehead and body was incomplete, with rudimentary, distinct eyeballs as well as an unusually malformed eye and jaw.

In the present case Grossly, the foetus had incomplete fusion of eye orbit and absence of upper jaw, facial and nasal bones and incomplete bifurcation of tongue as seen in fig no 2, 3 and 4. Based on the above characters the foetus was identified cyclopic and arhinia fetus seen in fig no. 1.

In general, hydrops amnion can be managed successfully by inducing parturition with cloprostenol and dexamethasone if the animal is close to calving. In this present case report fetal monster was the cause of hydamnios condition.



**Fig 1:** Cyclopic and Arhinia Fetal Monster



**Fig 2:** showing incomplete fusion of eye orbit



**Fig 3:** absence of upper jaw, facial and nasal bones



**Fig 4:** Incomplete bifurcation of tongue

**Conclusion**

In general, hydrops amnion can be managed successfully by inducing parturition with cloprostenol and dexamethasone if the animal is close to calving. In this present case report fetal monster was the cause of hydamnios condition.

**Conflict of interest**

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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