

A CASE REPORT ON SIALADENITIS

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Received on: 29/04/2023

Revised on: 19/05/2023

Accepted on: 09/06/2023

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ABSTRACT

Sialadenitis is an inflammatory or infectious condition in the salivary gland, the acute condition is more typically involved in the parotid and submandibular areas. Sialadenitis may cause by a bacterial or viral infection, radiation therapy, allergic reactions, and autoimmune reactions. Among the causes, about 10% of cases are seen in the pediatric population. The incidence of Radio Iodine-induced sialadenitis has been reported as 18% in all hospital settings. The endoscope technique is used to detect salivary infections, sialendoscopy is an efficient method for detecting infection in patients undergone RI therapy. Initial therapy includes hydration therapy, massage, pain relief by analgesics, and infection control by antibiotics. This particular condition commonly affects elderly patients above 50 years, especially having salivary gland stones. The present report describes a case of sialadenitis in a 70-year-old female patient. Commonly affects the geriatric patients with history of any underlying conditions or other comorbidities.

KEYWORDS: Sialadenitis, Sialendoscopy, Sialolithiasis.

1. INTRODUCTION

Sialadenitis is an inflammatory or infectious condition in the salivary gland that affects the parotid (in front of the ear), sub mandible (under the chin) of the small salivary gland^[1] caused by viruses like mumps, bacteria (staphylococcus aureus) dehydration, Sjogren's syndrome, poor oral hygiene and drugs like diuretics, antihistamines, and beta blockers.^[2] The inflammation of large salivary glands can be recognized easily by the symptoms of pain, swelling, tenderness, and redness.^[3] If proper treatment is not given it can spread into deep tissues of the head and neck, severe infection. Other symptoms are dry mouth, fever, swelling in the cheek, and decreased saliva. If sialadenitis is due to any infection it can spread by sneezing, coughing, or by having contact with the infected person and if it is due to salivary stone then there is no risk of contamination.

It is diagnosed by physical examination and the salivary gland will be examined by an endoscopy, an imaging test such as computed tomography, or by ultrasound. In some cases, they might consult an otolaryngologist for further evaluation.

The condition is mainly treated by using antibiotics, home remedies, and surgical treatments. If treatments are not supported then they will go for a surgical procedure

in which they drain the infection and remove stones or any other blockages which is called sialendoscopy.^[4]

2. CASE PRESENTATION

A 70-year-old female patient presented to the emergency department with a history of blisters beneath the tongue, swelling and tenderness for the last four days, a localized temperature on the right submandibular region for two days, and odynophagia on the previous day. She had no history of cough, voice change, drooling, neck stiffness, mouth pain, shortness of breath, or any other complaints. The patient had a medical history of Hypertension, Endometrioid adenocarcinoma endometrium, and medication history includes Telmisartan, Chlorthalidone, and Cilnidipine. The surgical interventions undergone were Brachytherapy, total abdominal hysterectomy with bilateral salpingo-oophorectomy.

The patient had normal vital signs, hemogram, Urea, Creatinine, LFT, except ESR (108mm/Hr), CRP (57.6mg/L), WBC (16920 lakhs/cumm), Sodium (127mmol/L). On examination, CT neck (plain) revealed 5mm calculus in the distalmost part of the right submandibular duct (likely at the sublingual caruncle) shown in the figure 1a and 1b. There is whenever mild dilation is seen at the right submandibular gland with surrounding fat stranding suggestive of sialadenitis.

There is also mild soft tissue swelling in the right half of the supraglottic. The thyroid is normal size but shows 15 mm-sized hypodense lesions, one in the isthmus and another in the right lobe. The left submandibular gland is normal.

The patient was taken for further evaluation by the ENT department and experts diagnosed the case as sialadenitis based on the physical examination, blood tests, and radiologic examination. On the first day, the patient was given iv antibiotics, mouthwash, pain medications, antihypertensive medications, and repeat monitoring of the vitals.

On the second day, she had stable vitals, but persisting swelling on the right submandibular region and was



Figure 1-a: (Calculus of 5mm).

shifted to ENT OPD, the physician changed the frequency of chlorhexidine mouth wash for three to four times a day with iv hydration, the addition of another class of antibiotic and diet with salt restriction. The patient experienced positional vertigo and due medications were given.

On the third day morning complaints of constipation were treated with stat medicine, stable vitals, and positional vertigo was managed by EPLEY maneuver, also have persisting swelling on the right-side mandibular area other medicines were continued.

On the fourth day swelling and tenderness were found to be reduced with normal blood tests and stable vitals, no other complaints were reported hence discharged.



Figure 1-b: (Calculus of 5 mm).

3. DISCUSSION

Sialadenitis is usually associated with a metabolic condition. Acute sialadenitis is usually due to bacterial or viral infections with swelling in the affected areas and rapid onset pain. Chronic sialadenitis occurs due to the obstructions like calculi, stricture, and swelling without erythema. Clinical manifestation can be done by using a visual inspection of glands to observe the number of glands involved, erythema of overlying glands, tenderness, texture, pressing of glands whether any discharge was produced, and the type of discharge. Fever may present. Here the patient presented with the symptoms of swelling in the right submandibular areas, mouth pain, and blistering below the tongue, she had no fever or other complaints. A focused cranial nerve exam is necessary to evaluate the facial nerve and trigeminal nerve, especially the mandibular branch. An examination of cervical lymph nodes is also required. Cervical lymphadenitis may be present in cases of infections. Chronic or recurrent sialadenitis causes repeated episodes of pain and swelling, often with meals and recurrent infections. Obstruction of salivary flow within the duct causes swelling of the gland.

The evaluation of sialadenitis can be done by culture and sensitivity of the exudate from the duct, complete blood count imaging tests include x-ray, ultrasound, MRI in case of neoplasia, CT scan, DTA Sialography, Nowadays High frequency-based ultrasound sonographic examination is the main test for sialadenitis, salivary endoscopy is the beginning test for the sialadenitis.^[5,6,7] In this case, the condition was identified by the

examination of complete blood count (ESR was elevated – 108, Lymphocyte was declined – 10.1, WBC elevated – 16900 and the imaging test (CT neck and X-ray) shows calculus in the right mandibular duct and shows mild dilation of the right submandibular gland with surrounding fat stranding suggestive of sialadenitis. Treatment was based on the duration whether it was acute or chronic. For Acute sialadenitis treatments includes hydration, analgesics (e.g., NSAIDs, Acetaminophen), warm compresses, and sialagogues Empirical antibiotic therapy with amoxicillin/clavulanate or clindamycin is used. In case of severe cases with significant swelling, IV antibiotics, and corticosteroids are used. Intravenous antibiotics may be necessary for severe cases. Symptoms of abscesses can be treated by using incision and drainage. Chronic sialadenitis is treated by using broad-spectrum antibiotics along with hydration, oral hygiene, and pain relief. In cases of infection, broad-spectrum antibiotics are added. salivary gland stone removal should take place, using interventional sialendoscopy or direct surgical removal in case of sialolithiasis.^[7,8] Here the patient was treated with iv fluids and iv antibiotics (Ampicillin, Gentamycin), Chlorhexidine mouth was also used, and Acetaminophen is used to relieve the pain.

As we know sialadenitis is the inflammation of the salivary gland which affects the parotid, submandibular, and small salivary glands. It mainly affects the population above 50 years especially those who are having or have no salivary gland stones. Even though it is rare there are about 10% of cases diagnosed as

sialadenitis. A study which was conducted between 1970 and 1998 showed that about 53% of patients were affected due to *S. aureus* and 31% were affected due to streptococci species hence we can say that *S. aureus* is the organism that mainly causes this particular disease. Radioiodine treatment used for hyperthyroidism and thyroid cancer can also cause sialadenitis.^[9] 115 participants were included in the study and 18% of the participants were diagnosed with sialadenitis. Recent studies show that Mikulicz disease, Kuttner tumor, and orbital pseudotumor show a high level of IgG4 and these elevated levels of IgG4 cause sialadenitis.^[10]

It was in 1896 the first case of chronic sclerosing sialadenitis was reported. A 28-year-old male patient was affected and reported by Kuttner. It was diagnosed by an imaging test. Sialadenitis is a benign inflammatory lesion and there are no reports of malignancy. This is a rare disease and mainly occurs in the submandibular gland.

4. CONCLUSION

Sialadenitis is a rare condition even though the emergence of sialadenitis may increase due to diabetes, Metabolic disorders, Nutritional deficiencies, Sialolithiasis, and Cancer conditions. Through frequent check up's we can reduce the risk, severity, and complications of sialadenitis. Frequently monitoring blood glucose levels and consulting dental clinics can reduce the incidence, severity, and complications of sialadenitis. Early detection of this particular disease helps to improve the quality of life, especially in the geriatric population. Early detection of the cause will help to prevent this severe chronic inflammation.

ACKNOWLEDGEMENT

The authors declare that the contents of this article are their original unpublished findings and that they did not receive any funding for the writing of this manuscript.

Informed consent

Before taking this case the patient and their families were informed and informed consent was acquired.

Conflicts of interest

The authors have no conflicts of interest to declare.

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