

RETAINED FOETAL MEMBRANE IN COWS OF KASHMIR VALLEY: PREVALENCE AND MANAGEMENT

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ABSTRACT

A total of 51 cases of retained foetal membrane in cattle were used to ascertain the prevalence and outcome of two different treatment protocols. Highest prevalence was observed in 3rd parity (37.25%) at 6 and 7 years of age (27.45%) and in spring season (33.33%). More prevalence was recorded in the dams with female (54.90%) and live fetuses (80.39%). A close relationship of retained foetal membrane was observed with dystocia, hypocalcaemia, abortion, premature delivery and twinning. As a treatment protocol, partial manual removal of retained foetal membrane followed by oral use of ecbolics and uterotonic liquid was found better as compared to complete manual removal.

Key words: Retained foetal membrane, cows, Kashmir, prevalence, management

In cattle, foetal membranes are generally passed spontaneously within 12 h after calving. When this physiological event fails to occur within the said period, it is considered the case of retained foetal membrane (RFM). Cows suffering from RFM are considered as 'risk cows' and should be kept in close observation (Gustaffson *et al.*, 2004). The condition adversely affects milk yield and fertility. Although numerous treatment protocols are followed globally (Drillich *et al.*, 2006a, 2006b), however, standardization of an effective treatment protocol under field conditions is required. Prevalence of this disease in the dairy cows of Kashmir has not been determined till date. The present retrospective study was therefore undertaken to ascertain the prevalence and outcome of various managemental protocols.

MATERIALS AND METHODS

Fifty one cases of RFM in cattle were handled either at the clinical complex or at the owner's premises from 1st April 2004 to 31st March, 2007. Prevalence with respect to age, breed, season, sex of calves, concurrent diseases and whether RFM was associated with normal or abnormal birth were recorded.

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The animals were divided into two groups viz. group I and II consisting of 40 and 11 cows respectively. In animals of group I, commercially available intrauterine antibiotics were used following complete manual removal of foetal membrane. In animals of group II, partial manual removal of foetal membrane and giving mild traction on the hanging portion of foetal membrane without inserting hand per-vagina along with administration of oral ecboic and uterotonic liquid (Utrifit @ 100 ml twice daily for a period of 4-5 days) was done. Intrauterine medication was not attempted in cows of group II. Efficacy of both the treatment groups was calculated after assessing the extent of uterine involution at 30 and 40 days post-partum by rectal palpation as per the method of Ahmed (2006). Complications arising during this post-parturient period were also recorded.

RESULTS AND DISCUSSION

Most of the cows suffering from RFM were crossbred Jersey (44/51, 86.28%). Crossbred HF cows were affected less (5/51, 9.80%) and local cows least (2/51, 3.92%). High and equal prevalence (14/51, 27.45%) was found in the 6 and 7 years old cows (Fig 1). The prevalence of RFM was high up to 3rd calving (Fig 2). There was a steady increase in the

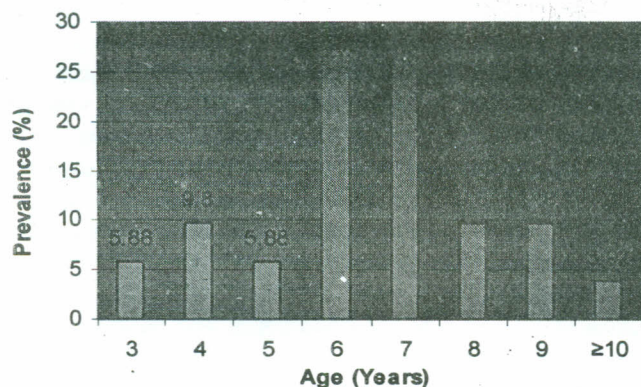


Fig 1. Age wise prevalence of RFM.

incidence of RFM from 1st (10/51, 19.61%) to 3rd (19/51, 37.25%) calving. It showed abrupt decline to 5.88% (3/51) following 4th calving and decreased further thereafter. Increased occurrence of RFM in 2nd and 3rd lactation may be due to peak milk yield which may result in more drainage of calcium from the blood to the udder causing loss of uterine tone.

Prevalence of RFM was highest in spring (17/51, 33.33%) followed by summer (16/51, 31.37%). Pandit *et al.* (1981) also recorded highest prevalence of RFM in spring season in Gir breeds of cattle. Since maximum cows conceive during May to July months in Kashmir, consequently the calving season is at peak during spring. More number of calvings could also attribute to higher number of RFM cases presented during this period. Prevalence was recorded as 15.69 (8/51) and 19.61 (10/51) per cent in autumn and winter respectively.

The more prevalence of RFM was recorded in dams with female fetuses (28/51, 54.90%) than with male fetuses (23/51, 45.10%), which may be due to shorter gestation length in dams carrying female fetuses. The present finding with respect to RFM in dams with female fetuses is contradictory to the finding of Erb *et al.* (1958) in dairy cattle. In that study male births were associated with 56% cases of RFM. Maximum prevalence of RFM was associated with live fetuses (41/51, 80.39%). This finding is similar to the observations recorded for beef cattle (Patterson *et al.*, 1981), where survival rates among calves born to dams experiencing RFM was 83.70%.

More numbers of RFM occurred in cows with normal parturition (43/51, 84.62%). However, in 15.38% (8/51) cases RFM occurred following dystocia. Laven

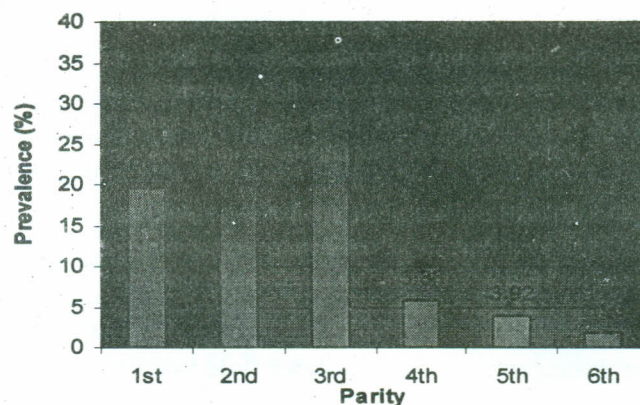


Fig 2. Parity wise prevalence of RFM.

and Peters (1996) reported RFM in 20-25% of cows undergoing difficult labour. Patterson *et al.* (1981) reported occurrence of RFM with dystocia in 21.70% beef cattle. In the present study 7.84% (4/51) cases of RFM were associated with milk fever. Hypocalcaemia results in failure of uterus to contract, leading to RFM (Curtis *et al.*, 1983) even in cases with naturally detached foetal membrane from maternal caruncle. Retained foetal membranes were also associated with abortion, premature delivery and twinning in 1.96, 1.96 and 3.92% respectively. The association of RFM in cattle with dystocia, abortion, short or long gestation and twinning was also recorded by earlier workers (Patterson *et al.*, 1981, Grohn *et al.*, 1990, Gustafsson *et al.*, 2004).

In 33 animals (82.50%) of group I complete uterine involution had occurred without complications when examined on 30th day post-partum. In remaining 17.5% cases metritis/ pyometra developed within 12-15 days following parturition and complete uterine involution was not found when examined on 30th day post-partum, however, involution was recorded to complete by 40th day. The development of metritis/ pyometra might be due to the damage of uterine wall that suppressed the uterine immunological defense mechanism (Gustafson *et al.*, 2004). Arthur *et al.* (1996) not recommended any treatment in uncomplicated cases as it would be imprudent to adopt a rigid attitude of non-interference'. However, it has been observed if cases of RFM go unnoticed or untreated for several days after calving, they may show increased temperature, anorexia, depression, hypogalactia and foul smelling vaginal discharge. Hence, a close supervision on cow's

temperature and appetite is essential during this period.

In animals of group II, where partial manual removal of RFM was done, no complications were observed. Complete uterine involution without complications was recorded in all the animals of group II when examined by 40th day post-partum per-rectally. Thus efficacy of treatment in the animals of group II was 100%. Partial manual removal with oral use of ecbolics and uterotonic liquid is therefore recommended for management of RFM under field conditions.

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