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Trans vaginal correction of dystocia due to fetal arthrogyrosis in a Holstein Friesian cow

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Abstract

A six years old Holstein Friesian cow in a private dairy farm was suffering from dystocia. The cow was attended in the barn and vaginal examination revealed the fetus in the birth canal with posterior longitudinal presentation, right dorso ilial position with both the hind legs twisted backward and hooves stuck on left lateral wall of the pelvic cavity. The hind legs were flexed and joints ankylosed to a greater extent. The monster fetus was delivered per vagina with some manipulation and forced extraction. The fetus was alive at birth but succumbed within half an hour of delivery with some frothy fluid exudation from mouth and nostrils. The flexure and ankylosis of all the joints of four limbs were suggestive of arthrogyrosis in the calf which was successfully delivered through trans-vaginal approach.

Keywords: fetus, arthrogyrosis, dystocia, cow

Introduction

The arthrogyrosis is a fetal monstrosity characterized by permanent joint flexure frequently involving with the forelegs [1]. The condition is most common in cattle, buffalo, and goats and in other pet animals [2]. Out of all etiological agents the genetic [3], plants like Sorghum [4], *Lupinus* toxicity at pregnancy [5] and prenatal infections with viruses, such as Akabane, Schmallenberg and Bluetongue virus [6] are found to be the major for causing arthrogyrosis in domesticated animals. Sometimes depending upon the severity of plant toxicity or pathogenesis of infection the degree of ankylosis and fibrosis of joints may vary. The present communication reports a case of dystocia in a Holstein Friesian cow due to fetal monstrosity with malpresentation and its successful trans-vaginal delivery.

Case History and Clinical findings

A six years old Holstein Friesian cow of third lactation was reported to be suffering from dystocia for about last four hours. The cow was on sternal recumbency, exhausted and dehydrated. Per vaginal examination following all the aseptic measures revealed malpresentation of a monster fetus. The fetus was found to be presented posterior longitudinally with right dorso ilial position. The hind legs were palpated towards the posterior of birth canal, both were found crooked towards the back of the calf and due to its right dorso ilial presentation, both the hooves were stuck firmly on left ilial side of the birth canal. Based on the clinical finding the case was confirmed to be dystocia due to fetal monstrosity with malpresentation and malposition.

Treatment and discussion

Prior to manipulation for correction of dystocia, the cow was administered with 25% Dextrose with electrolyte (2.5L; i/v), Chlorpheniramine maleate (15 mL; i/m). 7 ml of 2% lignocaine hydrochloride was injected to produce epidural anesthesia. The perivulvar region was thoroughly disinfected with potash solution and for lubrication of birth canal sufficient amount of carboxy methyl cellulose sodium was applied. After lubrication the position of the fetus was corrected to dorsosacral with retropulsion and rotation of the fetus. It was very difficult to straightened and pull both the crooked hind legs out together. So, with some manipulation and forced extraction the legs were pulled out one by one. Then, finally with the help of two assistants gentle forced extraction was applied and eventually fetus was delivered without any complicacy. The fetus was alive at the time of delivery but respiratory distress began after 10 to 15 minutes and died within half an hour with some frothy exudation from mouth and

nostrils (Fig. 2). The cow was then treated with Cefotiofur sodium (@1gm/day i/m for 5 days), vitamin B-complex (@ 10 ml/day, i/m, for 5 days), Calcium Borogluconate (250 ml; slow i/v at stat) and herbal uterine ecobolic (@300ml/day for 3 days).

The placenta was not removed manually as it was not separated completely. The fetus was examined and severe ankylosis and muscular dystrophy could be detected in both the hind legs. The left foreleg was almost normal and lesser degree of arthrogryposis condition could be seen in the right foreleg (Fig.1). The present report was in accordance with the reports of Devi Prasad and his coworkers [7] where ankylosis was severe on hind legs. Contradicting the statement of Hartley and his coworkers [1] and Sprake [9] of affection of arthrogryposis as more frequent and severe in the forelimbs than the hind limbs, the present finding however, observed more severity of ankylosis and muscular dystrophy in both the hind legs.



Fig 1: Arthrogryposis calf



Fig 2: Arthrogryposis calf with frothy exudate

Conclusion

The present communication placed on record a case of correction of dystocia due to posterior longitudinally presented arthrogryposis fetus with right dorso ilial position and its successful trans vaginal delivery in a Holstein Friesian cow.

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