

Dystocia due to muscular hypertrophy in a Graded Murrah Buffalo

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Muscular hypertrophy or double muscling is characterized by reduced fat deposits, light bone, thin skin and large muscles. It is seen in many breeds of cattle including Herefords, Holstein, Angus and Charolais (Roberts, 1971). The rate of congenital musculoskeletal anomalies of thorax and neck is reported as 1.48 per 10,000 births in cattle (Doyle *et al.*, 1990). This report describes the gross aspects of congenital muscular hypertrophy which is a characteristic feature of steatosis in a full-term buffalo calf and its successful cesarean delivery. In livestock, especially cattle and pigs, muscular pseudohypertrophy due to a localized muscular defect is known as steatosis (Hulland, 1993, Valentine and McGavin, 2007).

CASE HISTORY AND OBSERVATION

A full-term graded Murrah buffalo with straining for the past 8 hours following the rupture of water bag has brought to the Teaching Veterinary Clinical Complex, Veterinary College and Research Institute, Namakkal with the history of failure of delivery. An attempt was made by practising veterinarian but, it was futile. General clinical examination revealed that vulval lips were edematous and both the fore limbs of the fetus were hanging outside the vulva. Vaginal examination revealed excessive enlargement of the cranial aspect of the

fetus. Consideration of fetal size and diameter of the birth canal clearly indicated no possibility for vaginal delivery. Therefore it was decided to perform the cesarean section.

TREATMENT AND DISCUSSION

As per the standard procedure, caesarean operation was performed and a dead female fetus was delivered. Gross examination of the fetus revealed marked enlargement of musculature of cervical region and shoulder region of right fore limbs. Also nose and upper mandible was tilted towards right side. Marked amount of adipose tissue was also present below the eyeballs. The remainder of the body was normal. Grossly the neck of the fetus was excessively enlarged due to large, firm, spherical masses covered by intact skin. The masses consisted of markedly enlarged muscles in the area of left splenius and right serratus ventralis cervicis muscle, the marked deformity of the neck of the fetus. (Fig. 1a and 1b)



Fig.1a. Lateral view



Fig.1b. Dorsal view

It could be due to massive adipose and fibrous connective tissue replacement of the markedly atrophic left splenius and right serratus ventralis cervicis muscle as stated by Ingeborg *et al.*, (2007). These muscles were doughy on cut section. The consequential macroscopic enlargement of these neck muscles is typical of muscular hypertrophy (Ingeborg *et al.* 2007) a number of congenital defects of genetic and environmental cause (including viruses and toxins) have been reported (Leipold *et al.* 1983), but the specific cause of the hypertrophy of the neck

musculature is not known. In summary, this case report demonstrates that the risk of maternal morbidity can be avoided by cesarean under local anesthesia.

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