FISTULA OF SUBMANDIBULAR GLAND- A RARE PRESENTATION

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Abstract: Salivary fistulas commonly affect parotid gland. Submandibular fistulas are very rare. Most of them are congenital in origin and may be associated with abnormalities of the branchial apparatus. Traumatic submandibular fistulas on the other hand are very rare entities with only few cases reported till date.

Keywords: Submandibular gland, Salivary fistula.

INTRODUCTION:

Salivary fistulas are not very uncommon entity in day-to-day practice. Overwhelming majority comprises of parotid fistula, submandibular fistula is indeed a rare finding. Most of the submandibular fistulas are congenital in origin and may be associated with abnormalities of the branchial apparatus.^{1,5} Traumatic submandibular fistulas on the other hand are very rare entities with only few case reported till date. Here we present a case of traumatic submandibular fistula in a 10-year old boy, who was managed by complete excision of the involved gland and fistulous tract.

CASE REPORT:

A 10-year old boy presented to our outdoor with history of watery discharge from the right side of his submandibular area for the last three to four years. The discharge was intermittent in character but becomes profuse while eating and even at the thought and smell of food. Initially the patient developed an acute painful swelling on the right side of neck for which he took some medicines. The swelling did not subside following which it was punctured by his mother at home with a needle.

Subsequently, he developed watery discharge from the site of puncture. A local doctor then operated upon him for this ailment. However, the discharge persisted even after the operation. Since then, the symptoms are persisting. There was no history of purulent discharge or associated pain.

On examination,

there is a minute opening just above the greater cornu of hyoid on the right side of neck. There is no active ulceration or excoriation around the opening. There is a faint horizontal scar mark over the opening about 1 ½ "in length. On examination of the oral cavity, the duct opening and the surrounding mucosa looks normal. On giving the patient drops of lemon, a free flowing watery discharge was seen coming out of the opening on the right side of the neck (Fig 1,2). On palpation, the opening is adherent to the skin and underlying structure but the surrounding areas are free and mobile. The margins are inverted, non-tender and non-indurated. On bimanual palpation, the gland feels uniformly soft in consistency. On regional examination, no palpable cervical lymph nodes were found. On systemic examination, no significant findings were present.

On routine blood examination, no significant findings were present. X-ray occlusal view and X- ray mandible lateral view shows no radio-opaque stone. Sialography of right submandibular gland was done using 60% urograffin. The dye was injected through the natural opening of the Wharton's duct. The sialogram showed free passage of the dye through the duct and gland and coming out of the opening on the right side of the neck (Fig 3).

Decision to go for complete excision of the involved gland along with the fistulous tract was taken. The gland along with the

Fig I : Clinical photograph showing active sialorrhea following intake of lemon juice.

Fig II : Photograph showing close- up view of fistulous opening.

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Fig III : Sialogram showing free passage of dye from natural opening to the fistulous opening.

Fig IV : Peroperative photograph showing excision of the gland.

fistulous tract was traced and removed meticulously and the wharton's duct was ligated (Fig 4). The specimen was sent for histopathological examination, which revealed chronic sialadenitis. Postoperative recovery was uneventful with no recurrence of fistula after 3 months of follow-up.

DISCUSSION:

Salivary fistula usually originates from the parotid gland though rarely it can arise from submandibular gland. It can be internal or external, congenital or acquired. A salivary fistula may be due to surgery, facial trauma or sepsis within the gland parenchyma. Salivary fistula can arise either from the gland parenchyma, which is generally more common in parotid gland or from the main salivary duct, which can arise from both parotid and submandibular gland.³ Parotid fistula though quite common, submandibular fistulas are rarely encountered. Submandibular fistula though commonly congenital in origin, acquired cases can rarely occur and is generally traumatic in origin.^{1,2} The fistulas arising from the major salivary duct leaks profusely even at the thought of food, which correlates very well with our case. Common reason for the persistence of salivary fistula is mechanical obstruction to the drainage via natural pathway like calculi or tumors pressing on the salivary duct. However, we encountered no such anomalies in our case and the only reason for the persistence of fistula can be the ease of drainage under the effect of gravity and the short course of fistulous tract as opposed to the longer course of the duct.

The investigations are directed towards determining the condition of parenchyma and extent of fistulous tract. These make sialography the gold standard investigation. In our case, urografin 60% was injected through the natural opening and the dye was seen coming out from the external fistula thus conforming our clinical diagnosis. A plain radiograph is required in all cases to rule out a radio opaque stone. Scanning was not done as it often gives false positive and false negative results. Digital subtraction sialography is a recent development but cost and availability limits its regular use.⁶

The parenchymal fistulas can be initially managed conservatively by aspiration, reduction of salivary production and pressure

dressing. On the contrary, major duct fistula seldom responds to such conservative treatments. Hence, surgical intervention is considered the definitive management as in our case. Surgical management comprises of complete excision of the gland and the fistulous tract.^{1,4}

CONCLUSION:

Any swelling arising in the lateral side of neck in suprahyoid region must be viewed with concern as inadvertent aspiration or drainage can lead to a persistent submandibular fistula. Therefore, this should be always kept in mind as submandibular fistula though rare, is a reality. Fortunately, for us simple excision of the gland along with the fistulous tract is all that is required.

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