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MANAGEMENT OF ACUTE BACTERIAL SIALADENITIS
(Case Report)

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ABSTRACT

Background : Sialadenitis is the inflammation of the salivary gland. Predisposing factors for acute sialadenitis include diabetes mellitus, hypothyroidism, renal failure, and Sjögren syndrome. The most common bacterial cause of acute bacterial sialadenitis is *Staphylococcus aureus*. **Purpose :** to report the management of Acute bacterial sialadenitis, especially the recommendation antibiotic for treatment of Acute bacterial sialadenitis. **Case :** Woman, 34 years old, suffered the pain of left buccal especially when she was eating. There was a low-grade fever. She has been suffering since 3 days ago, but she did not give any drugs. The intra oral examination showed the stenoni of parotid gland was swollen and painful, and erythematous. The purulent discharge often was observed from the duct orifice when the gland was checked by palpation. The patient was diagnosed as Acute Bacterial sialadenitis. **Case management :** Amoxycillin caplet 500 mg three times a day, Ibuprofen caplet 400 mg three times a day, and oral rinse contains aloe vera gargle three times a day for seven days, then the instruction to patient took a lot of rehydration. After seven days, Cefadroxil capsul 500 mg two times a day replaced amoxycillin caplet 500 mg three times a day. **Conclusion :** It can be concluded that Cephalosporins display superior pharmacokinetics in saliva and cover the spectrum of all bacteria implicated in sialadenitis.

Keywords : Acute Bacterial Sialadenitis, Amoxycillin, Cefadroxil, Management

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INTRODUCTION

Sialadenitis is the inflammation of the salivary glands, the glands that produce saliva in our mouths. Sialadenitis, an acute infection, commonly affects the parotid gland. The microbiology of infection of the submandibular and sublingual glands has rarely been reported. Sialadenitis is usually caused by bacterial or viral infection, but the disorder can occasionally be due to other causes, such as trauma, radiation and allergic reactions.^{1,2,3}

Predisposing factors for acute sialadenitis are diabetes mellitus, hypothyroidism, renal failure, and Sjögren syndrome. The use of certain medications, especially those with anticholinergic properties, can also reduce salivary flow.⁴ The bacterial spectrum of salivary gland infections involves *Staphylococcus aureus* and *Streptococcus viridans*, but also includes gram-negative bacteria and anaerobes.⁵ The most common bacterial cause of

acute sialadenitis is *Staphylococcus aureus*, which has been cultured in 50% to 90% of cases. Streptococcal species and *Haemophilus influenzae* are also common causes.⁶

The incidence of acute suppurative parotitis has been reported at 0.01–0.02% of all hospital admissions. The submandibular gland is suggested to account for approximately 10% of all cases of sialadenitis of the major salivary glands. No race, age and sex predilection. Sialadenitis as a whole tends to occur in the older, debilitated, or dehydrated patient.¹

The manifestation of bacterial sialadenitis are specific. Patients with acute sialadenitis typically present with acute onset of pain and swelling of the affected gland. Physical examination may reveal induration, edema, and localized tenderness pain. Massage of the gland may express pus from the respective intraoral orifice.³

The current recommendations for the treatment of bacterial salivary gland infections are

mainly empirical. Therefore, an evidence-based literature review was conducted to identify antibiotics with favorable pharmacokinetics in saliva and to establish recommendations for the antibiotic treatment of sialadenitis. The other treatments are rehydration of the patient, encouraging salivary flow, gland massage, and antibiotics. If an abscess occurs, it will need surgical draining.⁷

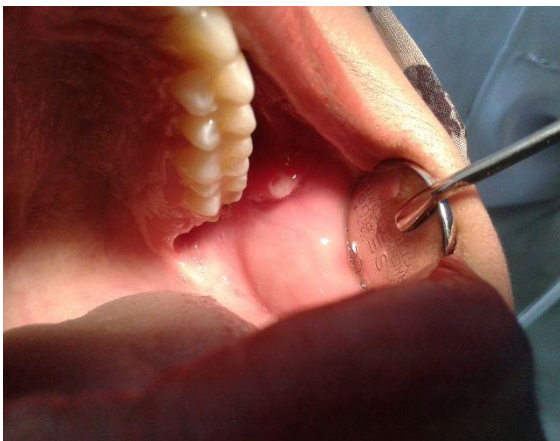
CASE

Woman, 34 years old, suffered the pain of left buccal especially when she was eating. There was a low-grade fever. She has been suffering since 3 days ago, but she did not give any drugs. Base on the patient history, she had suffered mumps when she was child. This symptoms were happened for the first time.

CASE MANAGEMENT

Visit 1 (the 3rd day)

The extraoral examination showed the normal manifestation, there was no swollen cheeks. The intra oral examination showed the stenoni of parotid gland was swollen and painful, and erythematous. The purulent discharge often was observed from the duct orifice when the gland was checked by palpation. She had a good oral hygiene and did not have the systemic disease.. The patient was diagnosed as Acute Bacterial sialadenitis. Because she did not have the history of gastritis so that she was prescribed by Amoxicillin caplet 500 mg three times a day, Ibuprofen caplet 400 mg three times a day, and oral rinse contains aloe vera gargle three times a day for seven days, then the instruction to patient took a lot of rehydration



Picture 1. The stenoni of parotid gland was swollen and painful, and erythematous. The purulent discharge from the duct orifice when the gland was checked by palpation.

Visit 2 (The 9th day)

The patient told her left buccal was not pain, especially when she was eating. She was not fever anymore. The extra oral examination showed

the normal manifestation. The intra oral examination showed the stenoni of parotid gland was white macula, the edges clearly defined, redness around, and not pain. The purulent was not found by palpation. She was asked to consume Cefadroxil capsul 500 mg two times a day, and oral rinse contains aloe vera gargle three times a day for five days, then the instruction to patient took a lot of rehydration.



Picture 2. The stenoni of parotid gland was white macula, the edges clearly defined, redness around, not pain, and the purulent was not found by palpation.

Visit 3 (The 15th day)

The patient told her left buccal was not pain. The extra and intra oral examination showed the normal manifestation. The drugs was not prescribed anymore. Patient had recovered.



Picture 3. The normal manifestation of stenoni of parotid gland

DISCUSSION

The symptoms of acute bacterial sialadenitis are inflammation, swelling of glands, pain, fever, malaise, redness of overlying skin, and pus from duct.³ It is like the clinical manifestation of the case report. Pasien was diagnosed as acute bacterial sialadenitis

In this case, the patient was given Amoxicillin caplet 500 mg three times a day for seven days, but in visit 2 she was prescribed Cefadroxil capsul 500 mg two times a day for five days. Empiric antimicrobial therapy is initially directed at gram-positive and anaerobic organisms, which are often penicillin-resistant, so augmented penicillin that contains beta-lactamase inhibitors are recommended. Culture directed therapy is administered, if possible. Acute suppurative sialadenitis rare lead to be the abscess formation.³

For *Staphylococcus aureus*, amoxicillin had a long bacteriostatic phase.³ Amoxicillin with its comparable clinical efficacy to other antibacterials and favourable dosage, pharmacokinetic profile and tolerability is an excellent candidate to treat various infectious diseases. As it is less effective against gram negative organisms. It is the one area where major development is required. Progression in work is also required to investigate new routes of administration and dosage forms with more efficacies to reduce the dose and associated side effects.⁷

There is evidence that suggests the effective use of b-lactam antibiotics, especially later-generation cephalosporins, as first-line therapy in the conservative treatment of sialadenitis. Their pharmacokinetics, spectrum, and side effects have been shown to meet the postulates for antibiotics necessary for the treatment of sialadenitis.⁶ Base on that theory, in visit 2, patient was prescribed Cefadroxil capsul 500 mg two times a day for five days. Cefadroxil capsul 500 mg two times a day replaced amoxicillin caplet 500 mg three times a day. It is also supported by the inflammation of clinical manifestation as the redness around steno of parotid gland, and not pain. It can be concluded that Cephalosporins display superior pharmacokinetics in saliva and cover the spectrum of all bacteria implicated in sialadenitis.

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