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Management of breech presentation dystocia by caesarean section in a Tharparkar cow

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Abstract
The study presents a case of dystocia due to breech presentation in a 7 year old cow brought to the Teaching Veterinary Clinical Complex of International Institute of Veterinary Education and Research (IIVER), Rohtak, Haryana, with a complaint that the animal had been in labour for over 24 hours. According to the owner, water bags were presented and ruptured on the previous day and since then animal was straining, gestational period was 9 months, animal was in 3rd parity, feed and water intake was normal. Per-vaginal examination was carried out and diagnosis of dystocia due to breech presentation was made as evidenced by presence of tail of the fetus in the birth canal along with bilateral hip flexion in the posterior presentation. It was impossible to deliver the calf per vaginally due to bilateral hip flexion, so caesarean section was performed. Following local anaesthesia using 2% lidocaine hydrochloride, Ventrolateral oblique incision was made on the left side and dead fetus was delivered. Post-surgical recovery was completed and the cow was discharged on the same day.

Keywords: Breech presentation, dystocia, caesarean section, bilateral hip flexion, posterior presentation

1. Introduction
The term dystocia is defined as delay and difficultyin parturition [1], it may occur due to failure in one or more of the three main components of calving; expulsive force, birth canal adequacy and foetal size and position [2]. It has a significant impact on production and future reproduction of the dairy [3] and beef [4] cattle. All types of dystocia may occur in both heifers and older cows but predominant types and risk factors differ between parity groups. In heifer the primary causes of dystocia, are oversized foetus, abnormal foetal position and failure of the cervix to dilate. In older cows the primary causes of dystocia include abnormal foetal position, oversized calves, multiple foetuses, uterine inertia, uterine torsion and failure of the cervix to dilate [5, 6]. The dystocia rate in heifers can be up to three times higher as compared to older cow [6]. One of the most difficult types of dystocia dealt by obstetrician is due tobreech presentation. Mostly on per-vaginal examination, calf's tail is recognized in the birth canal.

2. Material and methods
2.1 Case history and clinical observations
A 7 year old cow at full term was presented to the Teaching Veterinary Clinical Complex of International Institute of Veterinary Education and Research (IIVER), Rohtak, Haryana. Animal was reported to have been in labour for more than 24 hours at the time of presentation, water bags were presented at the vulva and got ruptured on the previous day and since then animal was straining. The gestational period was about 9 months and the animal was in 3rd parity along with normal feed and water intake. Per-vaginal examination revealed that the fetus was in posterior longitudinal presentation, dorso-sacral position, and bilateral hip flexion with the buttocks close to the pelvic brim along with presence of fetal tail in the birth canal; hence a case of breech presentation was diagnosed. There was no foetal movement and other reflexes, indicative of dead fetus. Per-vaginal delivery was impossible because of the bilateral hip flexion and there was no achievement after application of various mutation methods (Fig. 1) so, caesarean section was indicated.

Fig 1: Per-vaginal manipulation of the dystocia due to breech presentation in a Tharparkar cow.

Fig 2: The dead fetus delievered after caesarean section (A); and the uterus was sutured using double row of lambert followed by simple interrupted skin sutures after caesarean section (B).

3. Results

3.1 Treatment and surgical management

Caesarean section was performed using ventrolateral oblique approach in the lateral recumbency on the cow after preparing the site aseptically. Site was desensitized locally by using 80 ml of 2% lidocaine hydrochloride. Ventrolateral skin incision was made on the left side and the muscles were incised to expose the peritoneum. An incision was made on the peritoneum to gain access to the abdominal organs and then the rumen was retracted towards the diaphragm and the gravid uterus was exteriorized. An incision was made on the greater curvature of the uterus after which the dead calf was delivered (Fig. 2A). Prior to closure, the uterus was thoroughly explored and cleaned of blood clots and was closed with chromic catgut No. 2 using double rows of lambert over swan with cushing suture patterns and returned into the abdomen. The peritoneum and abdominal muscles were closed together using a simple continuous suture pattern with chromic catgut No. 2. Subcutaneous tissue was opposed with chromic catgut No. 2 using a subcuticular suture pattern, and the skin was closed using simple interrupted suture pattern (Fig. 2B) with nylon size 2. Immediately after the surgery, oxytocin (50 IU) was administered intramuscularly to help the involution of the uterus and expulsion of the placenta and uterine debris. The surgical site was dressed and owner was advised to dress the wound antiseptically every other day and to bring the animal after 10 days. Sutures were removed on day 10 and the wound healed perfectly without complication.

4. Discussion

The most common abnormal foetal position present as posterior malpresentation, foreleg malposition, breech malpresentation or cranial malposture. Though foetal malposition occurrence is < 5% [7], but is the most common cause of dystocia in older cows; accounting for 20% to 40% of cases [3]. Malpresentated foetuses have a two-time higher risk of dystocia and a five-time higher risk of still birth [7]. Abnormal foetal position is most affected by multiple births having a four time higher risk [8]. Foetal malposition is also influenced by sire, gender (male have a two-time higher risk), parity (two-time higher risk in older cows) and foetal mortality [9]. The calf in the present case was in posterior longitudinal presentation, dorsopubic position with the buttock closest to the cervix which is in agreement with the Breech presentation reported by [10, 11], that a foetus in longitudinal presentation lies with the buttock or feet closest to the cervix is referred to as breech presentation. The calf in this case was of normal size, full termed and a female. After the surgery, the dam was allowed to recover normally.

5. Conclusion

The present case was diagnosed as a case of dystocia due to fetal malpresentation i.e., breech presentation with fetus in the posterior longitudional presentation showing bilateral hip flexion which might have caused the dystocia in the cow. Attempts to deliver the fetus per vaginally were futile owing to less space available for the extension of the flexed limb. Thus, caesarean section was done without any further delay with least complications to the dam postoperatively.

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management of the dystocia affected animal.

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