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Dystocia due to conjoined twins: A report of two cases

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Abstract

Dystocia due to conjoint twins is not uncommon in buffaloes while rare in sheep. A case of dicephalus thoraco-abdominopagus conjoint twin foetus in a buffalo and monocephalic, tetrascelus, thoracopagus twins in a sheep were reported

Keywords: Tetrascelus, conjoint twins, dicephalus

1. Introduction

Congenital abnormalities have been of interest to many researchers and the general public, because environmental pollution has been incriminated as one of several causes of such abnormalities (Cabazon and Adogwa, 2003) [2]. It is a known fact that, many of these anomalies are not reported by the farmers and field veterinarians in many instances. Conjoined or fused twins arise from incomplete division of a single embryo during the primitive streak stage. The components of the foetuses are, therefore, monozygotic (Noden and Lahunta, 1985) [9]. The incidence of conjoined twins is reported from 1 in 50,000 to 1 in 100,000 births (Unver *et al.* 2007) [12]. The reported incidence of dicephalus is 2 in 27 anomalous twin lambs (Dennis, 1975) [4].

2. Materials and Methods

A graded murrha she buffalo was brought to the Department of Veterinary Surgery and Radiology, NTR College of Veterinary Science, Gannavaram with a complaint of being unable to deliver the foetus even 16 hours after initiation of parturition. The case was handled by the local veterinarians who tried to deliver the foetus by forced traction after lubrication. By the time, the case was presented, the buffalo was dehydrated. On examination per vagina, the location of the head was obscure. Entire pelvic cavity was found packed with limbs and hence a dog sitting posture of the foetus was thought for a while. Hence, caesarean section was performed under local infiltration analgesia, through a midventral approach, following a standard protocol and a conjoined twin fetus was delivered (Fig 1). Both the fetuses were still borne at the time of surgery and had separate heads, limbs, tails etc. but fused along the ventro-lateral aspect of the thorax and abdomen (Fig 2). Embryonic development was apparently complete. According to the nomenclature used to describe twins, this can be called as dicephalus thoraco-abdominopagus twins.

A ewe was presented with a history of dystocia for protracted period of 27 hours. It was handled by the shepherds without any success. At the time of reporting, it was dehydrated. There was distention of abdomen at both the flanks. The conjunctival mucous membranes were injected and toxemic. Caesarean section was performed through a left flank approach under local infiltration analgesia, and a conjoined twin foetus was delivered. The foetus had one head (Monocephalus), seven limbs one tail and the thorax of one foetus was found fused with that of the other (Thoracopagus). The foetus bearing head had only three limbs and lacked one forelimb. The incomplete foetus developed only from the caudal part and had four hind limbs (tetrascelus). The later had again abnormal angulation of different bones and joints (Fig 3). Thus, this abnormal foetus can be named as Monocephalic, Tetrascelus, Thoracopagus twins. This was also found dead at the time of surgery. Both the animals survived after surgery.



Fig 1: Note the midventral incision tightly packed with conjoint twin foetuses.



Fig 2: Note fusion of the twins along the ventro lateral aspects of thorax and abdomen



Fig 3: Note conjoint twin foetuses with one head and seven limbs.

3. Results and Discussion

Conjoined twinning has been reported in most domestic animal species more commonly in cattle than in other ruminants (Ramadan, 1996). However a case of conjoined twins has been reported in sheep in the present paper. Though this is not uncommon, there are only countable reports on conjoined twinning in domestic animals. Perhaps this may be attributed to the fact that, only those abnormal births

encountered by the academicians are being occasionally published and the rest are neglected. According to the nomenclature used to describe the conjoint twins, the buffalo foetus was dicephalus, thoraco-abdominopagus and the sheep foetus was monocephalic, tetrascelus, thoracopagus type.

In sheep, conjoint twins causing dystocia have been reported by a few researchers like cephalothoracopagus (Gungor *et al.* 2004) [6], dicephalus (Unver *et al.* 2007) [12], dicephalus with anal atresia, meningomyelocele, arachnomelia, and spina bifida (Esfandiari and Dehghan, 2010) [5], diprosopus, spina bifida and kyphoscoliosis (Shojaei *et al.* 2006) [11] etc. have been documented. Kumar *et al.* (2011) [7] reported dystocia due to conjoined twin monster in a malabari doe and Corbera *et al.* (2005) [3] reported congenital duplication of the caudal region in a kid. Bhoi (2009) [1] recoded conjoined sternopagus twin monster as a cause of dystocia in Mehsani Buffalo. Twinning is thought to be due to additive effects of genetic and environmental causes. In the present report, the cause of the conjoint twin formation is thought to be genetic, as in both the cases, the dams were fertilized by natural service and the sires were maintained for two generations.

Conjoined twins are considered to be monozygotic twins imperfectly separated, from a graded series of slight duplication to almost separated individuals (Leipold and Dennis, 1972) [8]. The most severe ones among them may even cause premature death of the conceptus, abortion, mummification, and stillbirth. Less severe aberrations lead to varying degrees of structural abnormalities that may cause dystocia (Gungor *et al.* 2004) [6]. In all the reports, inadvertent death was recorded in all the cases conjoint twins.

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