DYSTOCIA DUE TO SYNCEPHALUS TETRABRACHIUS TETRAPUS DICAUDATUS CONJOINT MONSTER IN A MURRAH BUFFALO

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ABSTRACT
A case of dystocia due to a syncephalus tetrabrachius tetrapus dicaudatus conjoint monster in a Murrah buffalo relieved by emergency caesarean section is reported.

KEY WORDS: Buffalo, Conjoint, Dicaudatus, Dystocia, Monster, Syncephalus, Murrah

INTRODUCTION
Congenital malformations represent a hidden danger for animal production and are responsible for economic losses either because they reduce the productivity of the farm, or because their spread in the population would decrease the total productivity of that species/breed (Albarella et al., 2017). The congenital diseases are structural or functional anomalies are present at the time of birth due to different etiology causes such as genetic, environmental factors and infections. These developmental defects leading to anomalies or monstrosities often result into dystocia. About 1.78% of dystocic deliveries from fetal causes are due to fetal malformations (Purohit et al., 2012). The origin of monozygotic conjoined twins which share a single common chorion, placenta, and amniotic sac could be, a) partial splitting of fertilized egg, and/or b) complete separation of fertilized egg, but stem cells of fetus are able to find like stem cells on the other twin leading to fusion of twins together (Cordero et al., 2005). For the obstetrical management of conjoined twins, delivery by caesarean section is usually undertaken (Singh et al., 2013).

CASE HISTORY AND OBSERVATIONS
A pluriparous water buffalo (OPD No. E-6-1081 dated 07.06.2018) at full term with second parity hours was brought to Veterinary Clinical Complex for relief from dystocia. History revealed that the case was attended by local veterinarian 8 hours back and amputation of two hind limbs had been carried out but failed to deliver the fetus after that. The animal was recumbent with tachypnea. The temperature was 102.5ºF. Pervaginal examination revealed fully dilated cervix with presence of two forelimbs in birth passage. Since the animal was already exhausted and lack of sufficient lubrication, an emergency caesarean section was planned.

DESCRIPTION OF FETUS
Gross examination revealed- two fetuses joined externally over the sternum and duplication of the body caudally, eight legs (of which two had been amputated at field level), fusion of two completely developed heads and ventral surfaces of necks; four eyes, four ears, two tails etc. Both the fetuses were of female sex. All these findings described the conjoint twins as syncephalus tetrabrachius...
Dystocia in a Murrah buffalo

tetrapus dicaudatus conjoint monster. Between the areas of fusion of two foreheads one underdeveloped dental pad and mandible was present having a tongue without oral cavity.

TABLE 1: Post mortem findings in the monster

<table>
<thead>
<tr>
<th>Internal organs</th>
<th>Foetus - I</th>
<th>Foetus - II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tongue</td>
<td>Present</td>
<td>Present</td>
</tr>
<tr>
<td>Trachea</td>
<td>Present</td>
<td>Present</td>
</tr>
<tr>
<td>Oesophagus</td>
<td>Present</td>
<td>Present</td>
</tr>
<tr>
<td>Lungs</td>
<td>Present</td>
<td>Present</td>
</tr>
<tr>
<td>Heart</td>
<td>Present</td>
<td>Present</td>
</tr>
<tr>
<td>Spleen</td>
<td>Present</td>
<td>Present</td>
</tr>
<tr>
<td>Liver</td>
<td>Present (Hepatomegalic)</td>
<td>Present</td>
</tr>
<tr>
<td>Kidneys</td>
<td>Present</td>
<td>Present</td>
</tr>
<tr>
<td>Intestines</td>
<td>Present</td>
<td>Present</td>
</tr>
</tbody>
</table>

FIGURE 1: Syncephalus tetrabrachius tetrapus dicaudatus conjoint monster

FIGURE 2: Pair of lungs and heart

FIGURE 3: Hepatomegalic (H) and normal (N) fetal liver

FIGURE 4: Fusion of both the fetuses at cranium

Radiographic examination of the monster was conducted which revealed two necks and fusion of both the fetuses at the level of cranium (Fig. 4) and the line of fusion was clearly demarked (Fig. 5). There was no fusion of sternal bones of both the fetuses (Fig. 6). However, externally both the fetuses were completely fused by means by soft tissues. Post mortem examination of the monster was also conducted and the findings are listed in Table 1.

The pre-natal developmental defects lead to anomalies or monstrosities and dystocia is the resultant. Conjoined twins are also known as diplopagus monsters or Siamese twins. These twins arise due to incomplete division of one embryo into two components usually at the primitive streak development state (Noden and Delahunta, 1985) and show great variation from partial duplication to almost complete separation of two individuals, joined in just a few places. The conjoint twins have been reported by
Dhami et al. (2000), Singh et al. (2013), Singh et al. (2016), Patel et al. (2017) and Srivastava et al. (2018). A similar case of dystocia due to syncephalus tetrabrachius tetratus sternopagus dicaudatus monster in ewes has been reported by Chandolia et al. (2009). The findings of the present case study suggested that performing a caesarean section in buffaloes with dystocia due to fetal monstrosities may be considered as a wise decision for better outcome of the case.

**FIG. 5:** Line of fusion at the level of cranium

**FIG. 6:** Absence of sternal fusion of both the fetuses

**REFERENCES**


