CASE REPORT

ORAL DESQUAMATIONS OF CLINICAL INTEREST – a report of 2 cases

ABSTRACT:

In oral medicine, dermatologic diseases have special attention as oral mucosal lesions may be a clinical feature or the only sign of various mucocutaneous diseases. Dentists are often the first to be consulted by patients who develop acute Oro-facial pain and the skin lesions associated with oral lesions and could be neglected by dentists due to lack of information and/or improper diagnosis. Vesiculobullous lesions are a distinct group of oral disorders characterized by formations of vesicles or bullae. Vesiculobullous lesions that involve the oral cavity are common features of a wide variety of diseases. The dental practitioner attempting to diagnose the oral ulcers and lesions is often confronted with several diseases having similar and identical clinical appearances. Also, the clinical identification of intact vesicle and bulla in the oral cavity is really a challenge due to regular irritation and the friable nature of the oral mucosa that makes the diagnosis of vesiculobullous lesions even more difficult as the differential diagnosis of the disease also includes ulcerative, immunological, neoplasms and systemic diseases.

Keywords: vesiculobullous diseases, oral mucosa, pemphigus vulgaris, mucous membrane pemphigoid, case report.

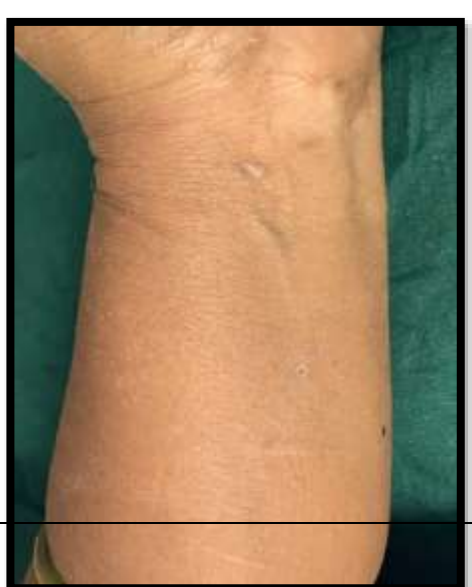
INTRODUCTION

Oral mucosa is often affected by many mucocutaneous autoimmune diseases which has varied clinical presentations of which most of them overlaps one another. Among those, Vesiculobullous diseases represent a heterogeneous group of dermatoses with widely varying clinical manifestations, which have been the subject of increase in the prevalence rates in recent years. Although in the majority of cases these diseases are characterized primarily by the presence of vesiculobullous lesions, their aetiology, pathogenesis, severity and trajectory may differ [1]. These include common pemphigus or pemphigus vulgaris, paraneoplastic pemphigus and benign mucous membrane pemphigoid which, clinically, are very similar when present in the oral mucosa [2]. Due to the varied nature of these diseases, it becomes quite difficult to arrive at an early diagnosis which ultimately can have a big impact on individuals' quality of life, influencing their social lives, as well as their physical and psychological wellbeing. [3] To manage these patients' early diagnoses is of prime importance and which are purely based on thorough history, clinical features and proper selection of investigations

Among the vesiculobullous diseases, pemphigus vulgaris (PV) and benign mucous membrane pemphigoid (BMMP) are prominent, and are characterized by the production of autoantibodies that are directed towards the constituents responsible for the adhesion of the epithelial cells to each other. Thus, this antigen-antibody reaction results in a pathological process clinically characterized by the appearance of blisters or vesicle on the skin and/or mucosal surfaces [4,5]

Case 1: A 42-year-old female patient reported to the department of oral medicine and radiology with the chief complaint of presence of burning sensation and bleeding from the gums for the past 3 weeks, for which she gives history of aggravation of symptoms during brushing and mastication. Patient gives history of same symptoms before 1 year for which she was treated by a private practitioner on which the given concern regressed but patient was not aware of medication given. A review of medical and family history was non-contributory. Her extraoral examination revealed presence of ruptured vesicles in forearm and hands for which patient gave history of vesicle formation before 3 days which ruptured

on its own leaving a scarred surface [figure1 a & b]. Her intraoral examination revealed presence of generalized erythematous, inflamed marginal and attached gingiva with generalised loss of contour and stippling and blunt interdental papillae with interspersed areas of desquamation. On palpation it is tender and soft in consistency and with evidence of bleeding and a positive nikolsky sign. On right and left buccal mucosa, presence of diffuse erythematous and erosive areas interspersed with greyish white linear striae's seen extending from commissural area till retromolar region. on palpation it is tender with no evidence of bleeding [figure 2]. Based on history and clinical examination, provisional diagnosis of Desquamative gingivitis suggestive of Pemphigus in right and left buccal mucosa was considered and a differential diagnosis of plasma cell gingivitis, lichen planus and pemphigoid were included. The patient was subjected to blood investigations prior to biopsy which revealed all the blood parameters were within normal range. The two tissue specimens of perilesional biopsy of gingiva was obtained for histopathological examination and direct immunofluorescence. Her histopathological investigation revealed presence of flattened ret pegs and subepithelial split at the basement membrane with a band of lymph plasmatic infiltration [figure3]. Her Direct immunofluorescence study revealed absence of all conjugates which might be due loss of immunoreactants in longstanding lesions which gives a false-negative interpretation. Based on history, clinical presentation and investigations, a final diagnosis of autoimmune disorder of skin and oral cavity suggestive of mucous membrane pemphigoid. The patient was treated with prednisolone 10 mg twice daily for 14 days and tapered to once daily for10 days and gradually the dosage was reduced. The lesions in skin as well as oral cavity shows reduction in severity in the fourth week follow up with no remission of lesions till date [figure 4].



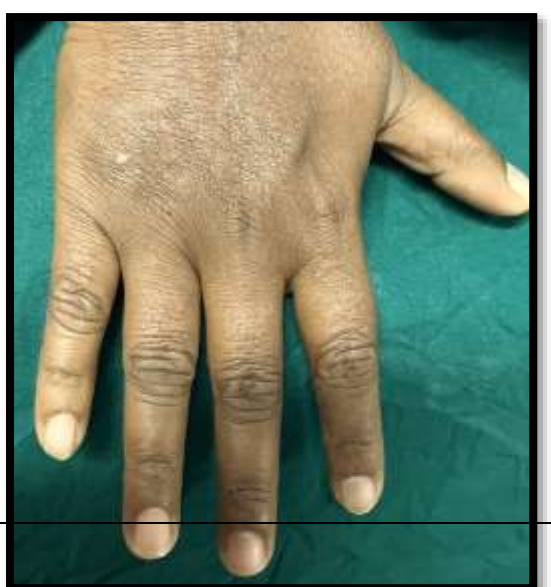


Figure 1 [a and b]: skin lesions on hands

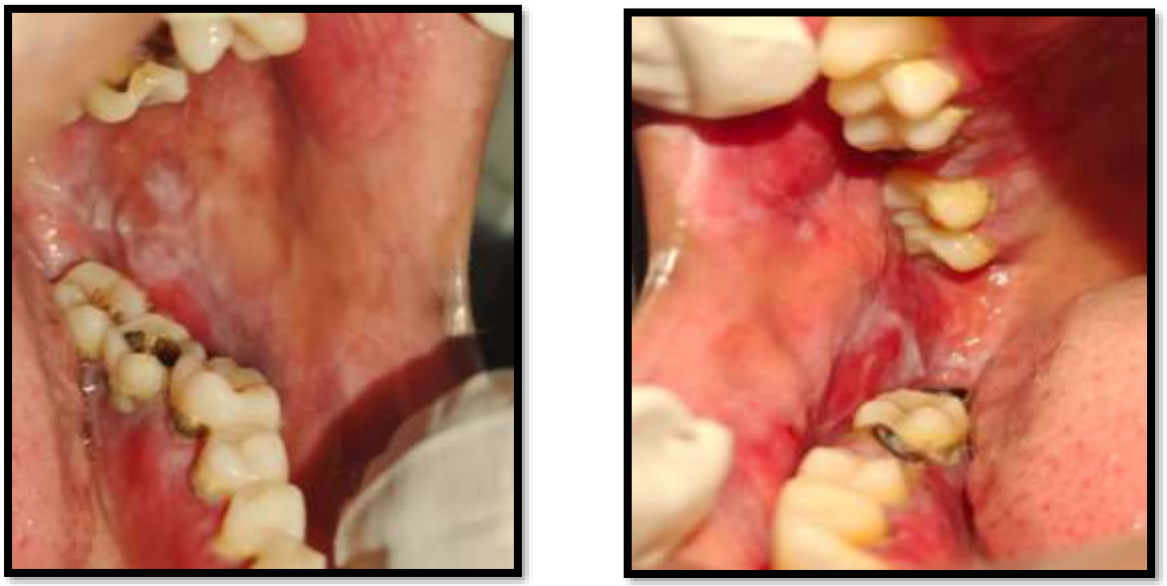


Figure 2 [a, b and c]: a (ulcerative surfaces seen on right buccal mucosa), b (ulcerative surfaces seen on left buccal mucosa) and c (desquamative gingivitis)

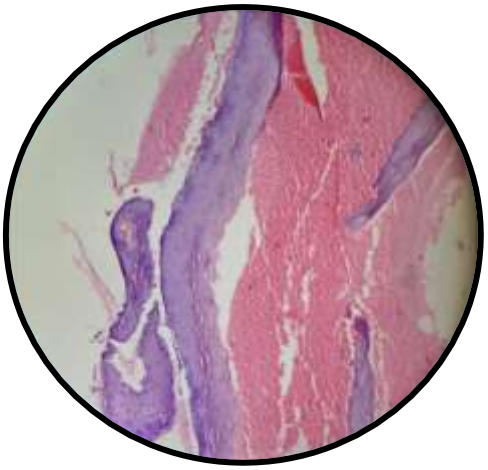
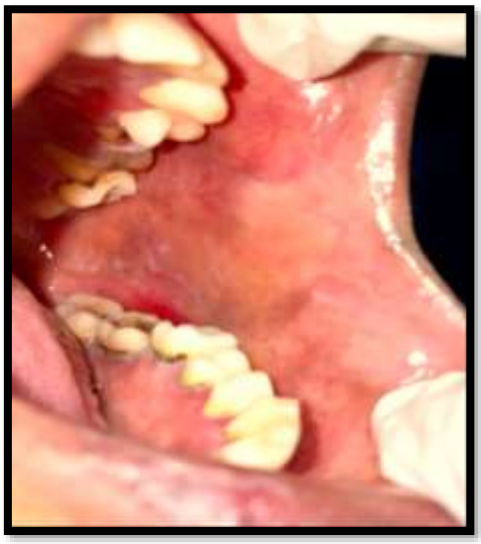


Figure 3: Haematoxylin and eosin (H&E) stained section showed subepithelial split at BMZ with lymphocyte infiltration



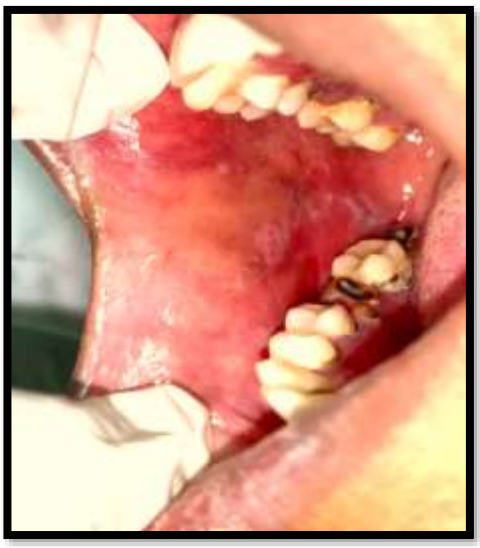


Figure 4: 1-month post treatment images of gingiva, right and left buccal mucosa shows remission of lesion

Case 2: A female patient of age 37 years reported with the chief complaint of presence of multiple ulcers in the oral cavity for past 1 month. Pt gives history of a single ulcer which started initially on lips and later around 10 days, ulcers stated to occur in multiple regions of oral cavity, patient gives history of skin allergy before 1 month for which she had taken over the counter medication and later gives history of developing ulcers. Her intraoral examination revealed presence of diffuse ulcerations with mild encrustations noted on the lower lip which is tender on palpation with evidence of bleeding[figure 5] and also there was presence of diffuse areas of ulceration on right and left buccal mucosa, upper labial mucosa and marginal and attached gingiva region of upper anteriors. The surface of the ulcer appears yellowish white interspersed with erythematous components, the edges of the ulcer is in continuous with the surrounding mucosa. On palpation it is tender with evidence of bleeding[figure 6]. Based on history and clinical presentation a provisional diagnosis of Drug eruptions of oral cavity was given with a differential diagnosis of erosive lichen planus, erythema multiforme, pemphigus. The patient was subjected to blood investigations prior to biopsy which revealed all the blood parameters were within normal range. The perilesional biopsy of right buccal mucosa was obtained for histopathological examination which revealed suprabasilar intraepithelial split with few acantholytic cells, the connective tissue exhibits chronic inflammatory infiltrate [figure7]. Based on history, clinical presentation and investigations A confirmed final diagnosis of pemphigus was given. The patient was treated with prednisolone 10 mg twice daily for 14 days and tapered to once daily for10 days and gradually the dosage was reduced. The lesions show reduction in severity in 1 month follow up with no remission of lesions till date[figure8].

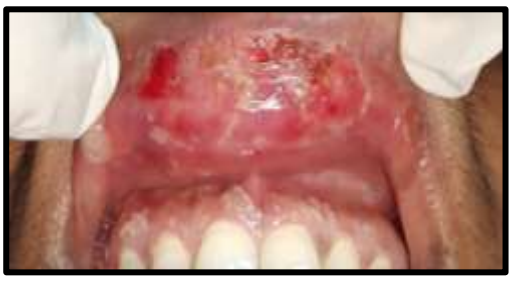


Figure 5 [a and b]: ulcerative surfaces with mild encrustations seen on upper and lower labial mucosa

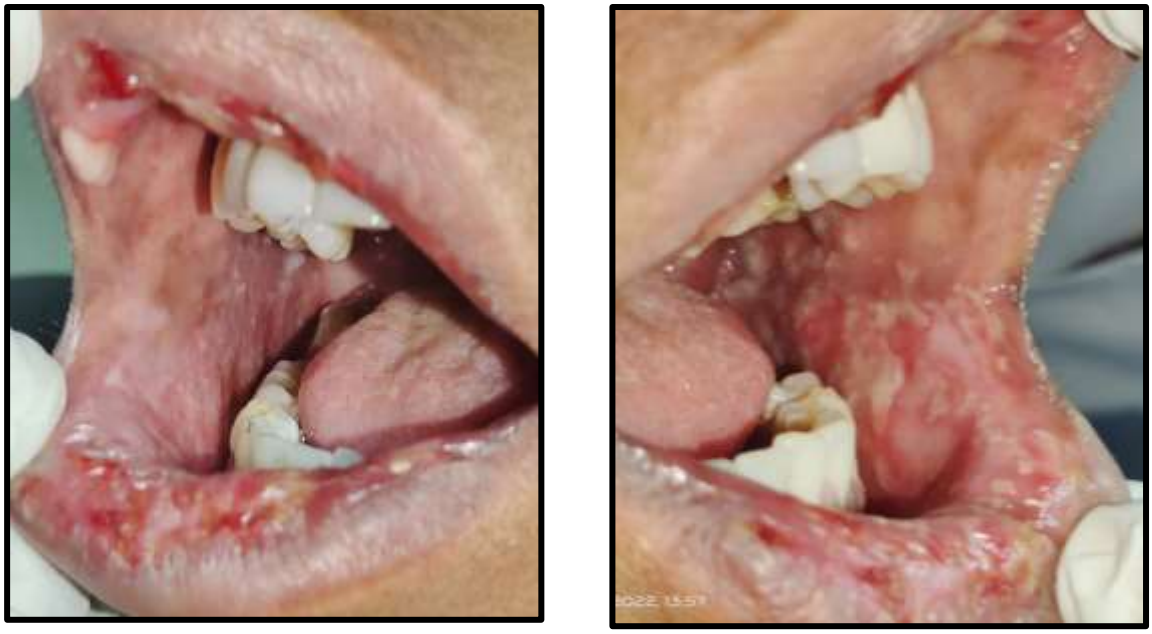


Figure 6 [a and b]: diffuse ulcerations in right and left buccal mucosa

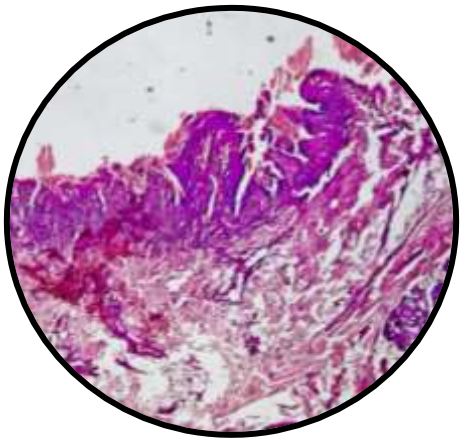
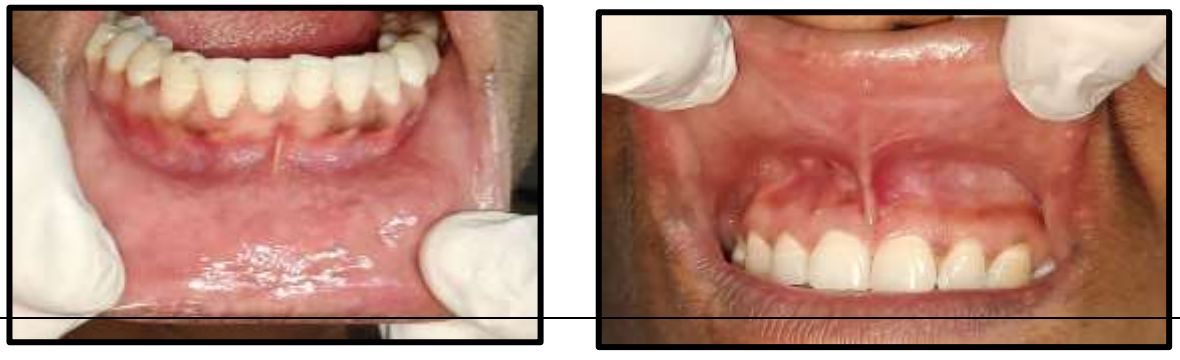


Figure 7: Haematoxylin and eosin (H&E) stained section showed suprabasilar intraepithelial split with few acantholytic cells, the connective tissue exhibits chronic inflammatory infiltrate



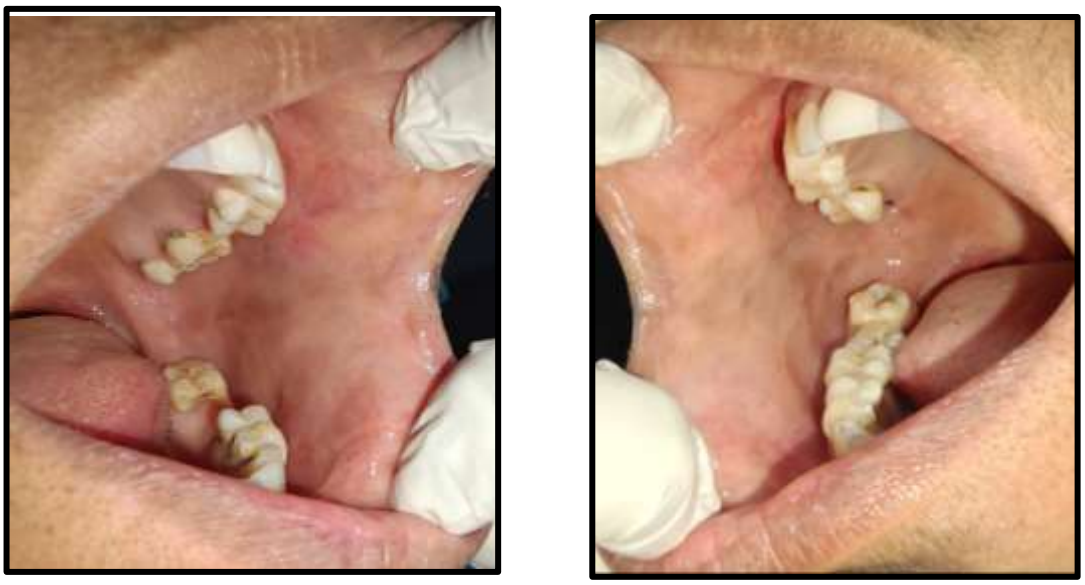


Figure 8: 1-month post treatment images of right and left buccal mucosa shows remission of lesion

Discussion:

Vesiculobullous mucosal disorders, includes some life-threatening diseases, manifest in the skin and mucous membranes and are clinically characterized by the appearance of blisters and secondary erosions [6]. Bullous autoimmune dermatoses have a common pathogenic mechanism involving binding of autoantibodies to specific adhesion molecules in epidermal desmosomes and in some cases in the area of the dermo-epidermal basement 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 subepidermal blister formation [7]. In cases of pemphigus, the IgG autoantibodies are targeted against desmoglein 3, a transmembrane glycoprotein adhesion molecule present on desmosome wherein pemphigoid the IgG autoantibodies are targeted

against the lamina lucida region of the basement membrane. The common aetiology behind any vesiculobullous disease could be of genetic, viral, autoimmune, drug induced, bacterial and even food additives [8]. Prospective studies suggest the incidence rates of vesiculobullous diseases are in the range of 14.5-20.4/million [9]. Most of the available epidemiological data results shows that Pemphigus Vulgaris is the most frequently reported disorder among the Pemphigus Diseases and Bullous Pemphigoid. [10] Clinical presentations of these diseases often overlaps one another, and diagnosis may not be easily made on the basis of clinical features alone. Hence the diagnosis consists of triad of criteria's: (1) the overall clinical picture, including patient history and physical examination; (2) histopathology; and (3) a positive direct immunofluorescence (DIF) microscopy, usually performed on perilesional skin, or serological detection of autoantibodies against the involved epithelial antigens [11]. Among these, immunofluorescence studies remain a gold standard yet in long standing cases it may give false negative results. Biopsy for suspected Vesiculobullous disease shows subepithelial separation in pemphigoid and Intraepithelial separation in pemphigus and cases of paraneoplastic pemphigus may show both intraepithelial and subepithelial separation [12]

when the clinical or microscopic findings are inconclusive, direct immunofluorescence is used to demonstrate the presence of immunoglobulins, predominantly IgG but sometimes in combination with C3, IgA and IgM, in the intercellular spaces. Indirect immunofluorescence has also been used to substantiate the diagnosis of pemphigus. A positive reaction in the tissue indicates the presence of circulating immunoglobulin antibodies [13]. Wherein cases of pemphigoid show Linear IgG and C3 at BMZ in direct immunofluorescence and Linear IgG at BMZ in indirect immunofluorescence assays [14]. The differential diagnosis for vesiculobullous disorders has a wide range of diseases due to their overlapping clinical features, and based on the clinical features and history given by the patient of above mentioned 2 cases, the differential diagnosis could be for case 1[plasma cell gingivitis, Lichen planus and Pemphigoid] and for case 2 [Erosive lichen planus, Erythema multiforme and Pemphigus].

The management of these vesiculobullous diseases starts from in suppressing the production of pathogenic antibodies, to stop new lesions, and to heal old ones. These goals are usually accomplished with the use of systemic glucocorticoids with or without steroid-

sparing agents. In addition, dapsone, hydroxychloroquine has been used with variable effect [15]. Commonly used treatments for pemphigus include corticosteroids and immunosuppressive drugs. There is still no standard treatment for pemphigus vulgaris data is not available from randomized trials using different drugs and methods. Recently, newer agents such as intravenous immunoglobulin therapy, rituximab, immunoadsorption using the Glo- Baffin adsorber system and immunoadsorption for rapid removal of desmoglein-reactive autoantibodies [16]. For pemphigoid the treatment options most frequently used are systemic corticosteroids alone or in combination with other immunosuppressive agents. In recent times, systemic dapsone, cyclosporine, sulfapridine as well as a combination of tetracycline and niacinamide have demonstrated therapeutic effect [17-19].

CONCLUSION

The myriad of cutaneous and mucosal hypersensitivity reactions with characteristic clinical presentation of lesions are triggered by certain antigenic stimulus, thus represents a various acute condition which involves both skin and mucous membrane. Due to the varied nature of these diseases with overlapping clinical signs and symptoms, it still remains a diagnostic dilemma in many clinical scenarios. As an oral physician, we play a vital role in diagnosing and management of those diseases by careful evaluation of combined history, clinical, histological and Immunofluroscene data. A multidisciplinary approach to treat these conditions along with proper follow up would aid in managing the acute nature of these diseases and improves the well-being of patients

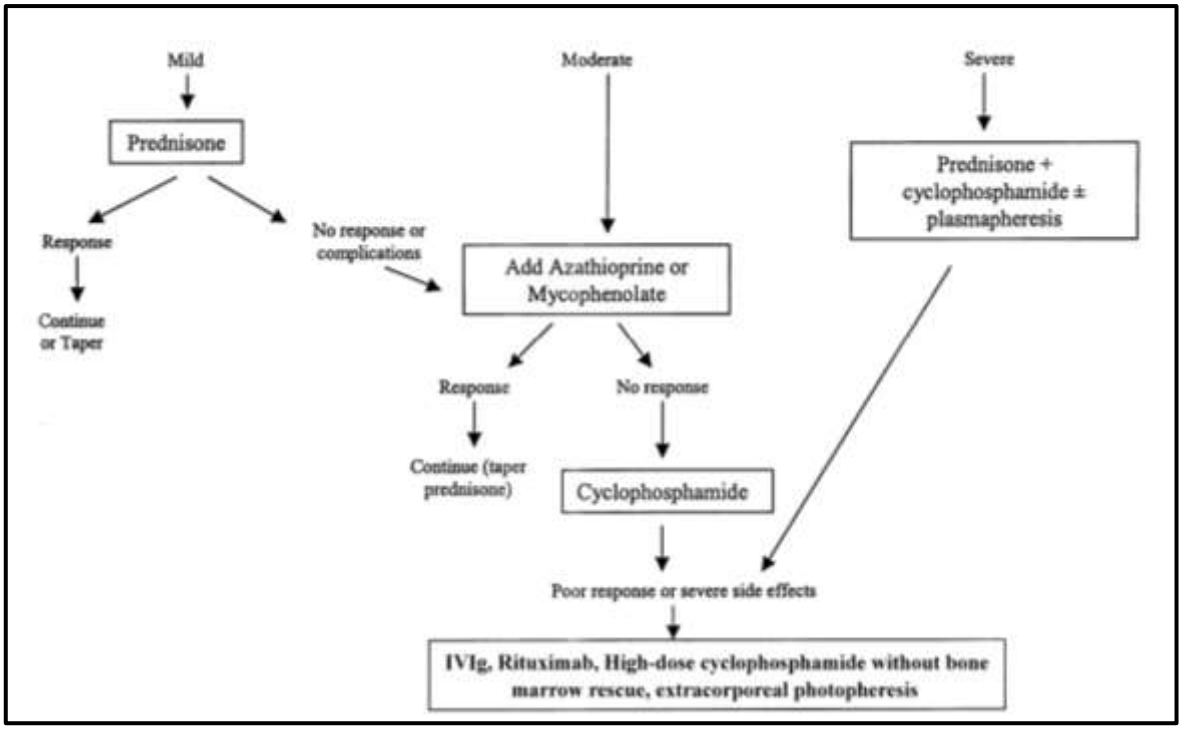


Figure 9: Management logarithm for pemphigus vulgaris [15]

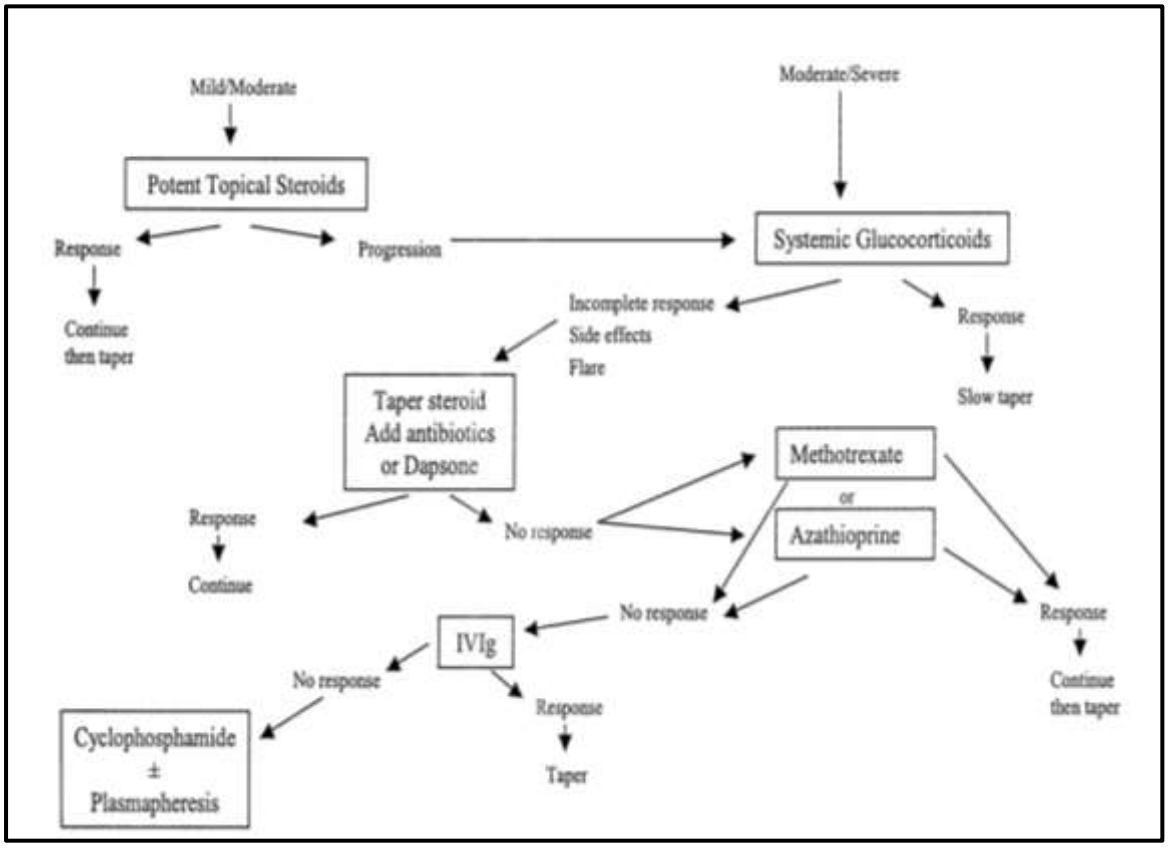


Figure 10: Management logarithm for Mucous membrane Pemphigoid [15]

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