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TRANSVERSE VAGINAL SEPTUM: A CONGENITAL MALFORMATION AND ITS MANAGEMENT IN A FEMALE DROMEDARY CAMEL

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ABSTRACT

A seven year old female dromedary camel was examined for the complaint of inability to breed due to problem during penile intromission. Vaginoscopy, using equine tube vaginoscope, revealed the presence of a tissue flap cranial to the urethral opening, buldging caudally and separating the cranial and caudal parts of vagina. Digital palpation was also performed and the condition was diagnosed as transverse vaginal septum. For treatment, the vaginal septum was grasped with an Allis tissue forceps and a circular piece was severed from the center with the Metzenbaum scissors. The remaining portion of septum was then carefully trimmed. About 28 days after surgery, the animal showed heat signs and was mated. On ultrasonographic examination three months, post mating the animal was found pregnant.

Key words: Vaginal septum, treatment, female camel.

INTRODUCTION

Congenital malformations of the genital tract are not common but sequalae of their presence can be serious. Barriers to the completion of vaginal intercourse may be physiological (e.g. vaginism) or congenital e.g. imperforate hymen and vaginal septum (Edmonds, 2003). Failure to manage these problems can have adverse effect on physiological and reproductive health of the affected animals.

Vaginal septum is one of the congenital anomalies and is sequale to the faulty canulization of embryonic vagina. It hinders in the penile intromission and can lead to reproductive failure. The aim of the present report is to highlight the salient features and treatment of transverse vaginal septum in a female dromedary camel under field conditions.

CASE HISTORY AND CLINICAL EXAMINATION

A seven year old female dromedary camel, weighing about 500 kg, was reported to the Central Veterinary Hospital, Abu-Dhabi UAE with the complaint of inability to breed due to problem during penile intromission. For diagnosis under the field conditions, the animal was controlled in the ventral recumbancy. A 20 ml of 2% lidocain was given in the 1st intercoccygeal space. The tail of the animal was completely wrapped and tied to one side. The perennial region was washed and dried. Vaginoscopy, using equine tube vaginoscope, revealed the presence of a tissue flap (8-10 cm in length) cranial to the urethral opening, buldging caudally and separating the cranial and caudal parts of the vagina. Ultrasonographic examination, using a B-mode real time ultrasound scanner fitted with a 6.5 MHz linear array transducer, revealed a hypoechoic uterus, with normal ovaries and fallopian tubes. The presence of septum was also confirmed by digital palpation. From these findings the condition was diagnosed as transverse vaginal septum (Normura *et al*., 1997).

TREATMENT

With the animal controlled in the ventral recumbancy under local anesthesia, the tail of the animal was completely wrapped in a bandage and tied to one side to avoid any hinderence in the surgical procedure. The vaginal septum was grasped with the Allis tissue forceps and a circular piece was severed from the center with the Metzenbaum scissors. The moment the piece was severed, a whitish fluid gushed out of the vagina. The remaining portion of the septum was then carefully trimmed to the extent that the operator's hand could easily pass beyond the septum. The bleeding was negligible and no ligation of any bleeding point was needed. About 28 days after the surgery, the animal showed signs of heat and was mated by an adult male camel. Three months after mating, the animal was examined for pregnancy through ultra-sonography and was found pregnant.

DISCUSSION

Congenital anomalies of the reproductive tract in the general population are estimated to have an incidence of 0.001-10% (Wai *et al*., 2001). Vaginal abnormalities that result in infertility are not common but are important to recognize. The vaginal vault is the location where the sperms are deposited during copulation. Barriers to the completion of vaginal intromission may be physiological (e.g. vaginism) or congenital (e.g. imperforate hymen, vaginal septum). There are two kinds of vaginal septa, transverse and longitudinal (Root *et al*., 1995; Edmonds, 2003). The type of the septum depends on which part of the process during early embryonic life is incomplete. If upper and lower system fails to develop properly, the septum goes transverse (crosswise, across the vagina). In this case sperms fail to reach the uterus. The incomplete fusion of anterior tissue results in the formation of longitudinal septum that affectively creates two vaginas, a right and a left. The cervix opens only to one side. Owner's original complaints in such cases include inability to breed naturally, dysuria, urinary incontinuence, infertility, recurrent vaginitis and ambiguous external genitalia (Whitacre *et al*., 1991; Root *et al*., 1995; DeSchaepdrijver *et al*., 1995). Vaginal septum condition is reported in women (Wai *et al*., 2001; Fritz *et al*., 2002), bitches (Root *et al*., 1995), rats (DeSchaepdrijver *et al*., 1995) and cats (Nomura *et al*., 1997). The animals with vaginal septum are clinically healthy but are infertile because the vaginal septum hampers the forward movement of the spermatozoa. Microscopically, the septum consists of a central core of connective tissue covered on both sides by the epithelium (DeSchaepdrijver *et al*., 1995). The diagnosis of the reported condition is based on complete breeding history, radiography, ultrasonography and in some cases digital manipulation if possible. For the management of the condition, available literature suggests that the surgical correction is the only choice. Wai *et al*. (2001) has reported that laparoscopically assisted hysteroscopic resection of the septum is a safe and effective surgical technique in women. Root *et al*. (1995) performed positive contrast vaginography for the diagnosis of vaginal septum in 15 bitches. After confirmation of the condition, four bitches underwent surgical removal of the septum, with or without episiotomy. Among the treated bitches, two bitches became pregnant. Montevecchi and Valle (2004) used the resectoscopic resection technique to treat the vaginal septum condition in women.

In the camel under discussion, the diagnosis was based on the mating history, ultrasonography and digital palpation. Fortunately, the vaginal septum was also not deep in the vagina and with simple surgery the animal showed recovery. Hopefully, this report will be helpful for the field veterinarians to diagnose and treat such conditions in the field.

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