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## Pervaginal delivery of Arthrogyrosis fetus in a Holstein Friesian crossbred cow

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### Abstract

A case of dystocia in a Holstein Friesian cow on its fifth gestation was brought with the history of full term pregnant, water bag ruptured and straining since 6 hrs. Pervaginal examination revealed that the fetus was in anterior longitudinal presentation, dorso sacral position with right laterally deviated head and ankylosed forelimbs. After correcting the postural abnormality a dead male fetus was delivered pervaginally by forced traction.

**Keywords:** Dystocia, Arthrogyrosis, Pervaginal delivery, HF crossbred cow

### Introduction

Feto-maternal disproportion mainly occurs due to congenital malformations and fetal oversize and these are the major cause of fetal death at the time of birth and such cases requires timely assistance to relieve dystocia in order to save the life of the dam. Fetal anomalies and various kinds of monstrosities though occurs with less frequency, have been reported in cattle (Roberts, 1971, Arthur *et al.*, 1989) <sup>[1, 2]</sup> and buffaloes (Kumaresan *et al.*, 2003) <sup>[3]</sup>. Arthrogyrosis is a rare malformation of the fetus, which is characterized by a congenitally contracted tendon in two or three or all four limbs with flexed or extended joints due to secondary or primary neuro muscular malformation <sup>[4]</sup>. The conditions have been reported in cattle, buffalo, ewe and pet animals <sup>[5]</sup>. The present case reports a rare case of dystocia due to teratological defective fetus and its successful pervaginal delivery after performing obstetrical mutation operation.

### Case History and Observation

A full term pleuriparous Holstein Friesian crossbred cow on its fifth gestation was brought to the Veterinary Clinical Complex, Veterinary College and Research Institute, Salem with the history of water bag ruptured and straining since 6 hours. On clinical examination all the parameters were within the normal limits. On vaginal examination cervix was fully dilated. The fetus was in anterior longitudinal presentation, dorso sacral position and the head was right laterally deviated. On careful examination of fetal forelimb it was found that the knee joints were severely contracted and difficult to move, which struck at the pelvic brim. Absence of fetal reflex indicated that the fetus was dead.

### Treatment and Discussion

The animal was stabilized with 2 liters of 5% Dextrose intravenously. Caudal epidural anaesthesia was induced by injecting 4ml of 2% Lignocaine hydrochloride at the first intercoccygeal space. The birth passage was thoroughly lubricated. Lateral head deviation was corrected by mutation operation. Snares were applied over forelimbs above the fetlock joint. Williams obstetrical long eye hooks were applied on the right inner eye canthes. By giving forced traction a dead male arthrogyrosed fetus was delivered pervaginally along with the fetal membrane. The cow was treated with fluid therapy, antibiotics, ecbolics and other supportive therapy for three consecutive days. The animal had an uneventful recovery. Gross examination of the fetus revealed ankylosis, muscular dystrophy and articular rigidity in the

forelimbs (Figure 1). Lateral radiograph of the fetal forelimbs showed ankylosis of the joints (Figure 2).

The present report was in accordance with the reports of Hartley and Wanner (1974)<sup>[6]</sup> and Sprake (2015)<sup>[7]</sup> where ankylosis was severe on forelimbs.



**Fig 1:** Arthrogyposisin forelimb of fetus



**Fig 2:** Lateral radiograph of fetus showing ankylosed joint.

The expression of an autosomal recessive gene with complete penetrance in the homozygous state (Goonewardene and Berg, 1976)<sup>[8]</sup> or by infection with some of the viruses (Dennis and Leipold, 1979 and Russeaux and Ribble 1988)<sup>[9, 10]</sup> may cause malformation of fetus during gestation. The congenitally malformed fetus is characterized by mild to extreme curvature of limbs, articular rigidity and muscular dystrophy (Nawrot *et al.*, 1980)<sup>[11]</sup>.

### Conclusion

The present study reports a case of dystocia due to anterior longitudinally presented arthrogyposis fetus and its successful pervaginal delivery in a Holstein Friesian cow.

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### Conflict of Interest

No conflict of interest

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