Oral Pemphigus Vulgaris: A Case Report and Review

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ABSTRACT:
Pemphigus vulgaris (PV) is an autoimmune disease accounting for 80% of all cases of pemphigus. Oral mucosa is frequently affected in patients with PV, and oral lesions may be the first sign of the disease in majority of patients. In some patients, oral lesions may also be followed by skin involvement. Dental professionals are therefore in a unique position to recognize the oral manifestations of the disease, allowing early diagnosis and initiation of treatment. Here is a case of pemphigus vulgaris where the patient reported with chronic multiple ulcerations in oral cavity and the final diagnosis was made by the timely interpretations of the manifestations.

Keywords: Autoimmune disease, Nikolsky’s sign, Pemphigus vulgaris, Vesiculo-bullous lesion.

INTRODUCTION
Pemphigus is an autoimmune disease involving the skin and mucosa and is characterised by formation of bullae.1 Pemphigus affects 0.1-0.5 patients per 100,000 population per year. It is a group of diseases of which Pemphigus vulgaris is the most prevalent type. Involvement of mucosa and skin is present through the disintegration of cellular adherence or acantholysis, resulting in intradermal bullous disease.2,3 This article describes a case of pemphigus vulgaris where the patient reported with chronic multiple ulcerations in oral cavity and the final diagnosis was made by the timely interpretations of these manifestations.

CASE REPORT
A 26 year old woman presented with a chief complaint of multiple ulcers in the mouth and difficulty in swallowing since 1 month. History revealed that the patient noticed mouth ulcers which bled on brushing, and increased salivation was reported. Patient later experienced dysphagia for solid food which progressively increased in severity. She had consulted several other practitioners who prescribed antibiotics, antifungals, topical anti-inflammatory agents and mouth guard. However, she experienced no improvement and no diagnosis was ever made. Her medical history revealed she was being treated for hypothyroidism (thyroxine 25mcg) since 6 months. On general physical examination, the patient was moderately built, moderately nourished and pallor of lower palpebral conjunctiva was present. Extra oral examination revealed no abnormalities and no regional lymphadenopathy. On intraoral examination, diffuse erosive lesions were present over marginal gingiva and interdental papilla of buccal and palatal/lingual aspects of the maxillary and mandibular arch. Ulcerative lesions with irregular borders associated with flaccid bullae were present in the right lower retromolar region. (Figure 1 & 2) Application of pressure on normal healthy mucosa caused flaccid bulla thereby showing positive Nikolsky’s sign. Hard tissue examination reveals supragingival calculus. The clinical presentation of chronic multiple erosive lesions, oral ulcers, flaccid bullae and positive Nikolsky’s sign in this case, provisional diagnosis of vesiculo-bullous lesion affecting
the oral cavity was considered. Differential diagnosis included pemphigus vulgaris and anemic stomatitis.

Figure 1: Erosion on the maxillary palatal marginal and attached gingiva

Figure 2: Erosion on the Right and Left mandibular lingual marginal and attached gingiva

Routine haematological and biochemical investigations were within normal limits except haemoglobin of 6 mg%. The patient was subjected to indirect immunofluorescence which showed the presence of Desmoglein 3, (Figure 3) Tzanck smear showed positive for acantholytic cells and thus confirmed the diagnosis of Pemphigus vulgaris. Patient was advised the following medications:

Prednisolone 10mg thrice daily for 7 days, tapered to twice daily for another 7 days, followed by once daily for 7 days. 0.1% Triamcinolone acetonide ointment was also prescribed to the patient. After 30 days follow up, reduction in symptoms and healing of oral lesions were noted (Figure 4). Three months follow up revealed no new lesion. The palatal lesions had subsided. There was improved oral functions and overall, the quality of life.

Figure 3: Photomicrograph showing Desmoglein 3

Figure 4: Thirty days follow up after treatment

DISCUSSION

Pemphigus is derived from Greek word “Phemphix” meaning bubble or blister. Hippocrates and Galen described these diseases as early as 4th and 3rd century BC. Pemphigus was originally named by Wichman in 1791. Pemphigus is a set of potentially life-threatening autoimmune mucocutaneous diseases. The pemphigus group of diseases are characterized by the production of autoantibodies against intercellular substances and, therefore, categorized under autoimmune diseases. The intraepithelial lesions of pemphigus vulgaris is due to underlying mechanism, IgG autoantibodies binding to desmoglein 3, a transmembrane glycoprotein adhesion molecule present on desmosome. This binding of antibody activates protease and block the adhesion function of the desmoglein directly. In the lower layers of stratum spinosum, the disintegration of cellular adherence called
Acantholysis takes place which results in the formation of suprabasilar bulla. The first signs appear on the oral mucosa, in 70 – 90% of the cases. The oral lesions may be painful and may interfere with oral functions. The involvement of the labial and buccal mucosa, gingiva and soft palate, is most common although any oral site may be affected. Patient’s appetite is affected due to persistent, painful ulcers and a burning sensation in the mouth. The dermal lesions are seen several weeks or months after the mucosal lesions appear, which is characterized by flaccid and fragile blisters filled with clear fluid. These fragile blisters are broken, which leaves behind erosions surrounded by epidermal rings. Applying pressure on normal healthy skin causes either a bulla or an erosion; this effect is known as Nikolsky’s sign which was present in our case. This sign, although highly indicative of pemphigus, is not definitive and may be negative in many cases. The chair-side investigations include Tzanck smear and biopsy. Tzanck smear can detect acantholytic cells which showed positivity in our case while biopsy shows suprabasal acantholysis. Accessory adjuvant test, are Direct and Indirect Immunofluorescence and ELISA. Direct Immunofluorescence reveals intercellular deposits of IgG, IgM, IgA and C3 protein, and Indirect Immunofluorescence detects pemphigus antibodies in serum, to measure anti-Dsg1 and anti-Dsg3 and in our case only Dsg 3 was present, ELISA test is done using recombinant Dsg1 and Dsg3. When the diagnosis remains uncertain, Immunoprecipitation and Immunoblotting techniques can be used to confirm the diagnosis.

Local and systemic corticosteroid therapy is usually employed in management of Pemphigus Vulgaris. The initial aim of treatment is to induce disease remission. This should be followed by a period of maintenance treatment. Mild localized lesions in patients with low titers of circulating autoantibodies may be controlled, temporarily, with topical corticosteroid rinses or creams, e.g., 0.1% triamcinolone acetonide in orabase or 0.05% clobetasol propionate. Intravenous injection of triamcinolone acetonide (20µg/L) or paramethasone every 7-15 days can be used in refractory lesions, but the treatment must be withdrawn if symptoms do not improve after three injections. In cases of extensive oral lesions or involvement of other mucosa and skin, systemic corticosteroid therapy is prevailing choice of treatment for pemphigus as they are both effective and capable of inducing a rapid remission. At the initial stage, prednisone 0.5–2 mg/kg is recommended. Adjuvant drugs (Azathioprine or Cyclophosphamide) are usually used in combination with the aim of increasing efficacy and of having a steroid-sparing action, thereby allowing mitigate use of corticosteroids doses and alleviate corticosteroid side-effects. Before the dawn of corticosteroid therapy, pemphigus was fatal. Plasmapheresis incorporation with steroid-sparing immunosuppressants have been successful in controlling the disease. However, the unfavourable side effect profile of these drugs has led to the inducement of newer immunosuppressants such as Mycophenolate mofetil. This drug has significantly reduced the relapse of disease when corticosteroids are tapered. Once remission is induced, there should follow a period of maintenance treatment using the minimum drug doses required for disease control and during which intermittent blisters are admissible. Drug doses should be tapered slowly and patients should remain under regular follow-up while they remain on treatment. Ultimately, treatment may be withdrawn and there should be prolonged clinical remission. The prognosis of untreated oral lesions is a progression that involves other mucosae, including the skin. When treated, the prognosis depends on the age of the patient, the initial severity, the extent of lesions, the interval between symptom onset and start of treatment, and the drug dose required to control the disease, among other factors.
CONCLUSION
Pemphigus Vulgaris, a potentially fatal disease with most cases showing early oral manifestations, requires early diagnosis and early treatment to prevent future complications. In patients with Pemphigus Vulgaris who have lesions confined to the oral cavity, close follow up is essential, and referral to specialists should be undertaken promptly in the event of appearance of extraoral symptoms.

REFERENCES