

# PARTIAL PENECTOMY IN DOG WITH PENILE GANGRENE DUE TO PERSISTENT PARAPHIMOSIS

Benudhar Mahanand<sup>1</sup>, Jayakrushna Das<sup>2</sup> and Bijay Kumar Patra<sup>3</sup>

<sup>1</sup>Assistant professor, <sup>3</sup>Associate Professor, Department of Veterinary Clinical Complex; <sup>2</sup>Associate Professor, Department of Veterinary Surgery and Radiology; College of Veterinary Science and Animal Husbandry, Odisha University of Agriculture and Technology, Bhubaneswar (Odisha).

DOI 10.29005/IJCP.2024.16.1.71-73}

[Received: 30.11.2023; Accepted: 28.1.2024]

**How to cite this article:** Mahanand, B., Das, J.K. and Patra, B.K. (2024). Partial Penectomy in Dog with Penile Gangrene due to Persistent Paraphimosis. *Ind. J. Canine Pract.*, 16(1): 71-73.

A four year old male dog was presented with paraphimosis and anuria. After detail physical and clinical examination the condition was diagnosed as gangrene at the distal portion of penis due to persistent paraphimosis. Partial penectomy was done to remove the gangrenous portion. The dog was able to urinate properly after recovery.

**Keywords:** Dog, Gangrene, Paraphimosis, Penectomy.

Paraphimosis refers to the inability to retract the penis into the preputial cavity, mainly resulting from an abnormally small preputial orifice, weakened preputial muscle and a hypoplastic prepuce (Katayama *et al.*, 2017). Penile amputation with concurrent pre-scrotal, scrotal, or perineal urethrostomy is the treatment of choice for diseases of the prepuce, glans penis, os penis, and penile urethra that are refractory to medical management, or have resulted in irreversible pathologic changes to the structure and function of related tissues. Examples of such diseases include persistent balanoposthitis, recurrent urethral prolapse, chronic paraphimosis, priapism, penile trauma, and neoplasia of the prepuce, penis, and penile urethra. Partial penile amputation can be done as a treatment for small, non-neoplastic distal penile and preputial lesions (Patel *et al.*, 2022). In the present case, partial penectomy was done in a dog with penile gangrene due to persistent paraphimosis.

## Case history and Observations

A 4 year old non-descript male dog weighing 17 kg was presented to the Veterinary Clinical Complex, College of Veterinary Science and Animal Husbandry, Odisha University of Agriculture and Technology, Bhubaneswar, for treatment of

protrusion of penis along with anuria since two days. On physical examination it was seen that the exposed penis of about two inches was hard and black in color with blockage of urethra. A complete blood count showed the haematological parameters within normal range. Serum biochemistry tests revealed only slight elevation of blood urea nitrogen (42 mg/dl) and creatinine (1.8 mg/dl). It was diagnosed as a case of penile gangrene due to persistent paraphimosis. It was decided to conduct partial penectomy of gangrenous part.

## Surgical Treatment

The dog was premedicated with inj. atropine sulphate at the dose rate of 0.04 mg/kg. body weight (bwt.) intramuscularly (I/M) and inj. Xylazine hydrochloride at the dose rate of 1.0 mg/kg. bwt. I/M. Anesthesia was induced with inj. Ketamine hydrochloride at the dose rate of 5.0 mg/kg. bwt. intravenously (I/V) and maintained with additional doses of inj. Ketamine hydrochloride. The patient was kept in dorsal recumbency. The caudal abdomen and prepuce were thoroughly cleaned with 0.5% chlorhexidine acetate solution and hairs were shaved. Povidone iodine was applied over surgical site. A longitudinal incision was given over the ventral part of prepuce orifice

and extended posteriorly to about three centimeters length for better access to the penis. After exposing the penis, the dorsal artery and vein of the penis were ligated with 2-0 chromic catgut. A circular incision was given over the healthy portion of penis 2 mm posterior to the gangreneous part. The necrotic part of penis along with os penis was removed (Fig.2). A No.8 nasogastric tube was inserted into the urinary bladder through excised urethra as urinary catheter to prevent stricture formation at the urethral stoma and to divert urine during initial healing. The terminal portion of the excised urethra around the catheter was sutured with surrounding

penile muscle in simple interrupted manner using 2-0 chromic catgut. Prepuceal incision site was sutured in simple interrupted fashion using nylon 1-0. The catheter was secured to the prepuce with a simple interrupted suture pattern using nylon 1-0. Postoperatively inj. meloxicam (0.2 mg/kg.bwt.) was administered intramuscularly for three days to control pain and inflammation. Inj. ceftriaxone (25 mg/kg.bwt. I/M) was administered for seven days. Prepuceal pouch was flushed with povidine iodine solution daily to control infection. Catheter was removed 10 days after surgery.



**Fig.1- DRIBBLING OF URINE THROUGH URINARY CATHETER AFTER PARTIAL PENECTOMY**



**Fig.2- AMPUTATED PORTION OF PENIS**

### Results and Discussion

In this case, the complete blood count revealed no abnormalities in haematological parameters. Similar finding was also mentioned by Bolfer *et al.*, 2015. Slight increase in blood urea nitrogen and creatinine may be due to improper urinary drainage as a result of stranguria. The amputation was done posterior to the gangrenous part including os penis. Dorsal penile blood vessels were ligated prior to resection. The urethroscopy was conducted at terminal urethra. This is in accordance with the observation of Oliveira *et al.*, 2020.

Necrosis of a large portion of the penis especially at its anterior portion was found after careful examination of the resected portion (Fig. 2). Dissection of necrotic part produced a black coagulum. Initially, post-operative minor hemorrhage was observed at the urethroscopy site for two days after surgery which subsided with use of antibiotic and non-steroidal anti-inflammatory therapy and regular dressing as also reported by Patel *et al.*, 2022. The urethral catheter was placed up to 10 days after surgery in order to divert urine avoiding the possibility of urine scald dermatitis to the adjacent skin during initial healing period. After removal of the urinary

catheter the dog was able to urinate through the reconstructed preputial orifice (Fig.1) as also recorded by Roux *et al.*, 2022. The dog was followed up after 3 month and found to be urinating properly without any discomfort.

#### References

- Bolfer, L., Schmit, J.M., McNeill, A.L., Ragetly, C.A., Bennett, R.A. and McMichael, M. (2015). Penile Amputation and Scrotal Urethrostomy Followed by Chemotherapy in a Dog with Penile Hemangiosarcoma. *J Am. Anim. Hosp. Assoc.*, 51: 5975.
- Katayama, M., Seki, T., Takei, Y. and Takahira, A. (2017). Preputial reconstruction and urethrostomy after subtotal penile amputation in a dog. *J. Hellenic Vet. Med. Soc.*, 68(4): 669-674.
- Oliveira, S.B., Ferreira, L.F.L., Carvalho, T.F., Santos, R.L. and Valle, G.R. (2020). Collection of semen in a dog with partial penectomy followed by successful artificial insemination: case report. *Arq. Bras. Med. Vet. Zootec.*, 72(5): 1773-1777.
- Patel, N., Jones, S.C., McLoughlin, M.A. and James Howard, J. (2022). Partial penile amputation using a thoraco-abdominal stapler in nine dogs. *Vet. Med. Sci.*, 8(2): 437-444.
- Roux, F.A., Le, Breuil, F., Branchereau, J. and Deschamps, J.Y. (2022). Stuttering Priapism in a Dog — First Report. *Vet. Sci.*, 9: 518.

## LIFE MEMBERSHIP

Membership of the Society is open to Veterinary / Medical Graduates who are actively engaged in the field of Canine Practice. For the membership, please write to **Prof. (Dr.) A.K. Srivastava**, Secretary General, Indian Society for Advancement of Canine Practice, 21/5, Sector-21, Indira Nagar, Lucknow – 226 016 (U.P.) India.

**You may download the Form from our website: [www.isacp.co.in](http://www.isacp.co.in)**

The Life Membership Fee is Rs. **1000.00** / \$ 25/ £ 18.