

Therapeutic Management of Incomplete Cervical Dilatation in a Cow

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Abstract

A five years old cow in third lactation was attended at farmer's doorstep for a prolonged parturition. The case was diagnosed as improper dilation of cervix and was treated with Valethamate bromide, Antihistaminics, Dextrose, Oxytocin and Calcium borogluconate. After treatment, cow showed dilation of cervix facilitating normal delivery of a healthy male calf

Keywords : Dystocia; cervical dilation; treatment

Introduction

Failure of cervix to dilate completely is a common cause of dystocia in large ruminants. The bovine cervix being more muscular, fibrous and tightly closed during pregnancy than in other domestic animals may cause dystocia, if not properly relaxed and dilated (Tillmann, 1960). In normal parturition, cervix dilates under influence of various hormones viz. oestrogens, corticosteroids, relaxin, oxytocin and possibly prostaglandins and failure of cervix to dilate is due to dysfunction of these hormones (Sane *et al.*, 1994). Moreover, failure of cervix to dilate properly may be due to uterine inertia, metritis, birth weight of calf, injuries of cervix in previous parturition, and infectious uterine diseases, debility and debilitating diseases (Roberts, 1971) and in older cows due to loss of tonicity of uterus or loss of contracting ability of uterus during parturition. Singh *et al.* (1986) reported 55.8 percent incidence of incomplete relaxation of birth canal in cattle during parturition.

The study reports a case of delayed parturition in a cow due to improper dilatation of cervix caused possibly by hormonal dysfunction or injury of cervix during previous parturition.

Materials and Methods

A five year old non-descript cow in her 3rd lactation was treated at farmer's doorstep for prolonged parturition (dystocia). The cause was diagnosed

to be failure of cervix to dilate properly due to hormonal insufficiency or due to injury during previous dystocia in previous calving.

Pulse, respiration and temperature of cow were found to be slightly higher than normal (P=<80/mint., T=<103°F, R= <30/mint). As cow was in recumbent position, a plastic cloth was put under rear portion of cow by elevating her rear portion. Then the rear portion of cow was cleaned with P.P. solution (1:1000). A completely lubricated clean hand was inserted into vagina for specific examination of tract and foetus. By per vaginal examination nothing could be felt as cervix was not dilated and only one finger could hardly be passed. As straining and relaxation of pelvic ligaments was not so prominent and there was a history of dystocia in previous calving, it was inferred that the case might be due to improper dilatation of cervix associated with uterine inertia. Per rectal examinations revealed large size foetus and confirmation of live foetus was made by ultrasonography.

The animal was treated with Antihistaminics (Anistamin^a 4 ml i/m), Valethamate bromide (Epidosin^b, 5 ml i/m), 5% Dextrose saline (450 ml i/v) and Oxytocin (Syntocinon^c 2 ml i/v) along with Dextrose and 250 ml Calcium borogluconate i/v and the owner was asked to observe for any change.

The animal was examined per vaginum after one and a half hour and found that only 2-3 fingers

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could be passed through cervix, hence, it was decided to inject a second dose of Syntocinon 2 ml i/m, Valethamate bromide (Epidosin) 5ml i/m along with 200 ml Calcium borogluconate i/v. The animal was examined after 2 hours of second dose.

Results and Discussion

After the second dose, cervix was found to be completely relaxed and hand could be passed through it. The fetus was found in anterior longitudinal presentation with slightly upward deviated head. After mutation of upward deviated head with proper lubrication, mild traction on head and fore legs was applied and a male live foetus could be delivered. After giving a rest of 30 minutes, the cow was re-examined per vaginum and no more foetuses could be felt. The portions of loose placenta were removed and animal was given Intacef^a 2.5 gm i/m for 5 days, Melonex^a injection 5 ml i/m for 5 days, Furex bolus^d 2 boli i/ u daily for 3 days, mineral mixture (Minfa gold^a) 20 gm orally BID along with Exapar^e 50ml orally daily for 5 days. The dam and the calf were found to be completely normal after 5 days of treatment.

Arthur (2001) reported that in improper dilation of cervix associated with or without hypocalcaemia, injection of calcium borogluconate should be administered and waited for several hours to get cervix dilated. However, he also suggested that instead of waiting for long hours for same caesarean section should be done to save life of fetus. Roberts (1971) had also recommended, treatment of primary uterine inertia leading to improper dilation of cervix with Pitutrin 2-10 cc,

20-100 IU in large animal, i.v injection of calcium borogluconate (500 c.c 20% solution) and after 3-4 hrs if no response could be observed then caesarean section was indicated. Sane *et.al.* (1994) also indicated the same treatment in cases of improper dilation of cervix associated with primary uterine inertia.

In the present case dilation of cervix, associated with primary uterine could be achieved by administration of repeated injections of Calcium borogluconate, Valethamate bromide, Oxytocin and Dextrose. This finds support in observations of Roberts (1971), who indicated that injections of Oxytocin and Calcium borogluconate might improve tonocity of uterus and aid or hasten the cervical dilation.

References

- Arthur, G.H. (2001). *Arthur's Veterinary Reproduction and Obstetrics*, Edited by Noakes, D.E.; Parkinson, T.J. and England, G.C.W. Eight Edition Published by Harcourt (India) Private Limited.
- Roberts, S.J. (1971). *Veterinary Obstetrics and Genital Diseases (Theriogenology)*. 2nd Edition CBS Publishers and Distributors, India. P. 292-93.
- Sane, C.R., Luktuke, S.N., Deshpande, B.R., Kaikini, A.S., Velhankar, D.P., Hukeri, V.B. and Kodagali, S.B. (1994). *A Textbook of Reproduction in Farm Animals (Theriogenology)*, 2nd Edition, Varghese Publishing House, Bombay. pp 76-79.
- Singh, B., Sinha, A.K. and Sinha, K.P. (1986). *Indian J. Anim. Repr.* 7: 26-30.
- Tillamann, H. (1960). Cited by Sane *et.al.* *Reproduction in Farm Animals (Theriogenology)*, 2nd Edition, Varghese Publishing House, Bombay. p 77.

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