ABSTRACT

A conjoined twin monster fetus was delivered by per-vaginum in a pluriparous buffalo, which was presented with dystocia. The twin monster consisted of two female fetuses which were fully developed having eight limbs, i.e. four forelimbs and four hind limbs, joined together at the anterior part of the body. The monster can be classified as conjoined twin monster (Thoraco abdominopygophagus).

Keywords: conjoined twin monster, buffalo

INTRODUCTION

Conjoined twins are the most common cause of dystocia in cattle and buffalo. Conjoined twins develop when incomplete separation occurs after the development of the embryonic plate at 8 days. Depending upon the site of fusion or nonseparation, the types of the twins may differ. Varying degrees of fusion occur but anterior duplication is more often seen in ruminants and swine (Arthur, 1956). Monsters consisting of two fetuses or more joined together are common in cow and buffalo (Sane et al., 1971). Structural or numerical duplication during the embryonic stage give rise to fetuses whose body structures are partially but not completely duplicated (Roberts, 1971). Conjoined twins arise from a single ovum and are monozygotic. Hancock (1954) and Arthur (1956) reported its occurrence to be about one in 100,000 bovines’ births. This paper reports a case of dystocia caused by a conjoined twin monster in a female buffalo.

CASE HISTORY

A buffalo female aged 6 years was brought Pochampalli Veterinary Dispensary, Krishnagiri district, Tamilnadu, with the history of completion of full term pregnancy but with no parturition having occurred. The animal had completed one lactation, and the calving was reported to be normal. The animal had been straining for the previous five hours since the expulsion of the first water bag eight hours before. Per vaginal examination revealed fully dilated cervix and a conjoined twin monster attached at the trunk region. The monster was dead and was in anterior longitudinal presentation sacro ileal position with two forelimbs in the birth canal. Head palpated at the birth canal showed abnormal formation, and it was deduced that dystocia was due to the dead fetal monster exhibiting postural defects of the extremities.

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Case Report
After epidural anesthesia with 2% lignocaine hydrochloride, both the fore limbs were fastened to the snare and traction was applied after lubricating the birth canal with obstetrical gel. The fore limbs were extended towards the vulva, by traction on fetal trunk and other limbs simultaneously on forward and downward direction, the dead female monster twin fetuses were delivered.

GROSS APPEARANCE OF THE MONSTER

The monster was a conjoined twin with fusion at the anterior abdomen. The features were fully developed at the posterior region and not at the anterior region. It weighed 50 kg and had an abnormally developed head. The head lacked distinct eyes and mouth parts. There were two pairs of fore limbs, two pairs of hind limbs, two thoraxes, two trunks, each with both abdomens attached posterior to the umbilical region, and two tails. External genitalia were present. There was atresia ani and four teats were present, two on each were present. The small intestine was exposed through umbilicus (Figure 1). The gross appearance of the conjoined twin was like two separate calves in the same direction. The monster was a typical Siamese twin as per the classification of Roberts (1971) in which partial duplication occurs at both cranial and caudal ends.

INTERNAL ORGANS

On post-mortem examination, the conjoined twin monster was found to be attached to the anterior abdomen. In the right calf, the diaphragm was fully developed. Thoracic viscera included a pair of normal lungs and normal heart. The abdominal viscera like the intestine, kidneys, gall bladder and liver were normal. The urogenital organs were absent. In the left fetus, the thoracic viscera like the
lungs and heart were absent. The spleen, liver, and kidney were underdeveloped. The small intestine was present, but the small intestine of both fetuses joined, and the large intestine was common for the twins. Atresia ani was found in both the twins.

CAUSE

Conjoined twins may be caused by any number of factors, being influenced by genetic, environmental, and infectious agents. These factors are responsible for the failure of twins to separate after the 13th day after fertilization. Moreover, calves produced by assisted reproductive techniques such as IVF and ICSI may be a factor (Romero et al., 1988).

DISCUSSION

Twins are monozygotic in origin, and are, moreover, due to incomplete division of one embryo into two components usually at the primitive streak development state (Noden and Delahunta, 1985). Conjoined twins are non-inherited teratologic defects. Such abnormal embryonic duplications resulting in conjoined twins are rare and not well documented in buffaloes. Urankar et al. (1994) reported a conjoined twin monstrosity in a buffalo. The present case seems to be a non-inherited teratogenic defect of development since there was no history of monster birth in the previous four calvings. Dystocia due to conjoined twin monsters, though uncommon, has been reported earlier in buffalo (Urankar et al., 1994; Dhami et al., 2000) and in cow (Honnappagol et al., 2005). The present case is the first of its kind in buffaloes since there is no report of dystocia due to complete duplication of the entire fetal body.

REFERENCES