IMPERFORATE HYMEN AND SUBSEQUENT SECONDARY PYOMETRA, PYOCERVIX AND PYOVAGINA IN MURRAH BUFFALO HEIFER: A CASE REPORT

Brijesh Kumar*, B. Krishnappa, G.K. Das, G. Chetan Sharma, Dushyant Yadav and M.H. Jan

ABSTRACT

A rare case of complete persistence of imperforate hymen in murrah buffalo was diagnosed and treated successfully. Animal got permanent relieve from unwanted symptoms like continuous straining during urination and defecation. Though the animal cycled regularly but failed to conceive with follow-up for one year.

Keywords: imperforate hymen, Murrah buffalo, pyometra, pyocervix, pyovagina

INTRODUCTION

The hymen is formed from the epithelial lining of the paramesonephric ducts and the urogenital sinus at the vestibulovaginal junction (Roberts, 1971). Canalization of the hymen is usually complete at birth and leads to communication between the lumen of the caudal vagina and vestibule (Roberts, 1971). Congenital imperforate hymen is rare in cattle and similar condition in a buffalo heifer reported by Gupta and Sharma (1973). The complete blockage results in accumulation of uterine and cervical secretions and formation of mucometra, mucocervix and mucovagina (Parkinson, 2001).The present report puts on a record a case of imperforate hymen with secondary pyometra, pyocervix and pyovagina in a buffalo heifer.

CASE HISTORY AND CLINICAL OBSERVATIONS

A five year old Murrah buffalo heifer was attended by local practitioner with complaint of intense straining during urination and defecation. The case was diagnosed as a urinary obstruction and around three litters non-smelling mucous like fluid was evacuated by inserting a medium size canula connected to a rubber tube into buldge fluctuating portion through rectum. However, animal expressed temporary relief only for few days. After 48 days, animal developed same symptoms in an intense form (Figure 1) and the animal was referred to Referral Veterinary Polyclinic, IVRI, Izatnagar. Detailed anamnesis revealed that the buffalo was bred two times naturally with last mating three months back, during which the male had apparent difficulty in positioning himself. Further, each mating was followed by intense form of straining lasting few days. Since last mating, female developed permanent sign of prolong straining during and after defecation. Further, animal had an abnormal flow of urine and was also associated with straining.

Per rectal examination revealed a

Division of Animal Reproduction, Indian Veterinary Research Institute (IVRI), Izatnagar (U.P.), India, *E-mail: drbrijeshvet02@gmail.com

Figure 1. Tenesmus during defecation.

Figure 2. Visualisation of hymenal membrane cranial to urethral orifice.

Figure 3. Intense flow of from genitalia.

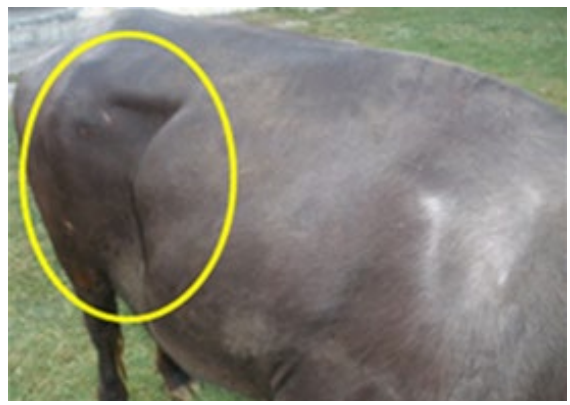

Figure 4. Apparent decompression of abdomen after evacuation of pus.

voluminous fluid filled fluctuating mass descending into abdomen and it was astonishing to find a tough membrane obstructing hand to palpate cervix per vaginally (Figure 2). These findings lead to diagnose the case as imperforate hymen.

TREATMENT AND DISCUSSION

The animal was subjected to epidural anaesthesia with 2% lignocaine hydrochloride and then restrained in lateral recumbency. The hymen membrane was punctured with a trocar guarded by finger and the hole was dilated to its maximum by digital pressure. Around 4 litres of intense foul smelling pus like fluid gush through vagina (Figure 3) and an apparent decompression of abdomen was noticed (Figure 4). Immediate per rectal examination failed to locate cervix and uterine horn. However, per vaginal examination reveals tough corrugation all over the wall of uterine horn. Uterus was flushed with normal saline mixed with

potassium permagnate (1:1000) and lignocain jelly (Lignocain Hydrochloride 4%) along with pulv. Antibiotic 10 gm containing Neosporin Polymyxin b sulfate, Bacitracin zinc and Neomycin sulphate applied locally. Animal was discharged with the prescription of parentrel anti-inflammatory Meloxicam 0.05 gm, antibiotic 2.50 gm containing Streptomycin Sulphate, Penicillin G Sodium, Procain penicillin G and intrauterine medication with 45 ml 5% Povodone Iodine for five days. After 45 days, follow-up was made to examine the animal. Cervix and both uterine horn were palpated per-rectally and no reunion of membrane were detected on per-vaginal examination. Animal cycled regularly but could not able to conceive with follow-up for one year. The animal was culled and failed to follow further.

The case, imperforate hymen with secondary pyometra, pyocervix and pyovagina was diagnosed on the basis of history clinical observation and per-vaginal palpation. The case was earlier mis-diagnosed as urinary obstruction and insertion of canula into buldge portion of vagina leading to breach in aseptic environment that might lead to subsequent infection with pus farming bacteria leading to accumulation of pus. In present case the wall of vagina and uterus become very thin and difficult to locate the horns but per-vaginal examination revealed that the inner surface of vagina and uterus was very rough and corrugated. This occurs because the normal outflow of the uterine secretions is prevented by complete persistency of imperforate hymen leading to accumulation of fluid that increases with the age and the cyclic ovarian activity of the female (Troiano and McCarthy, 2004). The duration and volume of fluid accumulation could have affected the endometrium via pressure atrophy leading to embryonic loss if fertilization occurred or some permanent blocked might have occurred that preventing fertilizations. And this may be the reason for the reproductive failure in the present case. Scanning through literatures revealed no sufficient information to suggest that hymen persistence is hereditary. Thus, opens the window for systematic research on prognostic reproductive life of an affected animal and its heritability which would help the clinicians as well as owners to take appropriate decision in time.

REFERENCES

Gupta, S.K. and R.D. Sharma. 1973. Imperforate hymen and persistent hymen in Murrah buffalo heifers - a record of three cases. *Indian Vet. J.*, **50**: 940-943.

Parkinson, T.J. 2001. Infertility in the cow: Structural and functional abnormalities, management and non-specific infection, p. 383-472. *In* Noakes, D.E., T.J. Parkinson, G.C.W. England. (eds.) *Arthur's Veterinary Reproduction and Obstetrics,* 8th ed. Philadelphia: Saunders, USA.

Roberts, S.J. 1971. *Veterinary Obstetrics and Genital Diseases*, 2nd ed. CBS Publishers and Distributors, Delhi.

Troiano, R.N. and S.M. McCarthy. 2004. Mullerian duct anomalies: imaging and clinical issues. *Radiolog.*, **233**: 19-34.