



OPERATIVE MANAGEMENT OF A POST TRAUMATIC PAROTID DUCT FISTULA – A CASE REPORT

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KEYWORDS :

INTRODUCTION

Parotid fistula may arise from the parotid gland or duct or ductules. It may open inside the mouth as internal fistula or outside onto the skin as external fistula. Fistula from the gland shows minimal discharge while fistula from the duct shows profuse discharge. Incidence is about 0.2 to 3%. Parotid fistula may form after superficial parotidectomy, after drainage of parotid abscess, ruptured parotid abscess, after biopsy, trauma and malignancy of parotid gland, out of which trauma being the most common cause. Here we report a case of operative management of a parotid duct fistula following trauma.

CASE REPORT

A 30 year old male presented with swelling over the left cheek and pain in the swelling for 5 days. Patient has a history of penetrating injury to left cheek 20 days before presentation which was primarily sutured in a peripheral centre. The pain and size of the swelling used to increase on taking feeds.

On examination, an irregular scar of about 8cm present over left cheek extending from below the angle of mouth till the left tragus. A swelling of about 5*5 cm was present over left cheek with ill defined borders and smooth surface.

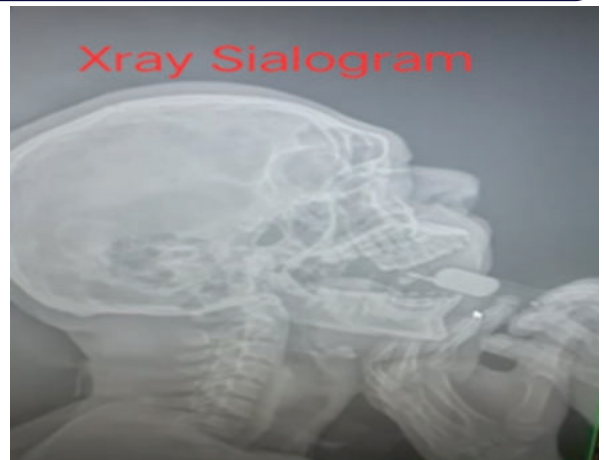


INVESTIGATIONS

Ultrasound of left cheek : 5*2 cm hypoechoic well defined lesion noted in the subcutaneous plane in left maxillary region.

Xray Sialography : Pooling of contrast material from left distal parotid duct noted. Proximal parotid duct not visualized - ?Transection of left parotid duct.

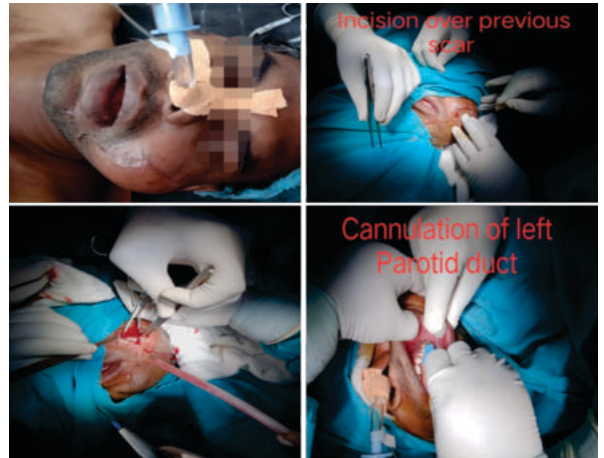
MRI Parotids : Evidence of 4.84*1.94 cm T1 hypointense, T2/STIR hyperintense well defined lesion noted in subcutaneous plane of left maxillary region. Evidence of similar lesions noted in left masseter muscle.



TREATMENT

After all investigations, provisional diagnosis of partial transection of parotid duct with fistula extending up to subcutaneous plane in left maxillary region was made. The swelling was aspirated twice using wide bore needle and pressure bandage applied. But it reappeared within two days of aspiration. Hence the patient was taken up for exploration under general anaesthesia.

Incision given over previous scar. Partial necrosis of left masseter muscle noted. Necrotic tissue debrided. An infant feeding tube of size 5 F cannulated through the left parotid duct opening in the oral cavity and saline pushed. This helps to identify the site of leak and thus the point of injury to the duct. Partial transection of the left parotid duct beneath the left masseter muscle noted with communication extending up to the subcutaneous plane in the left cheek. The duct was repaired with 5-0 prolene intermittent sutures and wound closed in layers after placing negative suction drain. A pressure bandage was applied over left maxillary region and patient was shifted to post operative ward in stable condition.



POSTOPERATIVE PERIOD: Postoperatively there was substantial reduction in the pain. The drain fluid was clear and about 50 to 60ml per day for first five days. The patient was started on oral glycopyrrolate 2mg twice daily. After two weeks, the drain was minimal and hence removed and glycopyrrolate continued for two more weeks. There was no evidence of facial nerve injury.

FOLLOW UP: At follow up after one month of surgery, the patient was symptom free, the wound was healthy and no recurrence was seen during further visits at follow up.



DISCUSSION

The most common cause of parotid duct fistula is trauma. These are diagnosed by classical history and sialography. Duct fistulas leak profusely and invariably needs surgery to close it. Excision of the fistula, diversion of the duct into the mouth, duct ligation, botulinum toxin A¹, tympanic neurectomy², radiation therapy³, anti sialagogues⁴ are the options available. Post operative pressure bandage, anticholinergics and antibiotics have synergetic effect in management of parotid fistulas. Parekh et al have described a classification system for management of parotid fistulae :

A) Diversion of parotid secretions in to mouth :

- 1) Reconstructive methods :
 - Delayed primary repair of the duct
 - Reconstruction of duct with vein grafts
 - Mucosal flaps
 - Suture of proximal duct to buccal mucosa
- 2) Formation of a controlled internal fistula :
 - T tube or catheter drainage in to mouth
 - Drainage of proximal duct by a catheter
- 3) Parotidectomy
- 4) Local therapy to the fistula :
 - Excision
 - Cauterization

B) Depression of parotid secretion :

- 1) Surgical approaches :
 - Duct ligation
 - Sectioning of auricotemporal nerve
- 2) Conservative approaches :
 - Administering nothing orally to the patient until the fistula closes
 - Atropine or pro banthine
 - Radiotherapy
 - Repeated aspiration and pressure dressing

The major problem with techniques attempting to divert secretions in to mouth with reconstructive surgery is the difficulty in identifying the proximal duct in the presence of extensive scarring that forms around the fistula with its associated significant risk of facial nerve damage.

Low dose radiotherapy for the treatment of parotid fistula is validated because parotid secretions are reduced after radiotherapy but because of its long term ill effects, it is not preferred

with selected parotid duct fistulas and glandular fistulas are best treated by tympanic neurectomy.

Pressure dressings lead to atrophy of the gland as the lobules of the gland are contained in relatively in elastic capsule. The sustained rise in pressure in the duct leads to compression of capillaries and veins, resulting in decrease in secretions and atrophy of the gland

CONCLUSION

The most common cause of parotid fistula is trauma. Diagnosis of parotid duct fistula is done by classical history and imaging studies. Intraoperative cannulation of parotid duct opening helps to identify the site of injury and extent of communication. This combined with meticulous repair of parotid duct with layered closure of the wound and post operative anticholinergics and pressure bandage are the key factors for successful management of the parotid duct fistulas.

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Tympanic neurectomy appears to be satisfactory method of dealing