

Case Report

Parotid Sialocoele Management - Made Easy

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ABSTRACT

Aim: Parotid sialocoele is a common complication following trauma, oral cancer surgeries, parotid surgeries and temporomandibular joint surgeries. This case report is aimed to highlight the action of normal saline on sialocoele management. Continuous leakage of saliva from the defect can be of hindrance to the patient and the doctor. Even after regular drainage and anti-sialogogue medication the defect may persist.

Conclusion: Although different conservative and surgical management options are available in literature, hereby we propose a simple yet effective modality.

Clinical significance: Normal saline is easily available, cheap and effective method to resolve parotid sialocoele, which can be incorporated in parotid capsule.

Keywords: sialocoele, fistula, salivary gland, trauma, normal saline, easy

INTRODUCTION

A sialocoele may be defined as a spillage and collection of saliva from any injured salivary gland parenchyma into the adjacent extraglandular tissues. Various etiologies that can disrupt a parotid gland include trauma, neck dissection, parotid surgeries, temporomandibular joint surgeries, trans-parotid condylar surgeries, etc may result in a sialocoele. Severe trauma to the parotid region may shred the parotid capsule and damage the gland parenchyma or the duct, which may lead to constant pooling of saliva in the tissue space. During neck dissection in oncosurgeries, the parotid tail is often included in the dissection. If the parotid tail is not sutured, it leaves behind a raw wounded parenchyma prompting to collection of saliva few days after primary closure and wound breakdown. The saliva itself has autolytic action that hinders wound healing and promotes infection. This makes treating the lesion a cumbersome

affair due to its chronicity, recurrence and complexity. ^[1]

Conservative management is ideally the first choice of treatment. One can find lot of varying conservative method including repeated aspiration, pressure dressings, anti sialogogue medications etc. It is often found that the lesion doesn't resolve by these modes and moreover anti-sialogouges may have certain adverse effects like blurry vision, headache, dizziness, xerostomia, constipation. Injecting various sclerosing agents into the sialocoele like sodium tetradecyl sulphate, fibrin glue, bleomycin, botulinum toxin, OK- 432 have been reported in literature, ^[2] but they are expensive and may be unavailable. Injecting warm hypertonic saline is reported but warming the saline may prove to be inconvenient. ^[3]

If the conservative treatment fails the surgeon might have to take a more aggressive stance like inserting a catheter

intraorally for drainage, ductal ligation, re-exploration and closure of fascia, tympanic neuropathy, local excision, cauterization, and auriculotemporal nerve sectioning (ht)etc. Low dose radiotherapy often ablates the sialocele although the risk outweighs the benefits if used for long time. ^[4,1]

CASE REPORT

Hereby we propose a simple, inexpensive yet effective technique in reducing a sialocele. A 27 year old male patient reported to the emergency unit with a history of road traffic accident. Medical, dental and personal histories were insignificant. On examination a cut-lacerated wound was noted on the left pre-auricular region measuring 5 cm long and 3 cm deep upon the parotid capsule, exposing the substance of the gland substance (Fig 1A). On further neurological examination, facial nerve palsy was noted of the ipsilateral side (Fig 1B). Primary closure was done in layers (Fig 1C). High-dose oral steroid medication and physiotherapy was started for facial nerve palsy. Patient was recalled for review. Healing of the laceration was apparently uneventful for first 5 days. On the 6th day patient reported

with a soft, fluctuant, dome shaped, non tender swelling of 6 cm by 3.5 cm in size over the healing wound (Fig 2A). No local rise in temperature, lymph node enlargement was noted. Swelling increased before meal-time. On bimanual palpation of the swelling drainage of clear fluid was seen (Fig 2B). Milking of parotid revealed no occlusion in the parotid duct. On aspiration, a clear fluid was seen and was sent for staining examination. Periodic acid Schiff (PAS) stain confirmed fluid to be saliva. Owing to the nature of the fluid and the location of the swelling and a positive PAS staining, a diagnosis of sialocele was given. 5 ml of 0.9% isotonic (normal) saline (Fig 3A) was injected at the site of aspiration with the help of a 20 gauge needle (Fig 3B). Care was taken not to insert the needle too deep to prevent any injury to the gland proper. Following which, patient was recalled every day for a period of 10 days and the process of aspiration followed by injection was repeated. A gradual reduction in size of the sialocele was observed and its final resolution was achieved within 2 weeks (Fig 4). Patient was kept on regular follow-up.



Figure 1. A: Deep laceration involving parotid parenchyma. B: Weakness of left facial nerve. C: Closure in layers. Skin layer with subcuticular suture.



Figure 2. A: Swelling over sutured wound. B: Drainage of saliva on bimanual palpation



Figure 3. A: Normal Saline. B: Injecting of normal saline into the parotid fistula



Figure 4: Resolution of lesion

DISCUSSION

Normal saline (NS) is a sterile, non-pyrogenic, crystalloid solution used widely in the medical field for cleaning wounds, irrigation; reversing fluid loss due to exsanguination, dehydration, diarrhoea; diluting certain medications etc. It is a

simple solution of one litre of distilled water and 9 gm of sterile Sodium Chloride. This 0.9% (weight / volume) concentration is termed as Normal Saline colloquially. It is also known as physiologic saline, isotonic saline. Osmolarity of NS is close to that of blood - 308 mOsmol/l and hence is used as replacement fluid for blood. NS contains 154 mEq/L of Na^+ and Cl^- . NS should be used carefully in patients with uncontrolled hypertension and pulmonary oedema. Fast infusion of NS may result in metabolic acidosis. Various other concentrations of saline are available like hypertonic saline (3%, 5%, 7%, and 23.4%), half normal saline (0.45 %) and quarter normal saline (0.22 %).^[5]

In the current case, normal saline basically acts as a sclerosing agent that induces fibrosis of the gland and thereby reducing secretion.

CONCLUSION

NS is isotonic, non-allergenic, non irritant, non toxic to surrounding tissue. It is extremely cost-effective and easily available. This technique is relatively easy, does not require any special equipment and can be utilized in sialocoele formed due to any etiology, be it, trauma, neck dissection, TMJ surgeries etc. Thus we strongly advocate the use of normal saline in treating parotid sialocoeles.

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