



## Case Report

# Surgical management of buried penis in ram in Kuwait

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## ARTICLE INFO

### Article history

Accepted 27 February 2020

Online release 24 March 2020

### Keyword

Buried Penis  
Surgery  
Sheep, Kuwait

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## ABSTRACT

Buried or concealed penis is a congenital abnormality in which the penis is buried below the surface of prepubic skin. A clinical case of concealed or buried penis of ram was observed in a farm belonging to Public authority for agriculture affairs and fish resources, Kuwait City, Kuwait. This one-year old Naomi ram suffering from concealed penis since birth. The clinical examination shows the penis downwards and difficulties with urine flow and insemination is not performed as a result of penile deviation. All these symptoms caused stretching skin of the penis pod. This case was treated by surgical intervention to remove stretch and skin tightening. The ram was anesthetized by xylazine and lidocaine combination. Only penicillin with oxytetracycline spray was recommended at post surgery period for one week. Complete healing of the wound required one week. Follow up confirmed the success of interference and normal life of the ram.

## INTRODUCTION

The penis represents the organ of the male's copulation. It is essential to know the reproductive biology and the morphology of the reproductive organs to increase animal production.

Buried penis is a condition that causes the penis to become hidden beneath the skin. It has a significant impact on quality of life and can present in a variety of ways, with lower urinary tract symptoms and erectile dysfunction being common.

The ram's (and the buck's) penis is fibro-elastic and has little erectile tissue. It measures about 40 cm in length. The root is thick due to the large development of the ischiocavernosus and bulbospongiosus muscles. In rams, the penile urethra lies in a groove on the ventral surface of the corpus cavernosum. The penis glans is particularly voluminous showing at its base a large extension, the urethral process. It is 4 cm long in the ram. The prepuce, which is a cutaneous

envelope, conceals the penis when it is flaccid. The body of the penis in ram is characterized by its sigmoid flexure. This is a double curvature of the penis on the median plane, slightly caudal to the scrotum. Erection increases only slightly the length of the penis. It is achieved by the unfolding the sigmoid flexure, which protrudes the free end of the penis out of the prepuce (Budras et al., 2011, Clayton and Flood, 1996).

The condition of buried or concealed penis in ram seems to be related to a lack of elasticity of erectile tissue which allows the penis to stretch easily in erection.

Many affections of the penile urethra were mentioned in the available literature including congenital anomalies such as hypospadias in cattle, sheep, and goat (Azari et al., 2010, Smith, 2009, Blowey and Weaver, 2011).

In hypospadias, the bared mucous membrane of the urethra was covered by suturing the skin edges after their dissection from the underlying tissues.

The displaced urethral orifice was then widened to its normal position (Misk, 2008).

Many surgical operations in small ruminants can be performed under local anesthesia and proper physical or chemical restraints (Ewing 1990; Taylor 1991). Sheep and goats are ideally suited to local anesthetic techniques under sedation or manual restraint. Lignocaine is the most commonly used of the local anesthetic solutions and is well tolerated in both species. Some of the newer solutions that cause even less tissue reaction may be used in sheep and goats but offer no particular advantage in these species.

There are no available techniques for correction of concealed penis in ruminants. We describe a surgical intervention to correct this defect in ram.

## **MATERIAL AND METHODS**

### **Case history**

One-year old Kuwaiti Naomi ram was suffering from concealed penis with difficulties in urination since birth. This case was recorded from one of the different farms belonging to Public authority for agriculture affairs and fish resources - Kuwait City, Kuwait.

### **Diagnosis of the case**

The penis can be palpated and visualized through pushing the skin around the penis to the pubis. Upon physical examination, ram had the stretched penile length appropriate for its age.

### **Treatment**

The treatment was performed by surgical intervention to correct the concealed penis. This allowed for complete exposure of the glans penis

and penile shaft. Xylazine, lidocaine, blade and silk sutures number 2 were used.

### **Surgical technique**

As a precaution, the ram was kept without any food 12-24 hours prior to the operation.

The ram was sedated by administering xylazine hydrochloride (Rompun®, Bayer) at 0.05 mg/kg IV, then they were placed in dorsal recumbency and the caudal abdominal and perineal regions were surgically prepared with 7.5% povidone-iodine surgical scrub. Local anaesthesia was used by circumferential injection of 1% lidocaine hydrochloride solution around the skin of the swollen area. The sagging area of the skin incised and made wound equal in dimensions. Careful deglovement of the penis is done with release of all tethering fibrotic tissue bands, until the penis is freed to its base (Figure 1D). Then incised sagging skin was sutured (interrupted) by silk number 1 or 2 use. The stitches were removed after 10 days of surgery. Use of only penicillin with oxytetracycline spray was recommended at post surgical period.

### **CONFLICT INTERESTS**

The authors declare no conflict of interests.

### **AUTRER CONTRIBUTIONS**

Khalifah Ali contributed to the collection of the data, clinical examination, and surgery.

Haithem Ali Mohamed Ahmed Farghali contributed to the conception and design of the work in addition to writing of the manuscript.

Ashraf Ali Eldesoky Shamaa contributed to the conception and design of the work in addition to revision of the manuscript.



**Figure 1:** Ram with concealed penis; B. Abnormal skin increases in the front of the buried penis; C. An aneurysm at the front of the buried penis, which is the cause of the deviation of the penis from normal positioning; D. Curved incision were made at the site; E. Tightening the skin adjacent to the abdominal wall and sutured; F The final shape of the skin and penis in normal condition.

## RESULT AND DISCUSSION

After 2 weeks, there were no complications such as significant wound infection. Straightening for penile erection and urination are normal of the operated ram. Until now, there is no complaint about postoperative complications from the owner.

The development of the external male genitalia is a complex process, involving genetic programming, cell differentiation, hormonal signaling, enzyme activity, and tissue remodeling. A disturbance in these processes might lead to disruption of the fusion of the urogenital folds at different sites along the urogenital tract.

The ram has a fibroelastic penis, with a characteristic sigmoid flexure. The penis was covered by a dense connective tissue capsule named tunica albuginea. The tunica albuginea involved the penile structure, which was formed

by the corpus cavernosum and corpus spongiosum. The corpus cavernosum was located dorsolateral, deep into the tunica albuginea, while the corpus spongiosum enveloped the urethra

The system of elastic and collagen fibers is an important structure for penile erection and allows adequate resistance during the return of the penis to a detumescence (Hsu et al. 1994, Sattar et al. 1994, Bastos et al. 2004, Babinski et al. 2005). Therefore, it may be considered that the extracellular matrix of the corpus cavernosum is essential for normal penile erection and is involved in erectile dysfunction. (Siracusano et al. 1996, Maia et al. 2006).

## CONCLUSION

This is rare case of ram in Kuwait. The successful surgical intervention returned the ram to its normal

life and farmer was happy to use the ram for reproductive purposes.

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