CASE REPORT

SIALODOCHOPLASTY FOR THE TREATMENT OF PAROTID DUCT STRICTURE- A CASE REPORT

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ABSTRACT

Parotid duct strictures are an uncommon cause of obstructive sialadenitis, leading to recurrent parotid gland swelling, pain, and reduced quality of life. While sialendoscopy offers a minimally invasive option, refractory cases may require surgical intervention. Sialodochoplasty, involving enlargement of the ductal orifice, serves as an effective treatment for severe or recurrent ductal strictures. We report the case of an old-aged patient with a chronic Right parotid duct stricture successfully treated with Sialodochoplasty, leading to symptom resolution and restoration of normal salivary function.

KEY WORDS

Parotid duct stricture, Sialodochoplasty, obstructive sialadenitis, parotid gland surgery, ductal reconstruction.

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INTRODUCTION

Parotid duct (Stensen's duct) strictures represent a less common etiology of obstructive parotitis but can lead to significant morbidity.[1] Chronic inflammation, recurrent infections, or trauma can contribute to ductal fibrosis and narrowing, causing obstructive symptoms such as gland swelling and meal-time syndrome.[2] Although conservative measures and sialendoscopy remain first-line interventions, severe or recurrent strictures may necessitate open surgical correction.[3,4] Sialodochoplasty offers a reconstructive approach, aiming to restore ductal patency and prevent recurrence. This report details a successful case of parotid duct stricture managed with Sialodochoplasty.

CASE PRESENTATION

A 67-year-old male presented with a 2-year history of recurrent painless swelling of the right parotid gland, particularly noticeable during meals. The patient reported intermittent purulent discharge from the right parotid duct orifice and had undergone multiple courses of antibiotics with only temporary relief. He denied any history of facial trauma, prior surgery, or systemic autoimmune disease. [Figure 1]

On examination, there was mild tenderness and swelling of the right preauricular region. Intraoral inspection revealed erythema and narrowing at the parotid duct papilla. Gentle milking of the gland produced scant, thickened saliva.

Ultrasound examination demonstrated dilated intraglandular ducts without sialolithiasis. Sialography confirmed multiple focal strictures within which the main stricture was approximately 1cm from the ductal orifice with significant upstream ductal dilatation. Diagnostic sialendoscopy showed a fibrotic stricture refractory to endoscopic dilatation attempts. [Figure 2]

Given the recurrent nature of the symptoms and failed minimally invasive management, the decision was made to proceed with surgical Sialodochoplasty.

Fig 1. Patient Profile and Locating Right Parotid ductal opening in mouth

Fig 2. Sialogram showing the Mega duct and ductal strictures of the B/L Parotid duct

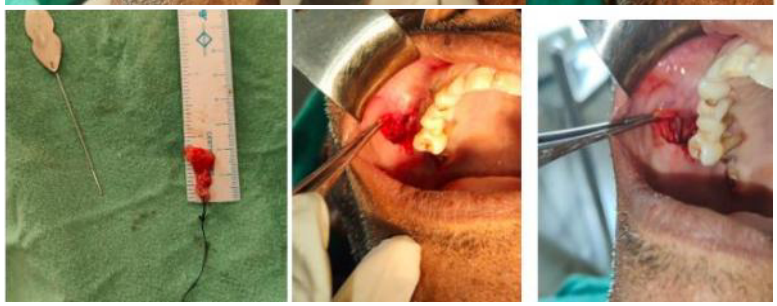

Fig 3. Surgical Procedure of Sialodochoplasty performed on right Parotid duct

Fig 4. Excised Parotid duct containing the main stricture and post-operative stent placement

Fig 5. 2 weeks follow up showing excellent healing after removal of the stent

SURGICAL TECHNIQUE

Under Local anesthesia, an intraoral approach was employed. Anelliptical incision was made over the buccal mucosa, around the papilla exposing Stensen's duct. The strictured segment of the duct was identified and isolated. The parotid mega duct, formed due to persistent salivary obstruction proximal to the strictured segment was identified. Elliptical incision was placed over the mega duct excising the distal part containing the stricture. The proximal duct was carefully spatulated to widen the lumen. [Figure 3]

The edges of the open duct were sutured with the oral mucosa using resorbable sutures to create a wide, mucosa-lined neo-ostium. Care was taken to avoid injury to the buccal branch of the facial nerve. Hemostasis was secured, and a Stent was placed and secured for prevention of future blockage and further accumulations. [Figure 4]

POSTOPERATIVE COURSE

The postoperative recovery was uncomplicated. The patient was advised on maintaining good oral hygiene, performing frequent saline mouth rinses and consuming sour candies to maintain the flow of saliva whenever mouth would feel dry. Prophylactic antibiotics were administered, and soft diet was recommended during the early postoperative period. [Figure 5]

At 2-week follow-up, the stent was removed and a well healed neo-ostiumwith improved salivary flow and no signs of infection was observed. At 3 months postoperatively, the patient reported complete resolution of meal-time parotid swelling.

DISCUSSION

Parotid duct strictures, though less frequent than submandibular duct obstructions, can cause significant patient discomfort and recurrent infections.[6] Initial management includes conservative measures and sialendoscopy, which allows for minimally invasive stricture dilatation. However, complex or fibrotic strictures may not respond to these techniques.[7]

Sialodochoplasty provides a definitive surgical solution by excising the strictured segment and creating a mucosa-lined neo-ostium to ensure durable patency. Use of a buccal mucosal flap not only maintains epithelial continuity but also reduces the risk of restenosis and facilitates optimal healing.[8]

Our case demonstrates the efficacy of Sialodochoplasty in managing a refractory parotid duct stricture, with restoration of normal salivary function and prevention of further infections.

CONCLUSION

Sialodochoplasty is a valuable surgical option for managing complex or recurrent parotid duct strictures. With meticulous surgical technique and appropriate postoperative care, this procedure can provide long-term symptom relief and preservation of gland function.

Patient Consent

Written informed consent was obtained from the patient for the publication of this case report and accompanying images.

Conflicts of Interest

The authors declare no conflicts of interest.

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