ORIGINAL RESEARCH PAPER
Volume-8 | Issue-9 | September - 2019 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

NON-TRAUMATIC STENSEN'S DUCT SIALOCELE ON MR SIALOGRAPHY

Radiodiagnosis

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ABSTRACT

Sialoceles are subcutaneous cystic cavity, usually containing saliva that arises from leakage of saliva into glandular or periglandular tissues secondary to damaged salivary gland or salivary duct. The most common causes of this rare condition are facial trauma, surgery or infections. Very rarely, sialoceles of Stensen's duct may occur without trauma. To the best of our knowledge only one case of non-traumatic Stensen's duct sialocele has been described previously on MRI [1].

KEYWORDS

sialocele, Sialography, Stensen's duct

INTRODUCTION

Sialoceles are subcutaneous cystic cavity, usually containing saliva that arises from leakage of saliva into glandular or periglandular tissues secondary to damaged salivary gland or salivary duct. The most common causes of this rare condition are facial trauma, surgery or infections. Clinically, sialocele appears as an asymptomatic soft, mobile swelling, occasionally fluctuant in the region of salivary gland with normal overlying skin [1,2]. Diagnosis is usually made on the basis of the patient's history and clinical examination. Imaging modalities such as Sialography, ultrasonography, MRI and fine needle aspiration is required to confirm the diagnosis, to evaluate the extent of the lesion and plan management [2]. Magnetic Resonance (MR) Sialography is an efficient technique to evaluate the ductal system of the salivary gland [7]. In the present context we report an uncommon case of non-traumatic recurrent parotid sialocele and emphasize the role of MR sialography in pre-operative evaluation.

Case report:

A 42 years old male patient presented with chief complaint of recurrent swelling in the left side of the face for 3 months. Patient gave no history of trauma or surgery at the site of swelling. No history of fever or pain. On examination there was a soft fluctuant swelling present at left ramus of mandible over the masseter measuring approximately about 4cm x 1 cm in size. No lymphadenopathy noted. Intra oral examination was unremarkable. Amylase test was positive. MRI of parotid sialogram at the site of the swelling revealed fusiform T2 hyperintense cystic lesion measuring~ 49 x 14 mm in the left cheek in the region and course of left Stensen's duct in coronal and axial images. Terminal ~ 1 cm Stensen's duct is not dilated. No obvious filling defect seen in the dilated Stensen's duct. Left parotid gland appears smaller in size and shows varying degrees of intraparotid duct dilatation with largest dimension being~4.3 mm. Right parotid appears bulky with no duct dilatation (Figure 1 (a-d)). Under ultrasound guidance FNAC was performed ,3-4 ml of clear fluid was aspirated and sample was sent for analysis which shows plenty of neutrophils. After aspiration the swelling was reduced in size.

DISCUSSION:

Mucoceles are well defined rounded lesions containing mucus, when they occur in the parotid gland are called sialoceles. Mucoceles are of extravasation and retention types. Extravasation type is used when mucus is extruded into the connective tissues and is surrounded by a granulation tissue while a retention type is a cyst with retained mucin that is lined with ductal epithelium. The retention type of the mucoceles is most common in the parotid gland[2]. Sialocele, or salivary pseudocyst, is a rare complication. Sialocele, a subcutaneous cystic cavity, usually containing saliva that arises from leakage of saliva into glandular or periglandular tissues secondary to damaged salivary gland or salivary duct [1,2]. The most common causes are facial trauma or surgery. Differential diagnosis of sialocele includes branchial cleft cyst, sialodochitis, retention cyst, and lymphoepithelial cyst. However given a history of trauma or surgery, the diagnosis can be done easily [2,3]. In equivocal cases, an elevated amylase level usually around 10,000 units/L in parotid secretion or imaging (Sialography) can help in establishing the diagnosis. Imaging modalities can determine the exact site of injury, location and extent of the lesion, and also the relationship of the lesion with respect to the facial nerve. It can also demonstrate the associated complications such as infection and hemorrhage in cysts[2,8].

Conventional sialography has been considered as the mainstay for diagnosis and evaluation of the sialocele , however it has many disadvantages like radiation exposure, pain during injection of contrast. It has certain limitations like failure to cannulate the ductal orifice in the presence of buccal mucosa scarring and upstream ductal system cannot be evaluated in presence of severe stenosis and transection of the duct[2,7].

MR Sialography is a promising non-invasive tool for evaluating the ductal system of major salivary glands. It has more advantages than conventional Sialography like noninvasive method, non-ionising radiation and ability to demonstrate up stream ductal system in cases of severe ductal stenosis [2,7]. MR Sialography has been performed using different sequences, such as fast spin-echo, CISS, modified RARE and HASTE pulse sequence. Heavily T2weighted sequences demonstrate the ductal anatomy and pathology of the ductal system. MRI was useful in providing anatomic localization of the focal cystic lesions [7,8].

A variety of surgical and nonsurgical treatments have been proposed for parotid sialocele. Conservative approaches are serial needle aspiration, antibiotics, compression dressings, radiation therapy and anti-sialogogues like atropine or glycopyrrolate[2,4,5]. Botulinum toxin injection has been used to treat parotid sialocele. Various surgical treatments are repair or reconstruction of duct, dochoplasty, tympanic neurectomy and duct ligation [5,6,9].

CONCLUSION:

Parotid gland sialoceles are relatively common complication following facial trauma or may be a complication of parotid gland surgery. Non-traumatic sialoceles are uncommon and may be sequelae of parotid gland infection. MR Sialography with a heavily T2-weighted sequence is a very useful non-invasive diagnostic tool for imaging of the duct system. Several treatments are currently available for salivary gland sialocele and are specifically chosen depending on the site of the injury

Figure 1

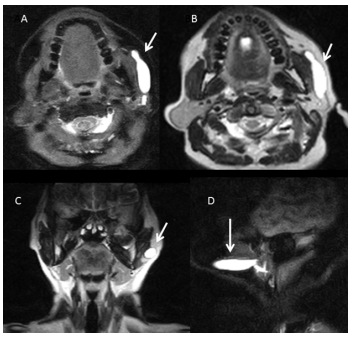

Figure 1 (A-D): (A) STIR Axial, (B) T2 Axial, (C) T2 Coronal, (D) STIR sag shows hyperintense cystic lesion measuring~ 49 x 14 mm in the left cheek in the region and course of left stensen's duct. Terminal ~ 1 cm Stenson's duct is not dilated (White arrows).

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