

## SURGICAL TREATMENT OF SALIVARY FISTULA IN A BULLOCK

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**ABSTRACT:** A non-descript bullock of six years of age and 225 kg of body weight was suffering from left parotid salivary fistula with huge loss of saliva. The loss of saliva was reduced (from 11ml/minute to 5ml/min.) by pre-operative management of housing in silent area as well as withholding of food in addition to the use of antibiotic and other supportive therapy. Under Xylazine (0.1mg/kg I/M) and local infiltration of 2% Lignocaine hydrochloride, following standard surgical protocol, the Stenson's duct was identified and ligated after infusion of diluted Tincture Iodine into the duct (7mm in diameter) towards the parotid gland. Post-operative follow up with antibiotics, withholding of feed with intravenous and successive oral fluid administration and management for a week hastened the healing and inactivation of the gland. The bullock was able to work normally afterwards.

**Key Words:** Parotid salivary fistula, Ligation of duct, Non-descript bullock.

Occlusion of Stenson's duct by foreign substance like rumen cud, grass spikes, awns, cell eruptions, plaques, blood clots and sialolith etc. at its oral opening results ductal engorgement. Any trauma or infection causes rupture of the duct, extravasations and subcutaneous accumulation of saliva causing salivary cyst. By repeated injury the cyst opens to exterior forming salivary fistula (Singh *et al.*, 1993, Saglian *et al.*, 2009). Since ruminant produce large quantity of saliva, the huge loss of fluid through fistula needs immediate correction to combat dehydration and infection (Ducharme 2004). A case of huge fluid-losing left parotid salivary fistula in a horned bullock

with its surgical treatment is presented in this report.

### **Case history**

A non-descript bullock aged 6 years and weighing 225 kg was reported with a history of small swelling at its left cheek for last 3 years without any previous systemic or physical problem. The case was presented with rupture of skin of the facial swelling and discharge (11ml/minute) of clear watery saliva (Fig.1).

Food of the animal was withheld and the animal was kept in a calm and quiet area under I/V fluid (5 litres of DNS 5% in the morning and 5 liters of Ringer's lactate in the evening, DNS 5% and RL both of Albert David, India)

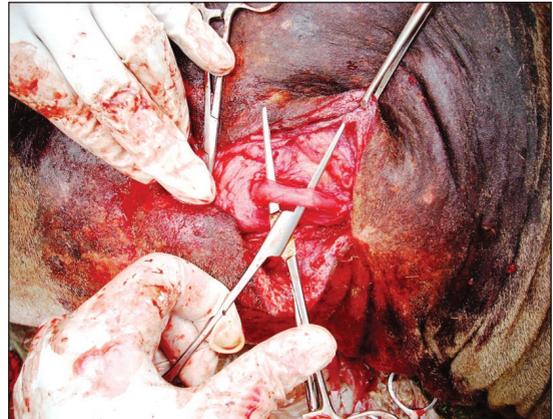
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**Fig.1: Saliva losing fistula on 3<sup>rd</sup> day of rupture.**



**Fig. 2: Separation of Stenson's duct for ligation.**



**Fig. 3: Post-operative healing of fistulous and surgical wound.**

infusion along with intramuscular 2.5 gm of Streptopenicillin (Dicrysticin-S, Sharabhai-Zyodus, India) and Prednisolone (Prednisolone, Intervet) 10ml,7ml and 5ml I/M, respectively daily for three consecutive days.

#### **Surgical Treatment**

The operation was performed on next day of skin rupture when saliva loss was reduced (5ml/minute). Under intramuscular Xylazin

hydrochloride @ 0.1mg/kg body weight (Xylazine 20 mg/ml, Indian Immunologicals, Hyderabad) and local infiltration of 8ml of 2% Lignocaine hydrochloride (Xylocaine 2%, Astra IDL, India), one incision was given at the site of fistula after aseptic preparation. The fistula was at upward and forward site at rostral border of the masseter muscle. One infant feeding tube was passed inside the engorged duct (7 mm in diameter) towards the parotid gland (Fig.2). The duct was isolated by curved artery forceps and 2 ml of Tincture Iodine solution (Tr. Iodine, Bengal Chemicals, India) diluted

with 8ml of distilled water was injected inside the tube towards the gland. Precaution was taken to save the adjacent artery and vein. Ligation of the duct and transfixation with subcutaneous tissue at two places was made with non-absorbable suture (SUTURA No.1, Futura Surgicare, Bangalore) during slow withdrawal of the catheter. The wound was closed in standard manner. Post-operatively no oral feeding was allowed and fluid therapy was given with intravenous use of Ringer's lactate

7 liters per day in two divided doses for 3 days followed by liquid diet. Enrofloxacin (Floxidin, Virbac, India) @ 1ml/15kg body wt. was given intramuscularly daily for 7 days and daily dressing was followed. The Bullock recovered uneventfully by 10 days post-operatively (Fig.3). It was reported to be in normal health for 4 years post- ligation. Reduction of saliva to 5ml/minute on and from 2<sup>nd</sup> day of fistulation due to rest from mastication and noise along with support of antibiotic and steroid corroborated with the observation of Singh *et al.*, (1993). Withholding the contribution of single parotid gland or unilateral inactivation in this case had no clinical effect on this bullock as also reported by Ducharme (2004). Cases of sialolith and salivary fistula have also been reported in cattle and buffalo (Ali *et al.*, 1978; Ray *et al.*, 1984; Joshi *et al.*, 2003).

#### ACKNOWLEDGEMENT

The authors are thankful to Director, A.H. and V.S., Govt. of West Bengal for giving facilities and Dr. Shashi S.P.Singh, Department of Veterinary Surgery & Radiology and Miss. Ruma Mazumder, Department of Veterinary Pharmacology & Toxicology, WBUAFS, Kolkata – 37 for their help during the study.

#### REFERENCES

- Ali MA, Ahmed JU, Rahaman MH (1978) Surgical treatment of salivary calculi in a bullock. *Bangladesh Vet J* 12: 59-60.
- Ducharme NG (2004) In: Fubini SL, Ducharme NG, eds. *Farm Animal Surgery Philadelphia*. 1<sup>st</sup> edn. Saunders. 167-169.
- Joshi VB, Tyagi SP, Sharma A (2003) Obstructive Sialolithiasis in buffalo and its management. *Buffalo Bull* 22: 3-5.
- Ray AK, Mohanty J, Mitra AK (1984) Surgical Treatment of Salivary Fistula in bovine. *Indian Vet J* 61: 984-985.
- Sagliyan A, Han MC, Gunay C (2009) Sialolithiasis and its management in two horses. *Indian Vet J* 86: 1062-1063.
- Singh J, Singh AP, Patil DB (1993) In: Tyagi RPS, Singh J, eds. *The Digestive System in Ruminant Surgery*. 1<sup>st</sup> ed. Delhi: CBS Publishers & Distributors. 189-191.

**\*Cite this article as:** Maji A K, Samanta A (2014) Surgical Treatment of Salivary Fistula in a Bullock. *Explor Anim Med Res* 4(1): 113-115.