
DYSTOCIA DUE TO DIPROPOSUS IN A CALF – CASE REPORT

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ABSTRACT

A case of diproposus in Bunaji calf which resulted in dystocia is reported. The calf was delivered dead following salvage of a cow that failed to calve successfully. Alarmed by this double headed calf, the butchers reported to the Divisional Veterinary Officer in charge of the Local Government. Each of the heads had a fully developed mouth to the level of the pharynx, eyes, nostrils, tongue, mandibles, maxilla, and pharynx and both were joined at the cranium. There was however one common trachea and oesophagus respectively. No gross disorders were found in other anatomical structures of the calf. Although no aetiologic factor was found to be responsible, incomplete twinning was considered to have been involved.

Keyword: Dystocia, Diproposus, Calf, Congenital anomaly, Monster, Nigeria

INTRODUCTION

Congenital defects are abnormalities of structure or function present at birth (Noden and de Lahunta, 1985). The defects arise as a result of defective genetics or from genetic insult/agent that is associated with foetal environment or from their interaction (Leipold *et al.*, 1983). Severe defects result in abortion of the calf or a return to service of the cow (Robert, 2004). Apart from the economic losses, they also cause psychological upsets particularly in Africa, where their occurrence are interpreted as bad omens (Gyang *et al.*, 1984). This latter point tends to limit their reports in Nigeria, although there is now increased awareness among livestock producers that practicing veterinarians and geneticists are the prime source of identifying and controlling these defects (Berepubo and Ezeasor, 1987).

In Nigeria, congenital malformations affecting dogs (Nottidge *et al.*, 2007). Sheep (Ate and, Allam, 2002) and Cattle (Ojo and Herzog, 1989) have been reported. There

seems to be an increase in the occurrence of the disorders whose aetiologies remain unknown. In Nigeria, to the best of the knowledge of the authors, no report exists on diproposus in the calf. This may be the first report of this condition in Nigeria. The apparent increase in cases of congenital defects reported in Nigeria in recent times underscores the need for greater attention and investigations into their aetiologies.

MATERIALS AND METHODS

Case History: A Bunaji cow with unresolved dystocia was salvaged and sold to the butchers. Following slaughter and opening of the uterus, a double headed monster calf was found (Figure 1). Alarmed by this rare monstrous condition, the butchers presented the dead calf to the Divisional Veterinary Office in Taraba State, Nigeria.



Figure 1: Diproposus calf (left lateral view and left head)

Physical and Postmortem Examination:

The double headed calf was carefully dissected out and a detailed physical and postmortem examination was made on the calf. No radiograph was taken of the heads to determine the extent of bony interactions. Also, no detailed anatomical examination was carried out on the vascular and nervous supply to each of the heads.

RESULTS AND DISCUSSION

Apart from the presence of the two heads, fusion of the mandibles and scoliosis of the vertebral column, no other physical deformities were found (Figure 2).



Figure 2: Diproposus calf on right lateral recumbency

The postmortem examination revealed no gross disorders of other anatomical structures. Each of the heads (with well developed hairs) was found to possess well developed mouth, eyes, nostrils, one ear, palates, mandible and maxilla, pharynx, tongue, oesophagus, cranium and brain. There was however a common oesophagus and trachea respectively and all other structures occurred singly (Figure 3). The

two heads were joined at the level of the occipital bone. The tongues were joined at their bases.



Figure 3: Dissected out tongues with common base

The case of diproposus presented here was characterized by fusion of both crania and mandibles, slight scoliosis while gross abnormalities of other structures were not apparent. Dicephalus monsters have been reported in goats (Pandit *et al.*, 1994), buffaloes (Bugalia *et al.*, 2001; Sharmai *et al.*, 2010), sheep (Shojaei *et al.*, 2006) and cattle (John *et al.*, 1983; Chandrahasan *et al.*, 2003; Patil *et al.*, 2004) with high incidence in female, although this case involved a male. It is very important to know various types of monsters in animals which usually cause dystocia, and which cannot be easily removed thereby demanding caesarean section. This case resulted in dystocia which forced the owner to salvage it. Usually, such situations lead to disposal at a ridiculous amount. The economic impact of monstrosities in terms of reduced value of calf or death of calf and the dam are obvious as in this case.

There is very little information on the definitive aetiology of embryonic duplications, and it is not known whether they are caused by genetic or environmental factors or both or by ageing ova (Getty, 1975). The causes of congenital anomalies are essentially unknown but the important known causes are prenatal infection with a virus, poison ingested by the mother, vitamin deficiency (A and folic acid), genetic and/or combination of these factors (Jones and Hunt, 1983). Though in this case, no specific aetiological factor was incriminated, it was thought that incomplete twinning may have been involved. This diproposus defect in this case was apparently incompatible with life

although a similar case in the buffalo was successfully resolved (Sharma *et al.*, 2010). The increasing reports of congenital defects to veterinary personnel by farmers in Nigeria in recent time is an indication of increased awareness that these defects are not associated with bad omens as previously thought (Gyang *et al.*, 1984). However, to the best of the knowledge of the authors there is no report of diproposus especially in cattle; this therefore case is probably the first to be documented in Nigeria in the Bunaji breed of cattle.

ACKNOWLEDGEMENT

The authors wish to acknowledge the contribution of the butchers in reporting this rare case without which it would have remained unrecorded.

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