VET SURGEON

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Dystocia is defined as difficulty or prolongation of parturition and requires immediate attention by veterinarians. Bovine is the most affected species with dystocia. Any physical or functional alteration causing hindrance in the birth process ultimately paves the way for dystocia (Srinivas et al., 2007).

Etiology of dystocia has been classified into maternal and fetal causes (Noakes, 2009). 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 (Purohit et al. 2012).

The present communication describes a case of dystocia due to abnormal posture in a crossbred Jersey cow.

**MATERIAL AND METHOD**

**CASE HISTORY AND CLINICAL OBSERVATIONS**

A five year old crossbred cow with full term pregnancy was presented by a farmer to udangudi veterinary dispensary, Tiruchendur division, Thoothukudi with a history of straining and rupture of water bag. On clinical examination the rectal temperature, heart rate and respiration were found within the normal limit. Per-vaginal examination revealed that the foetus was in anterior longitudinal presentation, dorso-sacral position, and right lateral deviation of head and left shoulder flexion hence a case of dystocia due to fetal cause was diagnosed.

**TREATMENT**

Epidural anesthesia was performed at sacroccygeal space with 2% lignocaine hydrochloride (5 ml) to avoid the straining and pain. Birth canal was lubricated with ample quantities of liquid paraffin. The deviated head and neck was brought into the birth canal by holding at the muzzle area and applying traction on lower jaw in dorsal and backward direction. The left shoulder flexion was converted to carpal flexion by pulling the part below the shoulder joint in upward direction. The carpal joint was pushed upward and digit of the left limb was grasped in cupped hand to pull it into the pelvic cavity.
Later fetal forelimbs were brought into the birth canal. Both the fore limbs of the foetus were snared after correction and with traction live female calf was delivered.

Post-operative treatment included
Inj. Calcium borogluconate-450ml, I/V;
Inj. Dextrose Normal Saline (5%) -2 L I/V;
Inj. Meloxicam-0.5mg/Kg b.wt, I/V;
Inj. Chlorpheniramine maleate-10ml, I/M and a course of antibiotic
Inj. Ceftriaxone and Tazobactum at 10mg/kg b.wt, I/M for 3 days and uterine ecbolic 200 ml bid.

The cow showed an uneventful recovery without any postpartum complications.

Dystocia due to lateral deviation of head and neck constitutes one of the commonest types of postural abnormality in anterior presentation causing dystocia in all species and it may arise during late gestation rather than during birth (Roberts, 1982; Noakes et al., 2009; Kamlesh Jeengar et al., 2015). Fetal causes of dystocia were more common in cows and account for 64.08%, head deviation-20.4% and limb flexion 19.4% (Purohit and Mehta, 2006).

REFERENCE


rumination is the process by which the cow regurgitates previously consumed feed and chews it further. Optimum chewing time is needed to minimize the risk of rumen acidosis, enhance fibre digestion and promote high levels of feed intake in dairy cows.

- A healthy cow ruminates for about 8 hours in a day. Rumination provides physiological benefits to the animal, similar to those provided by deep sleep.
- Rumination time is positively associated with milk production. Rumination peaked approximately 4 hours after feeding and periods of rumination are associated with time spent lying down.
- Rumination time is higher during 8pm and 4 am
- Multiparous cows spend more time ruminating than Primiparous cows.
- Each day a dairy cow chews about 12000 to 30000 times during eating and 20000 to 40000 times during rumination depending on the nature of the diet.
- Pressure of coarse material or "scratch factor" against the rumen wall stimulates the cow to ruminate.
- Promoting chewing increases salivary secretion and helps reduce the risk of SARA.
- Rumination increases the production of saliva, which acts as a buffer to the acids produced during the microbial degradation of carbohydrates.
- Feeding a high level of concentrates reduces rumination. It is critical that the ration contains an adequate amount of long fibre to stimulate rumination.
• Studies have shown that up to 90% of rumination occurs in stalls and a 2% increase in resting increases rumination time by 7%. So the stalls should be comfortable for the cows to lie down.

**RUMINATION AND COW HEALTH**

Rumination has been shown to be an important indicator of cow welfare, health and Estrus status.

• A drop in rumination is a clear indicator for health issues before clinical signs appear.
• A Veterinarian should be aware of the factors responsible for the reduction / stoppage of rumination so that the underlying causes can be identified and corrective measures taken in time.
• 90% of cows that had low rumination during the first week of calving experienced clinical disease.
• If rumination is chronically depressed by 10-20% due to poor management, then we can reasonably predict compromised ruminal function and greater risk of associated problems such as SARA, poorer digestive efficiency, lameness and lower milk fat and protein output.
• In cases like displaced abomasum, ketosis and metritis the rumination time comes down even before the development of clinical signs.
• Rumination drops before clinical signs develop. Likewise, returning to normal rumination is an indication that the treatment or nutrition change is successful.
• There is a decline in eating time and rumination time on the day before and on the day of estrum.
• **Rumination time has been shown to be consistently reduced about 8 hours before calving and increased 6 hours later. Thus, monitoring rumination time could be useful in predicting time of calving.**
• On high forage diets the cows ruminate often and when they are transitioned to a higher concentrates diet they ruminate less.
• Rumination decreases during heat stress, overcrowding, mastitis and hypocalcemia.
• On a high grain diet, due to increase in VFA production, the rumen pH comes down, resulting in a decrease in forage using microorganisms and thus less rumination.
The plicae palmatae defined as the radiating fold in the uterine mucosa on the anterior and posterior wall of cervical canal. A middle longitudinal ridge was considered to represent a portion of plicae palmatae which are folds on the anterior and posterior wall of the uterine cervical [pubmed.ncbi.nlm.nih.gov]

HISTORY AND OBSERVATION:

A cross breed cow with fifth calving calved 90 days back, which was brought for artificial insemination. On rectal examination showed prolapse of plicae palmatae through vagina. On the first day Injection GnRH 20mcg was given through intramuscular route. On second day, condition was normal, I inseminated the cow morning and evening. Now cow was three month pregnant.

CONCLUSION:

In cow during heat period prolapse of plicae palmatae occur due to high estrogen level. But this condition is very rare in cow. After injection of GnRH LH surge occur. Progesterone secretes from theca cells in the response to LH. Granulosa cells also responds to LH and secretes progesterone. Prostaglandin also secreted by granulosa cells due to progesterone. In turn prostaglandin stimulate progesterone secretion from both granulosa and theca cells [J.E.Fortune, I.E.L.Wills,2P].Bridges.3 and C.S.Yang 4. Pmc 2010 Apr 12,Animal Reprod]. The progesterone mitigate the high estrogen effect, so cow came to normal condition of heat on next day after injection of GnRH.

ABSTRACT:-

In the present case study, a cross breed cow, fifth calving which was brought for artificial insemination. On rectal examination showed prolapse of plicae palmatae through vagina. On the first day Injection GnRH 20mcg was given through intramuscular route. On second day, cow was in normal condition of heat and inseminated morning and evening. Now cow was three month pregnant.

KEY WORDS:-

Prolapse, plicae palmatae, cow

INTRODUCTION:

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