VAGINAL DELIVERY OF A RARE MONSTER (SYNCEPHALO-THORACOPAGUS QUADRIBRACHIUS QUADRIPUS) IN A BUFFALO

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ABSTRACT

Partial fetotomy was carried out for delivery of a fully developed syncephalo-thoracopagus quadribrachius quadripus monster in a multiparous Murrah buffalo. The monster had twin bodies which were fused from head to thorax. There was partial duplication of the face (four nostrils and two upper jaws separated by a single enlarged lower jaw), one head, two eyes, four ears and eight limbs.

Keywords: Buffalo, Conjoined twin, Fetotomy, Syncephalus, Vaginal delivery

INTRODUCTION

The congenital anomalies in veterinary practice has a frequency of 0.51% (Bahr and Distl, 2005). Out of these, congenital duplications, especially conjoined twins, are relatively common defects in bovines (Noakes *et al.,* 2001). Conjoined twins develop following incomplete separation after the development of embryonic plate (Whitlock *et al.,* 2008). Depending upon the site of fusion or non-separation, the types of the twins may differ viz., thoracopagus (40%), omphalopagus (35%), pyopagus (18%), cephalopagus (2%) and ischiopagus (2%; Fernando, 1993). Occurrence of syncephalus conjoined twin is rare in bovines (Potena, 1965), although this was frequently observed in other species (Dennis, 1975; Delprado and Baird, 1984; Sekeles, 1985). Management of conjoined twins diagnosed after the start of calving process is difficult and delivery by cesarean section is usually undertaken (Whitlock *et al.,* 2008). The present report discusses management and treatment of a conjoined monster for its successful per-vaginum delivery.

CASE HISTORY AND OBSERVATIONS

A multiparous full term pregnant Murrah buffalo was brought to the University Veterinary Hospital with a history of severe straining for the last 24 hours and ruptured water bag with no fetal parts visible at the vulva. Attempts by the field veterinarians for the delivery of fetus was not successful. Vaginal examination at the university hospital revealed a completely dilated cervix, dry birth canal and fetus in anterior longitudinal presentation as the head and forelegs were palpable at the pelvic inlet. Absence of suckling and eye ball reflex indicated that the fetus was not viable. Careful vaginal examination revealed that the head was enlarged, forelegs were more than two.

TREATMENT AND DISCUSSION

As the birth passage was not edematous and fetus was not emphysemated, decision was taken to perform fetotomy using Thygeson's fetotome loaded with the fetotomy wire (Bovivet, Denmark). Following epidural anesthesia (8 ml, 2% Lignocaine HCl), birth passage was well lubricated using sodium carboxy methyl cellulose gel (Carmellose-Na 1%, WDT, Garbsen, Germany). The monster head was repeled deep inside the uterus and mild traction was applied on the palpable four forelegs to bring the monster near to the pelvic inlet. One side of the fetotome was threaded with a wire saw which was then tied to a calving rope carrier. After assessing the farthest point of fusion of twins, calving rope carrier was passed around the fused part and bisection through the middle of fused part was performed. Subsequently, traction was applied to the monster head along with the attached two forelegs to successfully deliver one of the twins. To deliver the remaining part of the monster, moderate traction was applied on the other two forelegs and with the Kray Schottler hook on the vertebral column. The complete placenta was removed immediately. Next day, the buffalo was discharged with the routine prescription of antibiotics and supportive therapy.

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Thorough look at the physical characteristics of both the deformed fetuses classified the monster as syncephalo-thoracopagus quadribrachius quadripus (Hiraga and Dennis, 1993). Term syncephalo-thoracopagus was used as the twins were fused from head to thorax (Fig. 1A). In fact, syncephalus monster was defined as a conjoined twin with single head, single face with two eyes and four ears out of which two ears are on the back of the head (Whitlock *et al.,* 2008). In this case, there was partial duplication of the face as there were four nostrils, two upper jaws separated by a single enlarged lower jaw (Fig. 1B). The single fused head was wider than a normal head. The remaining parts of the bodies were completely duplicated and were united at the thorax. The terms quadribrachius and quadripus were used for four forelegs and four hind legs, respectively (Fig. 1A). These twins usually arise from one ovum and are developed from one germinal vesicle (Mitchell, 1927). The etiologies for congenital bovine fetal anomalies can be divided into heritable, toxic, nutritional and infectious categories (Whitlock et al., 2008). It is presumed that these factors could be responsible for the failure of twins to separate after the 13th day of fertilization (Romero et al., 1988).

Figure. 1: A) A syncephalo-thoracopagus quadribrachius quadripus monster, B) Characteristics of a syncephalus head.

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