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Research Article

Peripartum Physical and Behavioural Changes in Female Mithun (*Bos frontalis*)*

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ABSTRACT

The prepartum physical changes observed in female mithun were edematous swelling of vulva, development of udder, engorgement of teats, relaxation of pelvic ligaments and presence of mucus at vulva; and behavioural changes included self isolation from rest of the herd, calm and quiet walking and preference of being in confinement. The behavioural signs of first stage of parturition were observed as restlessness manifested by rapid change in position in all female animals. During the second stage of parturition all the animals showed severe abdominal straining and frequently raised their tails. All the animals delivered their fetus in lie down position. Just after delivery of the fetus the mother was busy with the new born.

Key words: Mithun, Peripartum changes

INTRODUCTION

Mithun is a semi domesticated bovine species and is found in some parts of North Eastern India, parts of Bangladesh, Myanmar, Bhutan, Sikkim and China. In India, it is found in Arunachal Pradesh, Nagaland, Manipur and Mizoram. Mithun is generally distributed in the altitude range of about 500 – 2700 meters above mean sea level. In earlier times mithun has been described as cattle of mountain. They prefer browsing than to graze. Mithun plays an important role in socio economic life of the people of north eastern hill region. The population of the hill animal is steadily decreasing due to various biotic and abiotic pressures. Precise information regarding prepartum physical and behavioural changes in female is very important so as to when external and intensive care is required for completion of the parturition. The present investigation was undertaken to study the peripartum physical and behavioural changes in female mithun.

MATERIALS AND METHODS

The present study was carried out at National Research Centre on Mithun, Jharnapani, Nagaland. Prepartum physical and behavioural changes were observed from day 15 before expected time till calving in 12 cases. All the animals were constantly observed during this period under confinement and the physical and behavioural signs exhibited were recorded as per the observation of Bhuyan, 1997.

Physical and behavioural changes during parturition were observed and recorded as per the method of Singh *et al.*, 1966 and Hafez, 1985. The same during post partum were observed and recorded just after delivery of fetus till day 60 as per method of Bhuyan, 1997.

RESULTS AND DISCUSSION

The prepartum physical changes observed in female mithun were edematous swelling of vulva, development of udder, engorgement of teats, relaxation of pelvic ligaments and presence of mucus at vulva which were noticed from average days of 8.58 ± 2.72 (range 4 – 12 days), 5.33 ± 1.89 (range 3 – 8 days), 2.83 ± 1.14 (range 1 – 4 days), 5.83±1.86 (range 3 – 9 days) and 2.00 ± 1.00 (range 1 – 4 days), respectively, before parturition. The presence of mucus at vulva was an indication of relaxation of the cervix.

Prepartum behavioural changes included self isolation from rest of the herd, calm and quite walking, preference of being in confinement. During this period, the female mithun did not go to deep forest for grazing and browsing, moreover, they preferred a plain place for grazing and browsing rather than sloppy steep. The result

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of the present finding supports findings of Verma (1996), Arthur (1975), Hafez (1985), Andrabi and Gill (1993), Singh *et al.* (1994) and Bhuyan (1997) in buffaloes.

The behavioral signs of first stage of parturition were observed as restlessness manifested by rapid change in position in all animals. It was found to increase gradually till the time to parturition. Raising of tail was observed in all cases along with occasional abdominal straining and arched back. The intensity of straining increased as the process of parturition advanced. The animals occasionally lied down and stood up during the first stage of labour. The symptoms in the first stage of parturition were more pronounced in primiparous than that in the pluriparous animals. Similar observations were reported by Singh *et al.* (1994) and Bhuyan (1997) in buffaloes. The animals showed reduced interest in food and water in this stage. It confirms the report of Singh *et al.* (1994) in buffaloes.

During the second stage of parturition, all the animals showed severe abdominal straining and frequently raised their tails. The intensity and frequency of abdominal straining increased as the different parts of the fetus appeared through vulva. The animal frequently changed its position and frequently alternated between standing and recumbent position although neither was maintained for long duration. Present observations were similar to the reports of Singh *et al.* (1966), Singh *et al.* (1994) and Bhuyan (1997) in buffaloes. Majority (67.77%) of the animals showed no interest in food and water. Some animals chewed grass and straws intermittently while straining to expel the fetus. Singh *et al.* (1994) and Bhuyan (1997) also reported that some animals retained little interest in food and water during this stage. All the animals delivered their fetus in lie down position. On the contrary Amonge (1993) and Bhuyan (1997) reported that majority of the buffaloes delivered their fetus in standing position. This could be due to difference in species and habitation.

Just after delivery of the fetus the mother was busy with the new born. Majority (75.00%) of the female reacted very quickly to nurse their calf, while 16.67 and 8.33 per cent animals nursed their calves within 5 and 5 to 10 minutes, respectively after delivery. During the present study it was noticed that pluriparous animals nursed their calves earlier that the primiparous. Similar finding was reported by Andrabi and Gill (1993) and Bhuyan (1997). During this period the female use to lick the placenta that is hanging through vulva. All the animals expelled their fetal membrane within normal period of time interval and spontaneously without any help.

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