ABSTRACT

Six adult buffaloes (6-9 years-old) in their 3rd or 4th lactation either in late pregnancy (6-7 months) or early (1-2 months) lactation and showing typical signs of stringhalt were located in a village. All the animals were treated with 8 ml of Tr. Iodi Mitis (2.5%). The injection of iodine solution was given in the stifle joint of the affected limb of each animal. The treated animals were monitored for one week for the recovery or any side effect(s) of the treatment. This treatment cured all these animals without any side effect. Possible causes of the ailment are discussed.

Keywords: buffalo, stringhalt, treatment, iodine

INTRODUCTION

Patellar luxation/fixation is commonly known as stringhalt. This problem has been reported in almost every species of domestic animals - bovines, equines, camel, sheep, goat, dog, cat and may occur sporadically or in outbreak form (Krishnamurthy and Tyagy, 1978; Cahill et al., 1985; Shettko and Trostle, 2000; Takahashi et al., 2002; Duzgune, 2005; Araujo et al., 2008). In Asian countries buffalo is known for its dairy, draft and meat purposes. Moreover, its importance in skin and hides (leather industry), bone - meal etc., cannot be ignored. Stringhalt in buffalo is quite common but it is not a life-threatening malady. Nevertheless, the affliction is disabling, reduces the production performance and degrades the market price of the animal. Patellar desmotomy has been commonly practiced to relieve the animal of this protracted ailment but the procedure is not free from mishaps e.g., delayed recovery, sepsis and incomplete severing of the medial patellar ligament. Further, daily dressing, antibiotic injections and veterinarian’s visits incur considerable expenditures. We report here a simple and lasting treatment of “stringhalt” in buffalo in this communication.

MATERIALS AND METHODS

Six adult buffaloes (6-9 years-old) showing typical clinical signs of stringhalt were located in a village. Four buffaloes were in their 3rd or 4th lactation and were 6-7 months pregnant while the other two had recently calved (1-2 months). A solution of tincture iodi mitis (2.5%) was prepared and autoclaved. Each animal was cast in lateral recumbency with the affected limb on the upper side. The animal was properly secured to avoid any untoward accident. The stifle joint of the affected limb was then flexed and a pit on inner side of patella was formed. The pit was located with the index finger and thumb, and into it a hypodermic needle of 14 gauge was inserted. A few drops of synovial fluid were observed at the upper end of the needle. Then depending upon the approximate body weight of the buffalo (350-400 kgs) 8 ml of the iodine solution was injected into the stifle joint. The ropes controlling the animal were slowly loosened and the beast took the standing position easily. No anesthetic or sedative was used during the whole procedure. Thereafter, the owner of each animal was contacted daily on the telephone individually and the animals were visited after one week of the treatment. These animals were then followed-up for two years for any side effect of the treatment or reoccurrence of this malady.
RESULTS AND DISCUSSION

All the animals fully recovered within one week of the iodine injection treatment. During observation after one week none of the animals showed any sign of “Stringhalt” when getting up and walking thereafter. As reported by the owners of the animals there was slight swelling at the injection site which subsided on its own in 2-3 days; otherwise, there was no untoward reaction.

Generally, animals suffering from stringhalt are relieved of the ailment by patellar desmotomy. However, this procedure is not free from mishaps. The procedure involves invasive surgery and needs the services of an expert for the location of median patellar ligament in buffalo due to its thick skin (Singh, 1979; Baird et al., 1993). Moreover, after the operation there are chances of sepsis which need to be taken care of by daily dressings and antibiotic injections and visits of a veterinarian, which does incur quite a cost and involves labour and time. It has been usually observed that after patellar desmotomy of one limb the other hind limb also develops this problem in a short time after the operation, which again needs the same procedure to be repeated. Hence, to avoid such complications the injection of iodine was chosen, which is cheap, safe and permanent. Vaghan (1960) recommended 5-10 ml of mild solution of iodine injection, which in our experience, lower doses (5 ml) are least effective and higher doses (10 ml) are injurious to the surrounding tissues.

The etiology of stringhalt still eludes scientists. However, there are certain opinions/hypotheses laid down by research workers which involve varied factors, such as genetics, demographic, involvement of nervous system, nutritional- involving some minerals and poisoning due to certain weeds infected by some fungus. In our opinion there are imbalances of certain minerals such as calcium/phosphorus, copper/molybdenum/zinc and sulphate etc., at least in buffaloes. We have observed that buffaloes either in late pregnancy or early lactation are commonly affected by this ailment. Moreover, it is the areas which are known for mineral imbalances in forages, soil and water in which affected buffaloes are mostly encountered. Dhillon et al. (1972) reported that buffaloes in late pregnancy and early lactation suffer from molybdenum-induced phosphorus deficiency haemoglobinurea in such areas in Punjab. During late pregnancy and early lactation, these animals require more calcium and phosphorus for the developing fetus and milk secretion and are likely to suffer from shortage of these elements. There may be excessive exostosis of tibial tuberosity, which might hinder the normal slipping of the ligament during walking and resulting in stringhalt. These authors have also reported bone deformities in buffalo-calves in these areas (Dhillon et al., 1993). Similar observations have been made by Silvaa et al. (2004). To settle the cause of stringhalt in buffaloes, well planned experimental studies under controlled conditions are warranted and effective control measures should be found for this malady.

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