

Dept. of Surgery,

Fac. of Vet. Med., Kafr El-Sheikh, Tanta Univ.,

Head of Dept. Dr. M.A. Selem.

## ECTASLA OF PAROTID DUCT IN BUFFALOS

(With 5 Fig.)

By

M.A. SELEM

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### تمدد قناة الغده النكفيه فى الجاموس

مجتدى سليم

تم تشخيص ثلاث حالات تمدد قناة الغده النكفيه فى الجاموس . وكانت طريقة العلاج المتبعه  
هى ربط قناة الغده النكفيه ثم حقن محلول اللوجولز بداخلها بعد موضع الربط فى اتجاه الغده .  
وهذه الطريقه سهله وسريعه ورخيصه وايضاً لا ينتج عنها مضاعفات ولا يتكرر حدوثها مره أخرى .

## SUMMARY

Three cases of ectasia of the duct of the parotid salivary gland in buffaloes are diagnosed. The duct is ligated and logul's solution injected in it, caudal to the ligation in retrograde direction to the parotid gland. This technique is easy, rapid, inexpensive as well as it has no complication and no recurrence.

**Keywords:** Ectasia, Parotid duct, buffaloes.

## INTRODUCTION

Salivary glands consists of three pairs of well-defined glands include: The parotid, mandibular and sublingual glands, as well as scattered lobules of salivary tissue (minor salivary glands) include: labial, buccal, lingual and palatine glands. The dog has in addition a zygomatic (supraorbital) salivary gland near the eye.

The parotid gland in buffalo occupies the entire parotid region, which is a triangle formed by the vertical ramus of the mandible rostrally, the wing of the atlas dorsocaudally and the sternomandibularis ventrally (EL-GAAFARY, 1964 and BARNWAL and SINHA, 1982) it is irregular triangular with its base ventrad, to quadrilateral in shape (EL-GAAFARY, 1954, SENGAR and SINGH, 1970 and BARNWAL and SINHA, 1982).

The parotid duct, after its emerge near the mandibular angle of the gland, lay dorsal to the fascial vein and under the cover of sternomandibularis muscle. It courses forward with the ventral branch of the facial nerve along the ventral border of the masseter muscle, then turns upward and gains its rostral border. The duct is here related rostrally to the facial vein. After a short distance it crosses under the vein and the zygomaticus muscle. The duct pierces the buccinator muscle, forms an ampulla and opens in the buccal vestibule in the parotid papilla opposite the fifth upper cheek tooth in adult and third upper cheek tooth in the calves (BARNWAL and SINHA, 1982).

Diseases of the parotid gland are of rare occurrences in different domestic animals (AHMED, 1988). Some affection of the parotid duct are recorded e.g. sialocele, fistulae, sialolithiasis, ectasia of the parotid duct and others (O'CONNOR, 1982; DIETZ and WIESNER, 1984; MISK and NIGAM, 1984; HARVEY, 1985 and AHMED 1988). MISK et al (1991) recorded one case of parotid duct ectasia in a buffalo, in which the duct was severely dilated.

## MATERIALS AND METHODS

Three adult female buffaloes are presented to the clinic with an unilateral salivary fistula. The case history indicated that the lesions were at first swelling at the cheek. The swellings have been faultily opened as an abscess. After that the present fistula is produced. The continuous flow of saliva from the fistula opening was the most characteristic symptom specially during feeding.

The physical examination revealed the presence of fistula openings connecting to a soft, fluctuating, painless, not hot, pear shaped swellings filled with fluid (Fig. 1 & 2). The fluid obtained from the present openings was clear and watery in appearance. The swellings became caudad in a tube shape, parallel to the lower border of the mandible and extended to the angle of the mandible. The oral examination revealed atresia of the parotid duct orifice.

The sialogram revealed the presence of ectasia of stenson's duct with obstruction of its oral end (Fig. 3). The lateral and dorsal radiographic projections are taken after evacuation of the fluid and injection of 20-25 ml, urograffin solution 76% into the fistula openings.

All cases are surgically treated. The animal is sedated with rompun (0.05 mg/kg B.W.) and secured in lateral recumbent position. The area around the swelling and the fistula till the angle of the mandible is prepared for surgery. A local analgesic solution (2% xylocaine) is injected around the fistula opening and in linear manner over the course of the parotid duct at the angle of the mandible.

Surgical debridement of the fistula opening is made. After reaching the cavity of the dilated duct and evacuation of its fluid content, a long artery forceps is introduced retrograde in the duct to bulge the skin, 3 cm caudal to the fistula opening, where the duct can be easily identified. An about 3 cm incision over the tip of the artery forceps parallel to the mandible is made. The duct is bluntly dissected and exposed. The duct is ligated with silk No. 3 (Fig. 4). Caudal to the ligature, 15 ml of lugol's is injected into the duct in retrograde direction. The two incisions are sutured in two layers, the subcutaneous one using interrupted mattress, chromic catgut No. 2 and the skin using simple interrupted, silk No. 3 (Fig. 5). The silk stitches are removed after 10 days and first intention healing was obtained.

## RESULTS

About 4 months postoperation the seat of the lesion was normal in appearance without any complication.

## DISCUSSION

Accidental traumatic wounds, surgical incisions as opening of an abscess, removing a neoplasm or excising flaps for an autoplasty, foreign bodies, or salivary calculi within the parotid duct may be the cause of fistulous lesions (O'CONNAR, 1982). The cause of the present fistula is the faulty opening of the salivary duct ectasia inducing it, which could not heal due to the atresia of the oral orifice or obstruction of the parotid duct.

MISK et al (1991) recorded a piece of straw obstructing the salivary papilla of parotid duct. In the present cases, no foreign bodies were observed. Salivary duct ectasia is caused by an obstruction of the oral mucosa. Chemical injuries and wounds can cause a stenosis due to scaring of the salivary duct orifice in the region of the papillae. Sometimes oat grains or chaff can become lodged in the papilla, leading to inflammation and subsequent obstructive stenosis and in very rare cases the salivary calculi (DIETZ and WIESNER, 1984).

To treat the ectasia of the salivary duct, some attempts are suggested such as creation of intra-oral fistula (DIETZ and WIESNER, 1984) or complete reconstruction of the stenson's duct by placement of a polyethylene tube (MISK et al, 1991).

The induction of intra-oral fistula (marsipulization) which has been described by DIETZ and WIESNER, (1984) in horse, may be useful the enlargement of the duct to a degree that the induced orifice can not drain the saliva from the dilated cavity which will remain inside it. Also, the reconstruction of the duct by polyethylene tube has some disadvantages from my point of view such as the chances are still present to obliterate oral end of the tube especially when its lumen is wide enough for accumulation of food particles in its opening or precipitation of decay to obstruct it, as well as the tube can not be easily obtained in the field.

The ligation of the parotid duct and injection of irritant to destruct the parotid gland of the affected side, which are made in the present clinical cases are easily and rapidly to perform, economically without complications and finally no chance of recurrence.

BARON and OBER (1962), reported 13 cases of persistent salivary fistula which were treated by primary ligation of

stenson's duct with satisfactory results. The glands were replaced by fat and fibrous tissue. Destruction of the function of the parotid gland by retrograde injection of logul's solution by AHMED, (1988) resulted in atrophy of the gland and fibrous tissue replacement.

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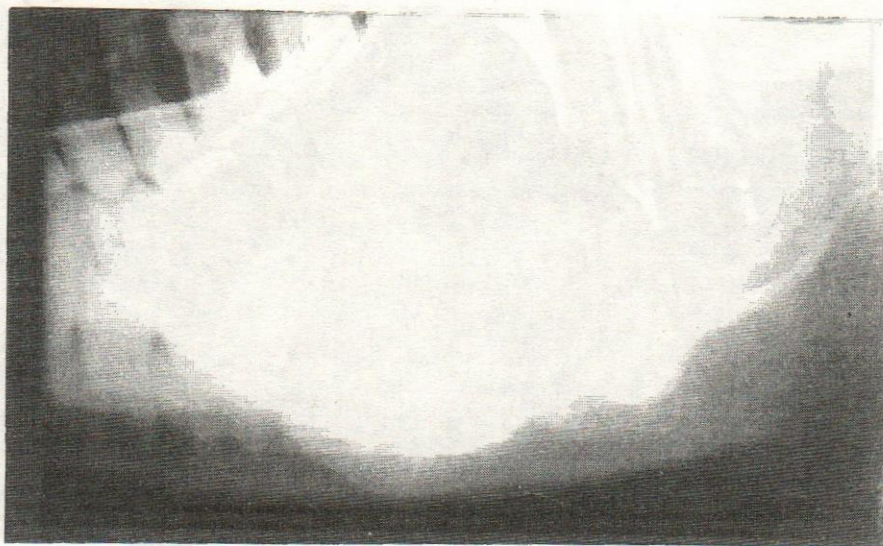
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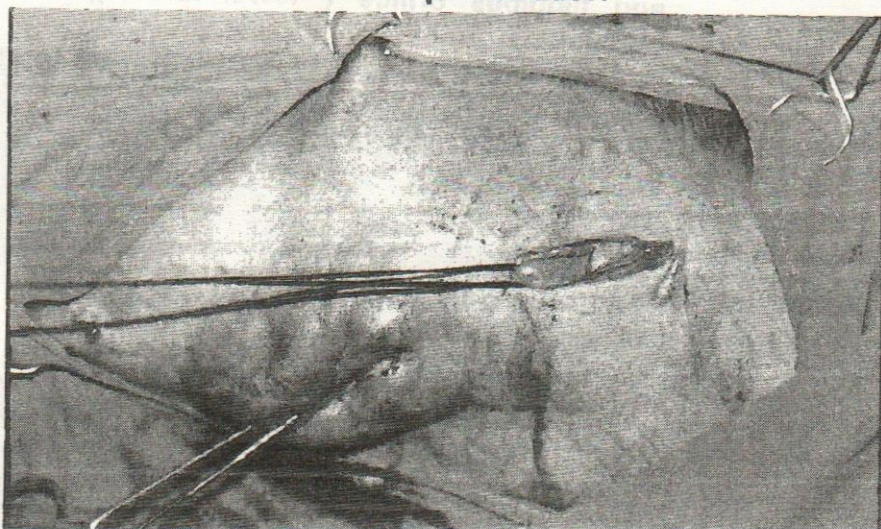
**Figure (1) : Showing the swelling of ectasia ( upper arrow ) and fistulous orifice ( lower arrow ), in a buffalo .**



**Figure (2) : Showing ectasia of the left parotid duct, in a buffalo .**



**Figure (3) : Sialogram of ectasia showing the severe dilatation of parotid duct .**



**Figure (4) : Showing the left incision at the seat of the fistula, with a long artery forceps bulging the duct in the right incision, before ligation of it .**



**Figure (5) : The two incisions are closed with silk in simple interrupted pattern .**