

A CASE REPORT ON PARAPHIMOSIS IN A GROWER PIG



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A CASE REPORT ON PARAPHIMOSIS IN A GROWER PIG



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Abstract

A five month old grower Boar (Hampshire) belonging to the Backyard Farm Of Tetultala, Khagrachari Sadar was presented to the Upazila Veterinary hospital , Khagrachari sadar upazila, Khagrachari district with the chief complaint of recurrent penile protrusion. All the vital parameters are normal.

Temperature 102° F, heart rate 80/minutes, respiratory rate 31/minutes. The protruded penis was swollen and edematous. Paraphimosis, phimosis, priampism were all considered as differential diagnosis. A tentative diagnosis of paraphimosis however made. The aim of therapy was to reduce the swelling, prevent infection, protect the exposed mucous membrane and ultimately return the protruded penis to its normal position, the normal reduction was not attempted, the purse string suture was eventually applied. The suture was removed after 10 days. The post operative care was prospectively followed for until the recovery. At post-operative phase antibiotic (Streptopenicillin) 1.5 ml intramuscularly for 5 days and antihistamin 1.5 ml intramuscularly for 5 days and Povin ointment was given. The Boar was recovered from the problem without any complication.

keywords:

Grower pig, Paraphimosis, Management.

CHAPTER- I

INTRODUCTION

Paraphimosis is inability to completely withdraw the penis into the prepuce (Michelle, 2012). A constriction preventing the penis from being withdrawn into prepuce, it can be congenital or acquired and is not uncommon in the dog and it serious, for gangrene may occur unless relief is afforded (Michael, 2005). Paraphimosis is a medical emergency where the foreskin can't return to its normal location once retracted. It usually occurs after erection and the symptoms may be included difficulty or pain during urination and painful erection (Davidson, 2010). Besides, the breed, excessive amounts of parietal preputial epithelium and absence or lack of development of the caudal prepuce muscle are also the predisposing factors of paraphimosis (Nevi *et al.*, 2015). The skin at the preputial orifice becomes inverted, trapping the extruded penis and impairing venous drainage. Other causes of paraphimosis include a small preputial opening, priapism, foreign objects around the penis, a constricting band of hair at preputial orifice, or trauma (Davidson, 2013). The paraphimosis may occur secondary to a hypoplastic prepuce, trauma, a relatively small or stenotic preputial orifice, constriction of preputial hair around the penis, ineffective preputial musculature that cannot effectively retract the penis into the prepuce, hypospadias, neurologic deficits in dogs with posterior paresis, balanoposthitis, large penile tumor, priapism, or may occurs as an idiopathic event (Michelle, 2012).

It may be due to either constriction of penis behind the glans penis, making it impossible to draw the organ back through the naturally small preputial orifice (Mahesh *et al.*, 2016). These could be associated with different types of conditions such as traumatic injury, neoplasia, swelling of prepuce and penile paralysis (Anderson, 2008). The symptoms may include: redness, tenderness, inability to urinate, swelling of the end of the penis, dark blue or black tissue on the end of the penis, discomfort and pain (Biggers, 2017). Paraphimosis is more common in dogs than cats, pigs, cattle etc. The diagnosis of paraphimosis is made by visual examination of the genitalia. Because paraphimosis is very painful in the early stages, sedation or anesthesia may be required to examine the penis and prepuce. The extent of mucosal injury and the potential for penile necrosis and urethral compromise should also be assessed (Key, 2016). Additionally, edema (swelling) will occur as a result of restriction of blood flow back from the head of the penis. This further prevents the glans from retracting and restricts the proper flow of urine through the urethra, which leads to bladder enlargement and discomfort (Mahaney,

2013). The cranial 1 to 3 cm of prepuce protrudes forward from the skin reflecting off the abdominal wall.

The preputal orifice normally permits unimpeded extrusion and retraction of penile shaft (Boothe, 2003). If the penis is not immediately replaced it will dry out and become painful— secondary to this self-trauma, ulceration, urethral obstruction, necrosis and gangrene may occur (Merck, 2009). There are the several methods used for treating paraphimosis. Ice packs, penile wraps, and manual compression reported as effective agents to reduce swelling (Ravikumar *et al.*, 2019). Paraphimosis due to trauma and other causes has been reported, this case report describes the successful correction of paraphimosis in a pig.

CHAPTER- II

MATERIALS AND METHODS

2.1 Case presentation & history

A five months old Hampshire pig weighing about 15 Kg was presented to the Upazila Veterinary Hospital, Khagrachari Sadar Upazila, Khagrachari District, with the history of protrusion of penis from prepuce (Figure 2.1). The penis was swollen and edematous and presence of tissue debris. The length of the exposed penis at time of presentation was about 3.0 inch. The rectal temperature, heart rate and respiratory rate were within the normal range.

2.2 Surgical management

a. General approach

Before to the treatment physical examination was done and recorded the temperature, heart rate, respiration rate and body weight etc.

b. Correction of paraphimosis

The exposed penis was washed with Potassium Permanganate solution (PPM) (Figure 2.2). The swelling and edema was controlled by applying icepacks. The tissue debris was removed by using artery forceps and washed the protruded penis with water (Figure 2.3). 4% Lidocaine gel was applied over the protruded penis. With gloved and lubricated hand, the protruded penis was pushed through the prepuce by gentle pressure to regain its normal position (figure 2.4). Re-occurrence of protrusion penis was prevented by applying purse string suture pattern (Figure 2.5).

c. Post operative care

Antibiotic [Streptopenicillin, 1.5 ml, intramuscularly]; Antihistaminic [Antihistavet, 1.5 ml, intramuscularly]; injected for 5 days and Dextrose saline [25%, orally] ; and ointment [oint. Povin].



Figure 2.1: Protrusion of penis



Figure 2.2: Application of potash water



Figure 2.3: Tissue debris removed by using artery forceps



Figure 2.4: Repositioning the protruded penis



Figure2.5: Application of purse string suture



Figure2.6: After correction of paraphimosis

Advice:

1. Not to use animal for future breeding purpose.
2. Keep the animal at dry place.
3. All prescribed medicine should be maintained in proper dose.

CHAPTER- III

RESULTS AND DISCUSSION

The pig showed good recovery without recurrence and other complications. The suture was removed after 10 days. Paraphimosis considered an emergency. The immediate goal is to relocate the penis to its normal position within the prepuce. Once the penis is returned to its normal position, the dog is usually isolated from any source of stimulation, such as female dogs in heat or excitable activities (Russell, 2011). The primary goal in treating paraphimosis is to reduce the swelling and replace the prolapsed penis back to the preputial cavity as soon as possible to protect it from further injuries (Mahesh *et al.*, 2016). Once the skin is trapped, edema occurs and restriction worsens, often forming a tight tissue ring. This causes pain and worsening swelling (Jerry *et al.*, 1996). Acquired paraphimosis is a result of trauma to penis which causes damage to the innervations of the penis leading to the paralysis of retractor penis muscles (Nevi *et al.*, 2015). Initially the exposed tissue appears normal and non painful (Johnson, 2003 and Hedlund, 2007). Prolong paraphimosis can result in necrosis of the glans penis and obstruction of urethra. Although usually associated with coitus or sexual excitement, paraphimosis has been precipitated by fractures of penis (Rao and Bharati , 2004), balanoposthitis, inefficient preputial muscle (Chaffee and Knecht, 1975) and pseudoherphroditism (Papazoglou, 2001).

In the present case paraphimosis due to the the trauma to the penis during erection. According in current case report , the protruding penis was washed with Potassium Permanganate Solution(PPM) to minimize the edema and remove dirt and dust, respectively. This is line with previous report (Nevi *et al.*, 2015; Ravikumar *et al.*, 2019; Adeola and Enobong, 2016). The use of hyperosmolar magnesium sulphate solution in combination with ice packs facilitated return of penis into the prepuce (Elkins, 1984). Hypertonic solutions can be useful in difficult cases. If the everted prepuce does not slide over the edematous, exposed penis, a cold compress may be applied with gentle digital pressure to act as a pressure bandage. A temporary purse string suture can be placed to keep the penis inside the prepuce. With paraphimosis due to other causes, or of longer duration, sedation or general anesthesia can be required (Merck, 2009).

In this reported case, the paraphimosis was managed initially by reducing the swelling followed by retention in the preputial cavity by purse string suture, antibiotic, and anti-inflammatory was used to facilitate recovery and

prevention of secondary bacterial infection. Postoperatively, the prepuce of the pig was applied with a 1% Povidone-iodine ointment. The pig has recovered without any complications. The decision to treat paraphimosis conservatively or surgically depends to a large extent on the clinical signs and duration of condition (Ali and Davoud, 2011). Temporary purse string suture was applied to the preputial orifice to keep penis in preputial cavity as one of the options in the initial surgical treatment of paraphimosis (Fossum, 2002; Kumaresan *et al.*, 2014) applied purse string suture for retention of penis whereas (Adeola and Enobong, 2016) used tension release incision with simple interrupted sutures for treatment of paraphimosis in dogs.

CHAPTER- IV

LIMITATIONS

1. Due to short duration, I could not follow up the case.
2. Due to lack of resources, I could not do the surgery aseptically.

CHAPTER- V

CONCLUSION

Paraphimosis is seen most often after erection. Paraphimosis warrants veterinary intervention if not resolved quickly. If recognized early, before severe edema and pain develop, paraphimosis is easily treated. It is concluded that paraphimosis is considered as an emergency urological condition where urine flow should be established and further damage, necrosis of the penis is prevented by repositioning and retention it into the preputial cavity as soon as possible. So, the farmers should be careful about early correction of condition by the help of veterinarians.

CHAPTER-VI

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CHAPTER-VII

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CHAPTER- VIII

BIOGRAPHY

I am Sushama Chakma, daughter of late Hemaranjan Chakma and Mrs. Appeima Chakma. I passed my Secondary School Certificate (SSC) examination from Bharateswari Homes, Mirzapur, Tangail in 2012 and Higher Secondary Certificate (HSC) examination from Bharateswari Homes College, Mirzapur, Tangail in 2014. I enrolled for Doctor Of Veterinary Medicine (DVM) degree in Chattogram Veterinary and Animal Sciences University (CVASU), Chattogram, Bangladesh in 2014-2015 sessions. At present I am doing my internship program which is compulsory for awarding my degree of Doctor of Veterinary Medicine (DVM), from Chattogram Veterinary and Animal Sciences University. In near future I would like to work and have massive interest in pet animal medicine and like to work as a veterinary practitioner.