

UTERINE DIDELPHYS IN NILI RAVI BUFFALO-A CASE REPORT

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ABSTRACT

The basic aim of the study was to document a case study of uterine didelphys, a rare clinical condition in Nili-Ravi buffalos. An approximately 54 months old buffalo with the history of repeat breeding was brought to the Sahala slaughter house Islamabad. During ante mortem examination, trans-rectal palpation revealed the increased cervical diameter with a poorly described external oss. Upon passing artificial insemination rod, was felt only in one side of narrow uterine body. After slaughtering, gross examination revealed the presence of two cervical openings. Upon dissection, it was revealed that the opening in separate uterine horn is due to presence of band of tissue, although uterine horn consistency was normal. Both ovaries were cyclic. As far as biometric measurements are concerned cervix was 7.5 cm long and 7 cm in diameter. While ovaries were 2.5 cm and 3 cm long and 1 cm in diameter. There is no common uterine

body to both horns. The length of left and right horn was 15 cm and 16.5 cm respectively. This is an interesting case which broadens the spectrum of causes of repeat breeding.

Keywords: uterine didelphys, buffalo, *Bubalus bubalis*, uterine horn, Nili-Ravi, case study

INTRODUCTION

Uterus didelphys or true double cervix is a congenital anatomical defect of the female genital tract of monotocous species (Kennedy *et al.*, 1993). Uterus didelphys is reported in a variety of animals including sheep, goat and cows by (Timurkaan *et al.*, 2002; Raggio *et al.*, 2006). While Uterine didelphys is a normal feature of the female reproductive organ in the rabbit and some marsupials such as koalas. The defect is

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characterized by presence of completely separated cervixes, each one leading to a separate uterine horn by O.I. Azawi *et al.* (2009). The condition is caused by the caudal portion of the paramesonephric (Müllerian) ducts failing to fuse during embryonic development, resulting in a double uterus, cervix, and cranial part of the vagina. Although, the caudal part of the vagina and the vestibule were apparently normal (Raggio *et al.*, 2006).

CASE DESCRIPTION

An approximately 54 months old buffalo weighing approximately 500 kg was presented to the Sahala slaughter house Islamabad with the history of repeat breeding for more than a year. The estrus cycle was quite normal. Buffalo had the history of artificial insemination rather than that of natural mating. Upon passing, artificial insemination gun was felt only in one horn with

the absence of uterine body. Same procedure was repeated and same consistency was found in the contra lateral horn. The ovaries were also cyclic. The left ovary has presence of corpus luteum while right ovary has the presence of accessory follicles.

On necropsy, the reproductive tract was quiet normal. Biometrical measurement revealed that cervix was 7.5 cm long and 7 cm in diameter. While ovaries were 2.5 cm and 3 cm long and 1 cm in diameter. There is no common uterine body to both horns. The lengths of left and right horn were 15 cm and 16.5 cm respectively. After being dissected, the uterine body was seen to be divided by a septum into 2 distinct and separate compartments of almost equal size (Figure 1). Each uterine canal communicated with the vagina via its own cervix.

DISCUSSION

The etiology of the condition is unknown



Figure 1. Uterine didelphys Nili Ravi buffalo.

but is thought to be recessive gene association. All the conditions that arrest in the development of Mullerian duct system, among which uterine didelphys is rare. In cows, in abattoir studies involving 2,435 cows in Sweden and 2,010 cows in Finland, only one uterine didelphys was observed. A large abattoir survey of 33,506 ewes indicating 6 cases with prevalence of 0.02% (Smith *et al.*, 1995). While smaller survey of 214,276 and 3,275 ewes did not identify any abnormality (Ragassa *et al.*, 2009; Dawood *et al.*, 2010). Uterine didelphys has a high prevalence among the repeat breeders suggesting that such conception failure do occur. In addition, it might be considered that abortion, premature birth, retained placenta and infertility would be more common in cows with uterine didelphys than in normal cows due to unicornual placentation of the fetus. There are anecdotal reports of the cows with the anomaly of having produced calves sustaining abortions or having retained foetal membranes (M. Fatalla, 2000).

It can also cause dystocia due to foetal limbs entering each cervical canal. By this complication foetus can only be delivered by C. Section (Ajala *et al.*, 2000).

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