

## Dystocia due to fetal muscular hypertrophy and excessive accumulation of abdominal fat in a buffalo fetus

S. PRABHAKAR<sup>1</sup>, V. K. GANDOTRA<sup>2†</sup> AND M. HONPARKHE<sup>3</sup>

Deptt. of Animal Reproduction, Gynaecology & Obstetrics  
Punjab Agricultural University, Ludhiana- 141004

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### ABSTRACT

A rare case of dystocia due to muscular hypertrophy and excessive deposition of fat in abdominal cavity of fetus was relieved by partial fetotomy.

**Keywords:** Dystocia, muscular hypertrophy, fetal oedema

**M**uscular hypertrophy or double muscling is characterized by light bones, thin skin and large muscles. The condition is hereditary and when present in fetuses, especially in primiparous animals, often leads to severe dystocia (Roberts, 1971). The present report describes a case of dystocia due to muscular hypertrophy and excessive deposition of fat in abdominal cavity of fetus.

A buffalo heifer with prolonged gestation showing symptoms of dystocia was presented in veterinary clinics for treatment. Animal was recumbent with severe straining. The waterbags had already ruptured. The buffalo had been examined and manipulated by local field veterinarian. Per-vaginum examination revealed both the forelimbs and head presented in the birth passage. The fetus appeared apparently normal as far as palpable. Attempts to relieve dystocia by mutations to deliver the fetus were unsuccessful.

Since passage was fully relaxed, fetotomy was considered to be the appropriate treatment. Fetotomy was performed under epidural anaesthesia (8 ml, 2%, Lignocaine Hydrochloride) and lubrication of the passage with parachlor gel (Carmellose-Na 1%, WDT, Garbsen, Germany). One forelimb was amputated first, followed by amputation of head and other forelimb together using Thygeson's fetotome. Moderate traction applied on remaining part of fetus yielded no results. Third cut at chest and evisceration also failed to deliver the fetus. Finally the cut at lumber region helped in removal of an enlarged mass with soft consistency with fluid oozing out on pressing the

tissue. The remaining part of fetus was rotated and delivered in posterior presentation with moderate traction. Buffalo recovered uneventfully with normal feed and water intake on next day and was thus discharged with necessary supportive therapy.

Careful dissection of the fetus revealed most of the visceral organs as normal except kidneys, which were enlarged and degenerated (Fig.). Histopathology of the tissues revealed muscular



Fig. 1: Muscular hypertrophy and excessive accumulation of abdominal fat in a buffalo fetus.

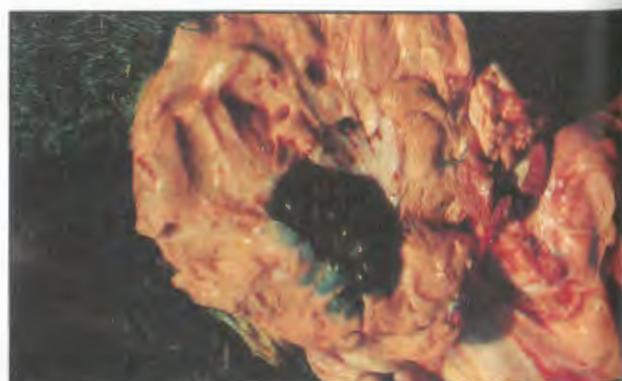


Fig. 2: Excessive fat accumulation around fetal kidneys.

<sup>1,2</sup>Associate Professor, <sup>3</sup>Assistant Gynaecologist

<sup>†</sup>Corresponding author

hypertrophy in the thoracic region. Excessive fat was also deposited around the kidney and the renal capsule.

#### Discussion

The occurrence of dystocia due to local and generalized oedema of the fetus leading to increased size is rare in bovines (Arthur *et al.*, 1982). Abnormal size or contour of fetus or fetal membranes due to recessive lethal genes may cause dystocia (Roberts, 1971). In buffaloes, dystocia due to hypertrophy of muscles of neck and hindquarter (Dhaliwal *et al.*, 1989) and pseudomuscular hypertrophy (Prabhakar *et al.*, 1995) has been reported earlier. In the present case, thoraco-abdominal region of the fetus was hypertrophied, which was basically due to excessive fat deposition.

Fat deposition only in the musculature of some body parts could be due to the recessive gene, however, the exact cause and pathogenesis of the same could not be ascertained.

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