

# Dystocia due to dizygotic twins in a crossbreed cow - a case report

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## ABSTRACT

*Twining incidences influenced by a wide variety of genetic and environmental factors ranging from 0.5 to 4%. This case report places on record the successful management of dystocia due to dizygotic twins in a pluriparous cross-breed cow of four and a half year of age in her third parity. Both fetuses were non identical and had separate placenta which suggest 'Dizygotic twins'.*

**Key words:** dystocia, dizygotic twins, cow

In uniparous species, twinning is a highly undesirable trait. The incidence of twinning in sheep and goat is very high (60-70%), whereas low in dairy cattle (1.04%) and mare (0.5-1.05%) (Roberts, 1971). Bovine twins are of the two types 1) monozygotic twins, genetically and phenotypically identical, since they are formed from one fertilized egg, which splits into two identical halves during early embryonic developmental stages and thereby both individuals are always of the same sex. 2) Dizygotic or fraternal twins are not identical genetically or phenotypically as monozygotic twins, since they are formed from two different sperms fertilizing with two completely different ova at the same time. Dizygotic twins are the most common type and not necessarily of the same sex because they are the result of ovulation and fertilization of two different oocytes. They can be also as similar or different as any two siblings born from the same parents during different

gestations (Wakchaure and Ganguly, 2016).

A pluriparous cross-breed cow of four and a half year of age in her third parity was brought to Government Veterinary Hospital, Prahladpur, District Kurukshetra (Haryana) with a history of unproductive straining with all the four limbs of the calf partially visible near the vulval lips. The general condition of the animal was fair and the pelvic ligaments were totally relaxed. Rectal temperature, respiratory rate and pulse rate of the animal were within the normal range.

The birth passage was completely relaxed and sufficient fetal fluids were present. Per vaginal examination of all the four limbs revealed that they were all forelimbs. Fetal head was also deviated to right side and fetal reflexes were also present. Further exploration revealed another head deep inside the birth canal and it was diagnosed as a case of dystocia due to twin fetus.

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**Fig.- Twin live female fetus**

After determining the relation of appendages to each fetus, mutational operations like retropulsion of two limbs, correction of lateral deviation of head and neck and traction of one fetus followed by another was performed and two live female fetus were delivered. Both fetuses were non identical and had separate placenta which suggest 'Dizygotic twins'. Careful examination of the birth canal revealed no injury or laceration subsequent to mutational operation. Parenteral administration of antibiotics [Ceftriaxone+Tazobactam-4.5gm (Intaceftazo-Intas Pharmaceuticals)] and analgesics [Meloxicam 30 ml (Melonex-Intas Pharmaceuticals)] intramuscularly daily for three days to prevent secondary bacterial infection due to external contamination during manipulation was followed and the cattle recovered uneventfully.

Twining incidence is influenced by a wide variety of genetic and environmental factors ranging from 0.5 to 4% (Fricke, 2015). There is higher incidence of twins in dairy cattle as

opposed to beef cattle (Rutledge, 1975). Increased nutritional intake to improve productivity also increases the twinning incidences. Economic loss due to twinning in cows often results from higher incidence of abortions, subclinical or clinical ketosis, reduced birth weight or stillbirths, mastitis, and problems related to dystocia.

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