GENITAL PROLAPSE IN DAIRY COWS IN AN INSTITUTIONAL FARM

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ABSTRACT

In the present report, genital prolapse in primiparous cows and primer heifers in a dairy herd of an institutional farm is described. The seasonal occurrence of such prolapse coincides with periods of relative feed scarcity particularly during the dry season. Due to continuous observations of such occurrence, limited availability of feed, and other management practices can be highlighted as risk factors for genital prolapse in the cows. Consequently, provisions should be made to check these practices, hence reduce occurrences to a minimum in the herd.

Keywords: genital prolapse, cows, dairy, feed, season.

INTRODUCTION

Occasionally, cattle develop problems with prolapses near the time of calving (Radostits *et al.*, 2006). A prolapse can be defined as an abnormal repositioning of a body part from its normal anatomical position (Boden, 2005). Two distinct types of prolapses occur in the reproductive tract of cattle: vaginal or uterine (Powell, 2014). Genital prolapse in ruminants is an emergency condition that includes uterine and vaginal prolapse and should be treated before excessive oedema, traumatic lacerations, fatal haemorrhage and bacterial contamination lead to unfavourable prognosis (Murphy and Dobson, 2002; Miesner and Anderson, 2008; Ilieva *et al.*, 2009; Beheshti *et al.*, 2011).

Eversion and prolapse of the vagina is a problem most frequently found affecting both sheep and cattle (Kuijlaars, 2012). The condition usually is observed immediately post-partum or later in mature animals (Hosie, 1989, Dimitrov *et al.*, 2003), though reports for incidences in young sheep and buffalo heifers are available (Roberts, 2004; Veeraiah and Srinivas, 2010). The main reason for the disorder is a relaxation of the pelvic ligaments and surrounding soft tissue structures due to alterations in the hormonal profile during the last trimester of pregnancy (Wolfe, 2009; Ennen *et al.*, 2011). There are several predisposing factors to these prolapses with high levels of estrogens and relaxin around parturition (Hafez and Hafez, 2000), and increased intra-abdominal pressure (Drost, 2007) considered as the major predisposing factor. Others include altered micro- and macro mineral metabolism (Bhatti *et al.*, 2006; Akhtar *et al.*, 2008), foods containing phytoestrogenic substances (Miesner and Anderson, 2008), ovarian cysts leading to nymphomania (De Kruif *et al.*, 2009) or genetic predisposition (Kahn, 2005).

Uterine prolapse has been recorded in all animal species, although it is most commonly seen in pluriparous dairy cows (Roberts, 1986; Noakes *et al.*, 2000). It can be a partial or complete turning inside-out of the organ, in which the inside comes to the outside through the lips of the vulva and hangs down, sometimes as far as the hocks (Boden, 2005). Prolapse of the uterus is a common complication of the third stage of labour in the cow (Joseph *et al.*, 2001). Various predisposing factors have been suggested for uterine prolapse in the cow, i.e. hypocalcaemia, prolonged dystocia, foetal traction, foetal oversize, retained foetal membranes, chronic disease and paresis (Risco *et al.*, 1984; Potter, 2008). Due to the very low incidence (0.002 to 0.003%), only a limited number of comprehensive studies concerned with the survival rate and fertility of affected cows have been reported (Gardner *et al.*, 1990; Jubb *et al.*, 1990; Murphy and Dobson, 2002).

Case Report

Out of a herd of 180 dairy cows of mixed breed (Bunaji, Brahman and Friesian-cross), present in the institutional farm's dairy unit, several cases of genital prolapse have been reported to occur annually particularly during the dry season when feed supply is at a minimum. Majority of the cases observed in this unit occur especially at the third trimester of gestation, just after parturition and most of these prolapses occur overnight during calving only to be seen the following day (Figures 1 and 2). Though, the recent cases as reported by livestock attendants presented the following clinical signs: weakness, straining, prolapsed uterus with oedema present, and eventually recumbency. Most of the cases

were managed conservatively by replacement of the prolapsed organ, with consequent antibiotics and anti-inflammatory therapy. Several cases survived. Though the recent case of uterine prolapse reported were not so fortunate, they were salvaged considering they are food animals.

DISCUSSION

Prolapse of the uterus is a condition that is frequentlyseen in a cattle practice particularly during the calving season (Woodward and Quesenberry, 1956). However, the exact aetiology and epidemiology of this condition remains unclear because many factors have been associated (Noakes *et al*., 2000; Hanie, 2006; Jackson, 2004). Vaginal prolapse in cows is often a chronic, recurrent, hereditary pre-partum disease, whilst uterine prolapse is nonhereditary and mostly associated with hypocalcaemia or forceful foetal extraction (Anonymous, 2006). Uterine prolapse is a very painful and serious condition due to which most of the animals cannot remain standing for long. Animals suffering from uterine prolapse either remain in sternal or in lateral recumbency (Richardson *et al*., 1981). Vaginal prolapse is comparatively less serious and therefore such animals usually remained standing.

Hypocalcemia results in atony of the uterus and a delay in cervical involution, both of which could predispose to uterine prolapse in dairy cows (Roberts, 1971; Odegaard, 1977). Forced extraction of the foetus has also been suggested as an etiological factor (Roberts, 1971). Management practices by attendants in the absence of veterinary personnel to help straining cows eventually result in prolapses. In this report, it has been noted that the occurrence of these prolapses are mostly during the dry period when there is a relative scarcity of livestock feed. Consequently, these cases may be said to be due to energy and mineral deficit. Considering that there is an increased requirement for energy by the dam during this period, it is pertinent that such needs be met adequately by planned calving and supplementation such cows. This practice will most likely check such occurrences and prevent loss of pedigree considering most of the animals kept by the institution are of improved quality.

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Fig. 1: Vaginal prolapse in a Bunaji cow

Fig. 2: Uterine prolapse in a Brahman