ABSTRACT

A Murrah buffalo in second parity was presented to the Veterinary Teaching Hospital, Pantnagar for the correction of dystocia. During the general examination of animal, two supernumerary teats, one attached to left fore and other to right hind teat were found. Milking revealed flow of milk from both the additional teats along with normal (primary) teats. To confirm whether milk came from a different gland sinus or from the teat sinus of the normal (primary) teat, sterilised methylene blue was injected through the orifice of the additional teat using a teat canula. The colour of milk was noted after milking the teats ten minutes later. The coloured milk came out from additional teats while the colour of milk from primary teat was normal. This confirmed that the additional teats had separate gland sinuses indicating the accessory teats as conjoined. There was no interference with milking. The familial history of this buffalo revealed that the dam also had supernumerary teats, indicating the hereditary nature of the trait.

Keywords: supernumerary teat, conjoined teat, gland sinus, buffalo

INTRODUCTION

Congenital abnormalities in the buffalo udder include many structural defects such as fusion of the front and hind teats (Fischer, 1962), very small short teats, improperly placed teats, cut-up udders and supernumerary teats (Singla et al., 2002). However, their occurrence in buffaloes is very uncommon. A conjoined teat is defined as a supernumerary teat (SNT) attached to the side of the primary teat. Conjoined teats do have accessory glands of various volumes (Steiner, 2004). SNTs are hereditary in nature with a heritability (h²) factor of 0.2 to 0.3 (Steiner, 2004). In the present paper, an unusual case of a Murrah buffalo with six functional teats is reported.

MATERIALS AND METHODS

A Murrah buffalo in second parity was presented to of the Veterinary Teaching Hospital, College of Veterinary and Animal Sciences, Pantnagar, for the correction of dystocia. During the general examination of animal, two conjoined teats, one attached to left fore and other to right hind teat (Figure 1), were found. Milking revealed flows of milk from both the additional teats along
Figure 1. Supernumerary teats one attached to left fore and other to right hind teat.

Figure 2. Infusion of sterilised methylene blue in additional teat.

Figure 3. Coloured milk from additional teat, normal colour milk from primary teat.
with normal (primary) teats. In order to confirm whether milk came from a different gland sinus or from the teat sinus of the normal (primary) teat, 20 ml of sterilised methylene blue was injected (Figure 2) through the orifice of the additional teat with the help of a teat canula (Steiner, 2004). Ten minutes later the teats were stripped and the colour of the milk was noted. The coloured milk came out from the additional teats while the colour of milk from primary quarter was normal (Figure 3). This confirmed that the additional teats had separate gland sinuses indicating the additional teats as conjoined. Nothing was prescribed for the accessory teats as these were not interfering in milking. Milk yield in previous lactation was 7-8 litres milk/day. The familial history of this buffalo revealed that the dam also had SNT, indicating the hereditary nature of the trait.

RESULTS AND DISCUSSION

In buffaloes, very little information is available on the incidence of SNTs. Singla et al. (2002) had reported one case of a buffalo with six functional teats. Unlike this case, the buffalo had equal number of distinctly separate teats on both the halves. Fischer (1962) described teat anomalies in two Murrah buffaloes. One consisted of a fusion of the left fore and rear teat and other a functional fifth teat. Dwivedi and Prabhu (1970) described SNT in buffaloes for first time. They reported 2.59% of SNT in Murrah, with 2.25% of single SNT and 0.34% of double SNT. In this case, SNTs were of the ramal type (ramified with normal teats). Dwivedi and Prabhu (1970) also found a higher number of ramal SNTs than caudal (located at the rear of normal teats) ones. However, the incidence of intercalary (between normal teats) SNTs was the highest. The distribution of SNT in this case was equal to both right and left side i.e. one each. The fact coincides with Dwivedi and Prabhu (1970). SNTs are usually found behind the normal rear teats (Johnson, 1974), on rare occasions in between the front and hind teats, or attached to the front or hind teats (Siegmund, 1979). Both the SNTs reported were functional. Dwivedi and Prabhu (1970) also reported higher incidence of functional compared to rudimentary and non-functional SNTs. The functionality of SNTs was maximum in intercalary followed by ramal and caudal SNTs. Unlike the finding of Singh and Prabhu (1966) in cattle, a large percentage of the SNTs in buffaloes were found to be functional. The present report concluded the hereditary nature of SNTs without any hindrance in milking with normal milk yield.

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mainly by symmetrical contracture of the four legs. Greene et al. (1973) reported 188 cases of arthrogryposis in 1,122 calves from different beef and dairy herds. Most calves had arthrogryposis of the four legs and other associated defects, mainly palatosquisis. In Hereford, Charolais, Jersey and German Black Pied cattle arthrogryposis associated with palatosquisis is caused by a single autosomal recessive gene. Hereditary arthrogryposis investigated in Canada, in Charolais calves from different farms, showed a wide variety of expressions. This probably occurs as a consequence of differences in the genetic background, action of modifying genes, or differences in an environmental component (Nawrot et al., 1980). In all affected buffaloes arthrogryposis was observed as a single defect except for one that had additionally brachygnatia (Schild et al., 2003). Bovine arthrogryposis commonly occurs as a syndrome associated with a single or multiple congenital defects (Leipold et al., 1970, Greene et al., 1973).

REFERENCES


