

**CONSERVATIVE MANAGEMENT OF PARAPHIMOSIS IN A 9- MONTH OLD DOG: A CASE REPORT**

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**ABSTRACT**

*A case of paraphimosis in a 9 months old Nigerian indigenous breed of dog on free range was presented to the VTH at Umudike with persistent protrusion and licking of the penis that made the animal restless. Clinical examination revealed swelling and oedema of the protruded penis with serosanguinous discharge from the prepuce. The preputial sheath was bruised although without stricture, mass or adhesion within the preputial opening. The physiological parameters of the dog were within normal range. A confirmatory diagnosis of paraphimosis was reached following thorough physical examination. The case was managed conservatively with hypertonic sugar solution and penicillin ointment. The conservative management of this case was successful due to prompt presentation by owners.*

**Keywords:** Conservative, Nigerian Indigenous Breed, Dog, Paraphimosis

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**INTRODUCTION**

Paraphimosis is a constriction of the foreskin preventing the penis from being withdrawn into the prepuccal cavity or when the foreskin fails to cover the glans penis [1]. Paraphimosis can be congenital or acquired. It is more common in sexually excited dogs than cats [2]. It is commonly seen in dogs less than one year of age [3]. Prolonged and intermittent coitus leads to the engorgement of *bulbus glandis* leading to the constriction of the prepuce, and failure of the prepuce to cover the genital organ. Constricted preputial ring hampers the venous return but the arterial blood keeps flowing leading to excessive oedematous and painful condition and other complications like desiccation, ulcers, cyanosis, balanitis and balanoposthitis [4,5,6].

The prepuce is a tubular sheath of skin lined with mucosa that covers a portion of the penile shaft. The prepuccal orifice normally permits unimpeded extrusion and retraction of the penile shaft [7]. The band-like preputial muscle attaches to the cranial and dorsal aspects of the prepuce [7, 8]. The primary function of this muscle is to draw the prepuce forward to cover the glans penis after erection. Failure of bulbar engorgement to regress, accompanied by trauma during coitus, may prohibit withdrawal of penis [6]. A small prepuccal orifice relative to the size of the penis can result in phimosis or paraphimosis [7, 8]. The most serious condition is paraphimosis with entrapment and strangulation of the penile shaft.

Prolonged paraphimosis can result in necrosis of the glans penis and obstruction of the urethra. Although usually associated with coitus or sexual excitement, paraphimosis has been precipitated by fractures of the penis [9], balanoposthitis, inefficient preputial muscle [6] and pseudohermaphroditism [10]. Preputial hair may encircle the protruded penis and form a band that contributes to or causes paraphimosis [11]. Paraphimosis without entrapment or strangulation may be the result of penile mucosal desiccation causing a 'friction effect' with the adjacent preputial skin, thereby impeding retraction; a small preputial orifice may contribute to this condition [12]. Paraphimosis may be acquired secondary to pelvic or local abdominal trauma; or regional scarring following surgery.

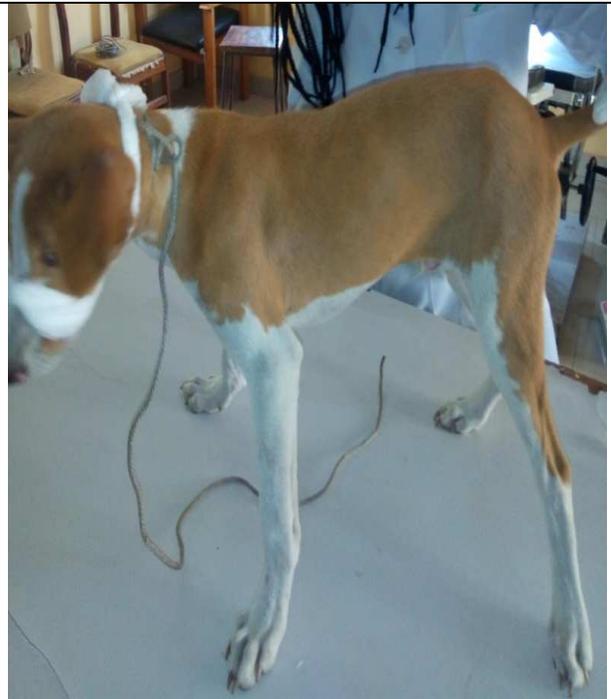
Diagnosis is primarily determined by physical examination of the prepuce and penis at the time of presentation. Management depends on the cause(s) and viability of the penis at the time of presentation [3].

### CASE PRESENTATION

A nine month old Nigerian indigenous breed of dog was presented to the Veterinary Teaching Hospital (VTH) Michael Okpara University of Agriculture, Umudike with complaint of persistent protrusion and licking of the penis which made the animal restless. On clinical examination there were swelling and oedema of the protruded penis with serosanguinous discharge from the prepuce. Bruises were also found on the preputial sheath with the absence of stricture or napkin-ring, mass or adhesion within the preputial opening on close observation. History revealed that the dog was on free range and routinely dewormed. The physiological parameters were within the normal range: Heart rate and pulse rates were respectively 120 and 118 beats per minute; visible mucous membranes were pink in colour and capillary refill time was less than 2 minutes.



**Plate 1: Dog at presentation: Note the swollen penis [arrow]**



**Plate 2: The patient after recovery**

## **DIAGNOSIS**

A tentative diagnosis of paraphimosis was made with the differential diagnoses of priapism, penile neoplasia and haematoma. However, following a thorough physical examination of the prepuce and penis at the time of presentation, coupled with an examination of the preputial orifice for evidence of entrapment and strangulation, a confirmatory diagnosis of paraphimosis was finally reached.

## **TREATMENT**

The exposed penis was washed with normal saline to remove dirt and debris then it was wrapped with gauze soaked in cold 50% hypertonic solution of dextrose saline. Penicillin ointment was also applied to the exposed penis. The penis was gently manipulated back into the preputial orifice by pulling the prepuce forward over the exposed penis thus replacing the penis into the preputial cavity. Dexamethazone at 0.3 mg/kg was administered intramuscularly for 3 days. 20% Oxytetracycline injection was also administered intramuscularly once.

## **DISCUSSION**

This was a case of paraphimosis without entrapment or strangulation in which the animal presented with persistent extrusion of the penis. This persistent exposure of the penis resulted in drying of the mucosal surface and loss of normal mucosal lubrication. This could have been associated with sexual excitement as the animal is on a free range. The bruises sustained on the penile shaft could possibly have been as a result of long standing irritation since the animal roams freely. This case agrees with Babalola and Henshaw [3], Michael [8] and Boothe [7] who reported that paraphimosis has higher incidence in dogs younger than one year of age.

The diagnosis was determined by physical examination of the prepuce and penis at the time of presentation. Conservative management was resorted to due to the absence of strangulation and entrapment at the preputial orifice. Cold compression of hypertonic solution was used to reduce the swelling and facilitate retraction into the preputial cavity, this is in agreement with the report of Asif [6]. The penicillin ointment doubled as topical antibiotic and a lubricant to prevent desiccation and enable smooth sliding of the prepuce over the penile shaft.

Both the cold compression and lubricant yielded the desired effect as the swelling reduced drastically which made it possible for the penis to be gently retracted back into the preputial cavity. The antibiotic was also effective as no secondary bacterial infection was averted.

The client was advised to closely monitor the animal for any sign of straining and also periodically assess the animal for penile coverage several times daily with friction-free movement of the prepuce over the penile shaft. The recovery was uneventful with no recurrence four months post treatment. In conclusion, this case of canine paraphimosis was successfully managed conservatively due to prompt presentation of the case by the owners. Therefore, the time of presentation of a case post occurrence is very significant to the ease of management and the successful outcome of the case.

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