DELIVERY OF AN ANASARCOUS BUFFALO CALF

Z.I. Qureshi, L. A. Lodhi, H. A. Samad and S. Ali[1]
Department of Animal Reproduction
University of Agriculture, Faisalabad
[1]Veterinary Officer, Rahimyarkhan, Pakistan

Case history

An eight years old Nili-Ravi buffalo was examined near to parturition. The owner reported that the buffalo had been off feed for the last 48 hours. The buffalo had completed the normal gestation period about 15 days ago but did not show any sign of parturition.

Clinical examination

Physical examination of the buffalo revealed that temperature, pulse and respiration rates were within normal limits. On rectal palpation, the cervix was found completely closed and the placentomas were enlarged. The calf was in anterior presentation and the head of the calf grossly distorted with subcutaneous swelling on neck region and forelegs.

Treatment

After physical and rectal examination the following treatment was given IM for the induction of parturition (Morrow, 1980).

	Drug	Dose
(i)	Cloprostenol (Estrumate, ICI, U.K.)	500 μg,
(ii)	Stilboestrol Dipropinonate (Star Laboratories Pakistan)	80 mg,
(iii)	Dexamethasone (Decadron, MSD, U. K.)	20 mg,

After 72 hours the animal was examined again through rectum and vagina. Rectal examination revealed that the foetus was closer to cervix than it was before treatment. Vaginal examination indicated partial dilation of the cervix. Above mentioned treatment was repeated at this stage and 48 hours following the treatment, animal was again examined. At this time the cervix had completely dilated with the foetus in the birth canal. Due to the excessive swelling of head, neck and legs, it was difficult to pull the foetus out. A diagnosis of anasarcous foetus was reached (Fig.1 & 2).

The foetus was removed through forced traction (Arthur *et al.*, 1989). After the expulsion of foetus, foetal membranes were removed and the following treatment was given.

1.	Utocyl pessaries	6 nos one day	IU
2.	Dextrose 5% with normal Saline	1000 ml x 3 day	IV
3.	Oxytocin	40 I.U one day	IM
4.	Streptopenicillin (Pfizer)	5 gm x 5 day	IM
5.	Cal-D-Mag (Pfizer)	300 ml x 3 day	IV

IU = Intrauterine IM = Intramuscular
IV = Intraventriculus

The owner was advised to give soft feed. The animal recovered in 10 days.

Fig. 1: Distorted head

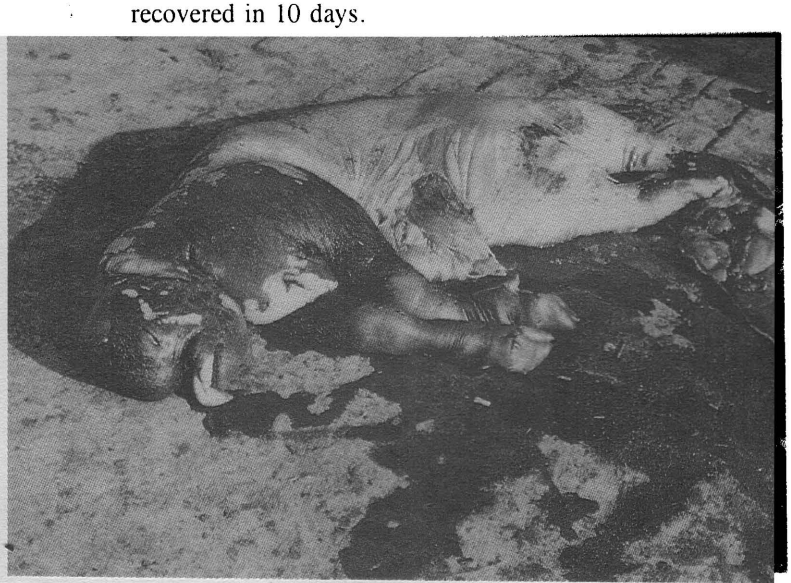

Fig. 2: Anasarcous buffalo calf

DISCUSSION

The embryonic period, when cell growth and differentiation are at their maximum, is the period of greatest susceptibility to teratogens and this is the time when the primitive germ layers and the organ rudiments are laid down (Singh and Hare, 1977). During the foetal period, only the later differentiating systems such as the palate, cerebellum and urogenital structures are vulnerable to teratogens (Eley *et al.*, 1979).

Development of calves to normal or abnormal depends on the genetic make up of the foetus and the environment in which it develops (Wilson, 1977). Abnormal development occurs when a threshold of genetic and environmental insults is reached and the foetal compensatory mechanisms are overwhelmed (Fraser, 1976). Purely genetic defects can originate from the dam, sire or both and can often be traced using an extended pedigree. However, environmental teratogens usually have their effect on the embryo during organogenesis (Trasler and Fraser, 1977). Cytogenetic defects can develop from nutritional deficiency or excess (Hays, 1981), inhaled chemicals or gasses (Kalter, 1968), chemicals (Berge and Nafstadt, 1983), drugs (Hays, 1981) and biotoxins (Cheeke and Shull, 1985). From the obstetrical aspect, future interest in the cytogenetic cases is of affected mother, which may show some mammary hypertrophy but mostly other parturition symptoms are not present. At the completion of normal gestation period, abnormal parturition mostly dystokia due to oversize foetus occurs. Thus either traction or foetotomy is recommended to effect the delivery (Arthur *et al.*, 1989).

It is impossible to give a set of indications for methods applicable to all the possible foetal dystokia cases. The veterinarian has to evaluate each case individually. In the majority of cases of foetal dystokia delivery is achieved by correction and traction. In the present case this technique was found to be most successful in relieving dystokia. With this technique in occasional cases the dam may suffer with trauma to the pelvic organs and damage to the pelvic nerves may occur when traction is applied. Caesarean section, lapro-hysterotomy and foetotomy are other alternatives and are performed in cases when vaginal delivery is impossible. However, fertility may be adversely affected following the use of either of these techniques.

REFERENCES

Arthur, G. H., D. E. Noakes and H. Pearson, 1989. Veterinary Reproduction and Obstetrics. Bailliere Tindall, London, U. K.

Berge, G. N. and I. Nafstadt, 1983. Teratogenicity and embryotoxicity of orally administered fenchlorphos in blue foxes. Acta Vet. Scand., 243: 99-112.

Cheeke, P. R. and L. R. Shull, 1985. Natural toxicants in feeds and poisonous plants. AVI Publishing Co. Inc., Westport, Connecticut USA.

Eley, R. M., W. M. Thatcher and F. W. Brazer, 1979. Numerical alterations of genomes and reproductive failure in cattle. J. Repord. Fert., 55: 181.

Fraser, F. C., 1976. The multifactorial threshold concept uses and misuses. Teratology, 14: 267-280.

Hays, D. P., 1981. Teratogenesis: A review of the basic principles with a discussion of selected agents. Part I. Drug Intell Clin. Pharmacol., 18: 444-458.

Kalter, H., 1968. Teratology of the Central Nervous System. University of Chicago Press, Chicago Illinois, U.S.A. 12-179.

Morrow, D. A., 1980. Current therapy in Theriogenology. W. B. Saunders Company, U. K.

Singh, F. L. and W. C. D. Hare, 1977. Collection and cytogenetics of fetal fluids from heifers during the third month of pregnancy. II cytogenetic studies. Theriogenology, 7: 203.

Trasler, D. S and F. C. Fraser, 1977. Time-position relationships with particular reference to cleft lip and cleft palate. In: Vilson J.G., and Fraser F.C., (Eds). Handbook of Teratology, Vol.2 Plenum Press, New York, pp: 47-72.

Wilson, J . G, 1977. Current status of teratology. In: Vilson, J. G. Handbook of Teratology, Vol. 1. Plenum Press, New York, pp: 47-72.