

## PERSISTENT HYMEN: A CAUSE OF INFERTILITY IN MURRAH GRADED BUFFALO

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**ABSTRACT**

A three and half year old Murrah graded buffalo heifer was presented with the history of straining during urination and repeat breeding for last six months. On per-rectal and vaginoscopic examination the case was diagnosed as persistent hymen. The condition was treated surgically with Trocar and Canula. The animal showed an uneventful recovery, inseminated after two months of treatment and got conceived.

**Keywords:** *Bubalus bubalis*, buffaloes, persistent hymen, Murrah graded buffalo

**INTRODUCTION**

Persistent hymen is one of the congenital anomalies of the genital tract and a cause of infertility in the domestic animals. The hymen is formed from paramesonephric ducts epithelial lining and the urogenital sinus at the vestibule-vaginal junction (Roberts, 1986). A persistent hymen is a form of segmental aplasia that occurs as a result of embryonic malunion of paramesonephric duct and ectodermal urogenital sinus in which the communication between the caudal vagina and the vestibule is not complete

(McEntee, 1990). It may be imperforate or present in varying degrees depending upon malunion. The complete blockage results in accumulation of uterine and cervical secretions and formation of mucovagina, mucocervix and mucometra (Parkinson, 2001). As soon as vagina becomes fully distended, discomfort and tenesmus was observed in the affected animals. The condition is rare in cattle (Madhusudhan *et al.*, 2016; Kumar *et al.*, 2017), occasionally seen in buffaloes (Singh *et al.*, 2010; Kumar *et al.*, 2016), camels, llamas and alpacas (Fowler, 1998; Johnson, 2008) and also reported in human beings (Friedman *et al.*, 1989; Yu and lin, 1993). The present case report documents the disease condition and management through instrument assisted approach.

**CASE HISTORY AND CLINICAL OBSERVATIONS**

A 3.5 year old Murrah graded buffalo heifer was presented in clinical camp with the history of repeat breeding for last six months. Detailed anamnesis revealed that the local paravet staff struggled with artificial insemination of the animal for about three to four times.

Also, the animal was subjected to natural service but failed to conceive. Straining was also

observed during urination. Physical examination of animal was unremarkable. On per-rectal examination, a fluid filled distension in the vagina apart from distended urinary bladder was observed. Vaginal examination using speculum revealed the presence of a thick muscular band at the level of vestibular-vaginal junction. Vagina was non patent and was not having any passage communicating with rest tubular genitalia. However, no abnormality was detected in urethral opening.

### TREATMENT AND DISCUSSION

The buffalo was restrained properly in standing position and then catheterization

was done with Foley's catheter for the instant relief from distended urinary bladder. Epidural anaesthesia was given to the animal with 2% lignocaine hydrochloride 1 ml/100 kg body weight. The hymen membrane was punctured with trocar and canula guarded by finger and created rent was extended to its maximum by inserting 3 to 4 fingers and then full hand (Figure 1). Around 2 to 3 litres of fluid having mucoid consistency was evacuated from vagina (Figure 2).

Through per-rectal manipulation maximum of the discharge from vagina was evacuated. After complete evacuation, the vaginal douching was done with 7 to 8 litres of Condy's lotion (1:1,000). After flushing, vagina was smeared with antibiotic ointment framycetin sulphate and lignocaine hydrochloride jelly paste for 4 to 5 days.



Figure 1. Persistent Hymen in buffalo.

The supportive therapy was done with inj. Streptopenicillin 2.5 gm and inj. Meloxicam 0.2 mg/kg body weight intramuscular for five days. The animal showed an uneventful recovery.

In the treatment of imperforated hymen, two methods have been suggested. In one method, cruciform incision was given at hymen membrane and the incised parts were sutured with the wall of vagina at right angle in all the four directions. In the other method, hymen membrane was punctured with trocar and canula and the created space was extended to its maximum by digital method (Roberts, 1986). In some of the cases, secondary complications like mucometra, mucovagina and pyovagina were found in the animal diagnosed and treated for persistent hymen (Madhusudhan *et al.*, 2016; Kumar *et al.*, 2016). But in the present case animal was inseminated after two months of treatment and conceived.

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