

CASE REPORT

## A Case of Oral Vassiculobullous Lesion – Systematic Approach Towards Diagnosis

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### Abstract

Vesiculobullous lesions are type of mucocutaneous disease that is characterized by formation of vesicles and bullae or blisters. The etiopathogenesis of these diseases are different, varies from infective to autoimmune. Some of the vasiculobullous lesions are life-threatening, if they are not diagnosed and treated at time. Often oral lesions appear first, before appearance of the skin lesions. In the present case a 54 years old patient was suffering from pan-oral vesicle formation followed by rapid rupture and formation of painful ulceration with difficulty to eat or drink for almost six months. (2018, Vol. 02; Issue 02: Page 21 - 25)

**Key words:** Vesiculobullous lesions, Vesicle, Bullae, Autoimmune.

### Introduction

Vesiculobullous lesions are type of mucocutaneous diseases where skin, oral and other mucosa of the body like conjunctiva or genitalia may be affected simultaneously or separately with formation of painful vesicle or blister followed by rupture to form ulcerations. The term 'vesiculobullous lesions' is a clinical term as a group of diseases with different etiopathogenesis and prognosis presents with same clinical manifestations.

Disease like Lichen planus, Herpes simplex, Pemphigus, Bullous pemphigoid, Erythema multiforme, Varicella, Herpangina, systemic lupus erythematosus( SLE), discoid lupus erythematosus( DLE), paraneoplastic pemphigus are fall in

the category of vesiculobullous lesions. Bullous autoimmune dermatoses have a common pathogenic mechanism involving binding of autoantibodies to specific adhesion molecules in epidermal or epithelial desmosomes and in some cases in the basement membrane zone of the epithelium or dermis (1). Some of these diseases has benign chronic clinical course but some causes significant morbidity and mortality, for example, prior to discovery of corticosteroids, the mortality rate of pemphigus vulgaris was 95 percent. Today, steroids and antibiotics has reduced the mortality rate, but still 30-40 percent patients die, either due to disease or due to side effect of the

medicines (2). On the contrary, viral diseases like Herpes simplex treated with anti-viral drugs and use of steroid can aggravate the situation. So, diagnosis is the key to treat vesiculobullous lesions.

### Case report

A 54 years old lady reported to the department of oral pathology with complain of ulceration in the mouth, severe pain during eating, bleeding from the ulcers for last six months. On examination there was crustations with yellowish slough on the lower lip (Fig 1).



Fig 1: Ulceration the lower lip and palate

Intra orally there were erythematous ulcerations with yellowish slough bilaterally on the buccal mucosa, posterior region of hard palate and soft palate (Fig 2).



Fig 2: Ulceration on buccal mucosa

She had a solitary blister on the back. The patient was on oral hypoglycemic drugs for last twelve years and was on the same medicine for last four years. She had visited various dental clinics, skin clinics during past six months. Two months back, in a private skin clinic provisional diagnosis of Herpes virus infection was made and serological test to determine serum IgM, IgG level against Herpes Simplex 1 and 2 was advised. The serum IgG level was high 2.90 which signifies reactive or positive result. Accordingly the patient was treated with oral antivirus drug, acyclovir 800mg, five times in a day for two weeks but without any clinical improvement.

After clinical examination and through review of past treatment history the provisional diagnosis of vesiculobullous lesion was made. Patient was advised routine blood test, serum blood sugar level, HIV1, HIV2, serum ANA (antinuclear antigen) assay followed by incisional biopsy. The blood reports were within normal range except blood sugar level, which was high (PP- 256mg/dl and fasting- 122mg/dl). ANA blood test was negative against all the target antigens. After giving prophylactic antibiotics (amoxicillin-500mg) for three days, incisional biopsy was taken from perilesional area on left buccal mucosa in relation to molars and tissue kept in 10% formalin for histopathological evaluation. Tissue processed at histopathological laboratory and haematoxylin and eosin stained slide reveals stratified squamous epithelium with splitting of epithelium above basal cell layer, acantholytic cells in the splitted area, chronic inflammatory

cells infiltrate in the superficial of the connective tissue, diagnostic of pemphigus (Fig 3, 4).

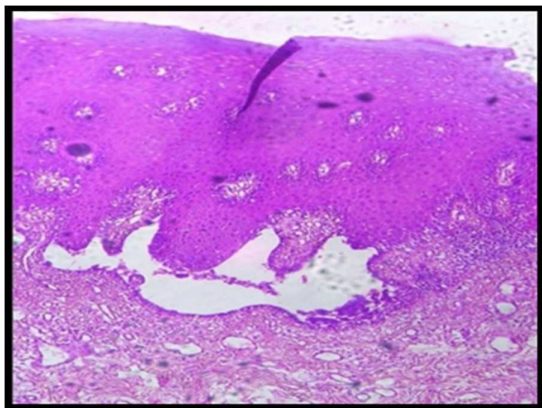


Fig 3: Splitting of epithelium above connective tissue (4X view)

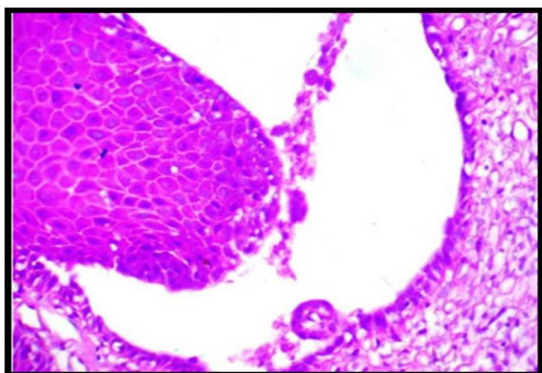


Fig 4: Splitting of epithelium above basal cell layer (100X view)

The treatment of pemphigus is systemic corticosteroids, but as the patient was diabetic, other immunosuppressive drugs like cyclosporine or azathioprine may be the alternative option. Initially, She was advised systemic corticosteroid, prednisolone-60mg/day in divided doses, with dramatic improvement of the condition in two weeks (Fig 5). After clinical evaluation we referred the case to dermatology department of any government medical college and hospital for the selection of appropriate drug with proper dose as

long term treatment usually required in these cases.

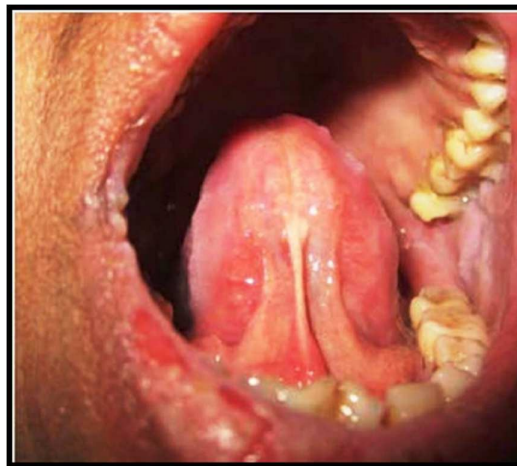


Fig 5: After two weeks of steroid therapy

### Discussion

Oral vesiculobulbous lesions may be infective or immunologically mediated. Diseases like primary herpetic gingivostomatitis is infective, where vesiculoulcerative eruption typically occurs in the oral and perioral tissues. The focus of eruption is expected at the original site of contact (3). Varicella zoster, measles, herpangina, hand-foot-mouth diseases are some other infective viral diseases where vesicle or blister formation occurs but these infective lesions are usually self limiting and complete remission occurs after clinical course is over. Other form of vesiculobullus lesions are mainly autoimmune or immunologically mediated and have a common pathogenic mechanism involving binding of autoantibodies to specific adhesion molecules in epithelial desmosomes and in some cases in the area of the epithelium-connective tissue junction at base-

ment membrane zone. The binding of circulating autoantibodies and the induction of an inflammatory reaction in the area of target structures lead to loss of adhesion with subsequent intra or subepithelial blister formation (4). In the present case, primary diagnosis of herpetic gingivostomatitis was made by private dermatologist considering the nature and severity of the disease and accordingly enzyme immunoassay test was advised to determine the serum IgM and IgG antibody level against herpes simplex 1 & 2. A high IgG antibody level was detected and oral antiviral drugs were prescribed. But, the presence of IgG-class antibodies to HSV types 1 or 2 indicates previous exposure, and does not necessarily indicate that HSV is the causative agent of an acute illness (5). Supplementing culture or molecular detection of HSV antibody by immunofluorescence assay was necessary for the diagnosis of acute HSV infection (6). The lesion was totally unresponsive to oral antiviral drugs indicates that the acute disease was not of viral infection origin. So, when the patient was reported to our hospital, we concentrated our investigation on autoimmune vesiculobulbar lesions like, pemphigus, pemphigoid, systemic or discoid lupus erythematosus (SLE & DLE), erythema multiforme. As the gold standard to detect any oral lesion is the incisional or excisional procedure followed by histopathological evaluation, we prepared the patient for the biopsy procedure and antinuclear antibody test (ANA) assay from serum by ELISA method was advised. Detection of anti-cellular antibodies of the ANA family is pivotal to the diagnosis of many

autoimmune diseases. ANA are a specific class of autoantibodies that have the capability of binding and destroying certain structures within the nucleus of the cells (7). Various antigens were screened in this method like dsDNA, PCNA, ribosomal P-protein, nucleosomes etc. The negative results signifies that the patient was not suffering from SLE, DLE or drug induced lupus erythematosus (8). In the histopathology there was supra-basilar splitting, signifies intra epithelial vesicle or bulla formation which is characteristic of pemphigus.

Pemphigus represents four related diseases of an autoimmune origin - pemphigus vulgaris, pemphigus vegetans, pemphigus erythematosus and pemphigus foliaceus. Pemphigus involves circulating autoantibodies that binds to keratinocytes disrupting cell-cell adhesion within the epithelium and producing acantholysis. Pemphigus vulgaris (PV), the most common and important variant involving oral mucosa, characterized by circulating pathogenic IgG antibodies against desmoglein 3 (Dsg3), about half the patients also having desmoglein 1 (Dsg1) auto-antibodies (9).

The treatment of pemphigus is systemic steroid, and the condition improves significantly after two weeks of oral prednisolone treatment. We referred the case to dermatology department of medical college as the patient was diabetic, and prolonged use of steroid might worsen the condition, so, it was necessary to shift to other immunosuppressive drugs as the patient may require lifelong treatment.

## Conclusion

Oral vesiculobullous lesions precede skin lesions in majority of cases. We dentists have to be very careful to diagnose and treat such lesions as some of them are life threatening. The diagnosis is confirmed through pathological examination and direct immunofluorescence testing in the healthy perilesional mucosa. All patients with extended steroid therapy are monitored for weight gain and advised to consume low calorie, low fat diet as well as proper maintenance of oral hygiene.

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