

Uremic Stomatitis: Report of Two Cases

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ABSTRACT

Uremic stomatitis is a rarely reported oral mucosal disorder associated with renal disorder. In this article, we are reporting two cases who had chronic renal disorder, also review in detail about the current knowledge of oral and dental aspects of renal failure and there treatment modalities.

Keywords: Renal failure, Uremic stomatitis, Pseudomembrane.

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INTRODUCTION

Uremic stomatitis is a rarely reported oral mucosal disorder possibly associated with longstanding uremia in chronic renal failure patients. It was first mentioned by Etienne Lancereaux in 1887 and described by Barié in 1889.¹ With impaired renal function, a decrease glomerular filtration rate (GFR), and accumulation and retention of various products of renal failure changes the oral cavity progressively through an azotemic to a uremic state. In studies of renal patients up to 90% were found to have oral symptoms of uremia.² There have been only a few number of relevant reports noted in the literature. In this article, two case reports of uremic stomatitis with different clinical features are mentioned.

CASE REPORTS

Case 1

A 35-year-old female was referred here for severe burning sensation in mouth since 1 week. She also complained of dysgeusia since 2 months, was continuous and had no notable initiating or precipitating features.

The patient was married (housewife) and had an abortion 1 year back spontaneously at 2 months of gestation. She also had a history of fever with cough, severe headache with vomiting, exertional dyspnea since 2 months. She was diagnosed as chronic renal disease due to glomerular nephritis associated with severe hypertension and grade 4 hypertensive retinopathy. Extraoral examination revealed pallor, fatigue, hypertensive 210/110 mm Hg, uremic oral malodor. There was no cervical lymphadenopathy, and the cranial nerves were grossly intact. Intraoral examination revealed adherent white plaques of the floor of the mouth, buccal mucosa, labial mucosa, lateral borders of the tongue and gingivae (Figs 1 to 3). Very poor oral hygiene with generalized periodontitis. On investigation, Hb—8.6 gm/dl, BUN 72.8 mg/dl, creatinine—10.13 mg/dl, S sodium—133.5



Fig. 1: Case 1: Uremic frost on lower labial mucosa



Fig. 2: Case 1: Uremic frost on ventral surface

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Fig. 3: Case 1: Pseudomembranous frost on buccal mucosa

mmol/l, S potassium—5.7 mmol/l, HIV and hepatitis B were negative. In view of the extensive nature of the oral lesions, uremic stomatitis was judged to be the working diagnosis; in differential diagnosis chronic hyperplastic candidiasis were considered.

The patient was treated with analgesics, antibiotics (tetracycline), 100 mg clotrimazole, chlorhexidine mouthwash and followed up every 3 days. Patient was also advised to maintain a proper oral hygiene lesion gradually subsided after 1 week which then the patient underwent renal dialysis. Completely resolved after 1 more week while the patient was still continuing the topical medications.

Case 2

A 49-year-old male patient came with a complaint of ulceration on tongue since 1 week. He was under treatment for pyelonephritis since 10 years. On examination, he was moderately build and nourished. Intraoral examination revealed mucosa on the left side involving ventral, lateral surface of tongue, gingival and buccal mucosa were covered with a thick exudates and pseudomembrane (Fig. 4). Also, an ulcer of size 2 × 2 cm on left posterolateral border of tongue covered with a pultaceous coat. On investigation Hb—10.6 gm/dl, creatinine—15.13 mg/dl, S sodium—120.5 mmol/l, S potassium—3.6 mmol/l, BU—102 mg/dl, HIV and hepatitis B were negative. Diagnosis of uremic stomatitis were made differential diagnosis of traumatic ulcer and chronic hyperplastic candidiasis were considered.

Treatment targets of improvement of urea blood concentration and the underlying renal failure, supported by increased oral hygiene with antiseptic mouthwashes and antimicrobial/antifungal agents. Patient was treated with analgesics, antibiotics (tetracycline), 100 mg clotrimazole, hydrogen peroxide mouthwash and followed up every

3 days. White lesion and ulcers completely resolved after 3 weeks while the renal parameters of the patients were still elevated (Fig. 5).

DISCUSSION

Uremic stomatitis represents a relatively uncommon intraoral complication seen, mostly, in cases of end-stage renal disease or undiagnosed/untreated chronic renal failure.

Etiology of this remains unknown although it has been suggested that it may be due to raised levels of ammonia compounds.³ Ammonia is formed through the action of bacterial ureases modifying salivary urea which may be raised in affected individuals.⁴ It has been suggested that stomatitis appears when blood urea levels are higher than 300 mg/ml,⁵ although some cases reported mucosal changes at urea levels of less than 200 mg/ml.^{6,7} In our cases, 72.8 mg/dl and 102 mg/dl were found respectively (normal range—8-18 mg/dl), also, as a chemical burn or as a general loss of tissue resistance. Other possible causes include hemorrhagic diathesis,



Fig. 4: Case 2: Pseudomembranous uremic frost on left side buccal mucosa



Fig. 5: Case 2: Post-treatment view

common in uremia, causing decrease of viability of the affected tissues allowing bacterial infection, which can result in ulceration and pseudomembrane formation.⁸

Four forms are recognized: ulcerative form, hemorrhagic form, nonulcerative pseudomembranous form and hyperkeratotic form.⁹ Last two forms are commonly seen and appear as white lesions. The hyperkeratotic form presents as multiple, painful white keratotic lesions with thin projections. Nonulcerative form may appear as erythemopultaceous form characterized by red mucosa covered with a thick exudates and a pseudomembrane. In these reported cases, first case was consistent with hyperkeratotic form and the second case had both ulcerative and nonulcerative pseudomembranous form. Tongue and floor of mouth are usually affected.

Other clinical features include xerostomia, uriniferous breath odor, unpleasant taste and a burning sensation. Oral complications also include candidiasis, viral and bacterial infections.

Diagnosis is based upon history, clinical feature and lab investigations, like blood urea level, renal function test and urinalysis.

Uremic stomatitis is a disease entity that requires both local and systemic therapy. The primary emphasis is directed toward the correction of the systemic pathology for proper resolution of the oral condition. Although it will subside after renal dialysis local treatment including mild acidic mouth rinse, such as dilute hydrogen peroxide, topical antimicrobials and topical anesthetics,

such as lidocaine for pain control. Proper maintenance of oral hygiene can improve the conditions.

Chronic renal failure has become common in present days due to the changes in lifestyle. A thorough understanding of oral manifestation associated with renal diseases is necessary for an oral physician to help the patients in need often life-threatening conditions at an early stage. Role of dentist may be pivotal as he may the first person to diagnose such patients, so, it is important to familiarize the oral manifestations of renal diseases and advice them with the importance of proper oral hygiene maintenance.

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