

Awareness of diagnosis and management of oral pemphigoid lesions

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ABSTRACT

Aim: This study aims to evaluate the awareness of diagnosis and management of oral pemphigoid lesions. **Materials and Methods:** The study was conducted in Saveetha Dental College, Velappanchavadi, Chennai, Tamil Nadu. A total of 50 medical students of both genders (15 males and 35 females), who had finished their 1st and 2nd year clinical courses participated in this study. The 3rd year, final year students and interns who had been exposed to oral pathology and oral medicine classes were selected. The questionnaire comprising 10 points relating to the vesiculobullous lesion, types of pemphigoid lesions, diagnostic techniques used, and management of oral pemphigoid lesions was provided to all the students. The students will be explained about the questionnaire and asked to respond fearlessly. The questionnaire will be collected back from students and results will be analyzed. **Results:** In the present study, the students were aware of the term vesiculobullous lesions, the types of oral pemphigoid lesions, and the signs and symptoms of the disease. They were also aware of the diagnostic techniques used. However, they were not confident in choosing the best diagnostic techniques for evaluation of the disease. Most of the students answered that the best techniques for diagnosing oral pemphigoid lesions as indirect immunofluorescence which is only the confirmatory test. The students were aware that the corticosteroids are widely used in the treatment of the disease. The students were not confident enough to diagnose and treat such patients. **Conclusion:** Oral pemphigoid lesions, being a potentially fatal disease, require early diagnosis as well as early treatment to prevent future complications. Hence, there is a need to increase the awareness of students in diagnosing and treating the oral pemphigoid lesions.

KEY WORDS: Autoimmune, Diagnosis, Management, Pemphigoid, Signs, Symptoms

INTRODUCTION

Pemphigoid is a rare autoimmune disorder that can develop at any age, including in kids, but that most often affects the elderly. Pemphigoid is caused by a malfunction of the immune system and results in skin rashes and blistering on the legs, arms, and abdomen. Pemphigoid can also cause blistering on the mucous membranes.^[1,2] Mucous membranes produce mucus that helps protect the inside of your body. Pemphigoid can be found on the mucous membranes in your eyes, nose, mouth, and genitals.^[3,4] It can also occur during pregnancy in some women.

All types of pemphigoid are caused by your immune system attacking healthy tissue. They appear as rashes

and fluid-filled blisters.^[5] The types of pemphigoid differ in terms of where on the body the blistering occurs and when it occurs.

- **Bullous pemphigoid:** Bullous pemphigoid (BP) is a rare, autoimmune, chronic skin disorder characterized by blistering, urticaria lesions (hives), and itching. Less commonly these blisters can involve the mucous membranes including the eyes, oral mucosa, esophagus, and genital mucosa. It typically presents in older adults as a generalized intensely itchy blistering skin condition. The first symptom of BP is usually redness and itching of the skin. Within weeks to months, thin-walled, tense blisters with clear fluid centers (bullae) appear on the arms and legs (flexor surfaces), in the armpits (axillae), on the abdomen, and/or in the skin folds of the groin. Mucous membranes may also be involved but are less commonly seen than skin blisters.^[6] The blisters are usually tense (tight) and contain clear or blood-tinged fluid; they do not rupture easily

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with gentle contact. If the blisters do rupture, pain may occur, but healing is usually rapid and resolves without scarring.

- Mucous membrane pemphigoid (MMP) or cicatricial pemphigoid: MMP is a group of rare chronic autoimmune disorders characterized by blistering lesions that primarily affect the various mucous membranes of the body. The mucous membranes of the mouth and eyes are most often affected. The mucous membranes of the nose, throat, genitalia, and anus may also be affected. The symptoms of MMP vary among affected individuals depending on the specific sites involved and the progression of the disease. Blistering lesions eventually heal, sometimes with scarring. Progressive scarring may potentially lead to serious complications affecting the eyes and throat. In some cases, blistering lesions also form on the skin, especially in the head and neck area.^[7,8] MMP is characterized by the development of recurring blistering skin lesions affecting the mucous membranes of the body. These lesions may result in scarring of the affected area. The mucous membranes lining the mouth and eyes are most commonly affected. In some cases, the first sign of MMP is a red and blistered mouth. The gingiva, palate, and buccal mucosa may be affected. Involvement of the gums usually results in very red, tender gums that bleed easily and tend to slough off in shreds or sheets. Blistering lesions may spread to esophagus as well as larynx potentially resulting in dysphagia and hoarseness. In many cases of MMP, conjunctiva may be involved. Inflammation of conjunctiva or erosions forming on the conjunctiva may be the initial signs of ocular involvement in MMP.^[9] Ocular symptoms may include pain or grittiness of the eye, increased pressure within the eye (glaucoma), abnormal inward turning of the eyelid (entropion), and abnormal inward turning of the eyelashes (trichiasis) potentially causing irritation of the eyeball. Adhesions may form between the eyelids (symblepharon) or between the eyelid and the eye itself.
- Pemphigoid gestationis: Pemphigoid gestationis occurs in women during pregnancy or shortly after birth (postpartum period). Affected individuals develop reddish bumps or hives usually around the navel and the arms and legs. The rash may spread to affect other areas of the body and may be extremely itchy.^[10] Eventually, the skin lesions progress to form blisters. Pemphigoid gestationis usually resolves within 3 months without treatment.

Pathogenesis

Autoimmune blistering diseases occur when the body's immune system mistakenly attacks healthy tissue. In these blistering diseases, autoantibodies attack proteins that are essential to the proper function

of the basement membrane zone, a network of proteins that act as a "glue" that holds the epidermis to the underlying tissues of the dermis.^[11] In autoimmune blistering disease, the connection (adhesion) of the epidermis and dermis is damaged because autoantibodies attack specific structures or proteins, causing the epidermis and dermis to separate and blisters to form. In pemphigoid, autoantibodies react against proteins found at the junction where the epidermis and dermis meet, known as the dermal-epidermal junction (DEJ).

The present study was conducted to assess the awareness of diagnosis and management of oral pemphigoid lesions among dental students.

MATERIALS AND METHODS

The present study was conducted in Saveetha Dental College, Velappanchavadi, Chennai, Tamil Nadu. A total of 50 medical students of both genders (15 males and 35 females), who had finished their 1st and 2nd year clinical courses participated in this study. The 3rd year, final year students and interns who had been exposed to oral pathology and oral medicine classes were selected. A questionnaire was distributed to a total of 55 male and female students after approval and the students had given their consent. The questionnaire comprising 10 points relating to the vesiculobullous lesion, types of pemphigoid lesions, diagnostic techniques used, and management of oral pemphigoid lesions was provided to all the students. Students were asked to tick the option which they considered was the best. The students were directed to fill up the questionnaire within a stipulated time, independently, and in an unbiased manner, without mentioning their names or roll numbers. They were informed that the information furnished by them is for the research and evaluation purpose only and will be kept confidential. The complete sheets were collected and the data which were collected were then analyzed.

Questionnaire

1. Are you aware of the term vesiculobullous lesion?
 - a. Yes
 - b. No
2. Are you aware of the types of oral pemphigoid lesions?
 - a. Yes
 - b. No
3. What are bullous pemphigoid lesions?
4. What are cicatricial pemphigoid lesions?
5. Are you aware of signs of oral pemphigoid lesions?
 - a. Yes
 - b. No

6. Are you aware of symptoms of oral pemphigoid lesions?
 - a. Yes
 - b. No
7. Do you know the diagnostic techniques involved in oral pemphigoid lesions?
 - a. Yes
 - b. No
8. Best diagnostic techniques involved in diagnosis of oral pemphigoid lesions?
 - a. Indirect immunofluorescence
 - b. Direct immunofluorescence (DIF)
 - c. Biopsy
 - d. Clinical assessment
 - e. Serology test
9. What do you prefer for the treatment of oral pemphigoid lesions?
 - a. Corticosteroids
 - b. Intravenous immunoglobulin
 - c. Immunosuppressant
 - d. Anti-inflammatory agent
10. Are you confident to enough to diagnose and treat such patients?

RESULTS

The opinion of the students was as follows:

1. Are you aware of the term vesiculobullous lesion:

A total of 55 students (100%) agreed that they are aware of the term “vesiculobullous lesion .”
2. Are you aware of the types of oral pemphigoid lesions:

A total of 55 students (100%) agreed that they were aware of types of oral pemphigoid lesions.
3. What are bullous pemphigoid lesions?

Most of students answered that it was a bullae-like lesion, type of vesiculobullous lesions, autoimmune disease, etc.
4. What are cicatricial pemphigoid lesions?

Most of the students answered that it is also known as MMP; it causes entropion, trichinosis and symblepharon, autoimmune disease, etc.
5. Are you aware of signs of oral pemphigoid lesions?

A total of 55 students (100%) answered that they were aware of signs of oral pemphigoid lesions.
6. Are you aware of symptoms of oral pemphigoid lesions?

A total of 55 students (100%) answered that they were aware of symptoms of oral pemphigoid lesions.
7. Do you know the diagnostic techniques involved in oral pemphigoid lesions?

A total of 53 students (96.4%) answered that they were aware of diagnostic techniques involved in oral pemphigoid lesions. 2 students (3.6%) were

not aware of diagnostic techniques involved in oral pemphigoid lesions.

8. Best diagnostic techniques involved in diagnosis of oral pemphigoid lesions?

A total of 12 students (21.8%) opted for indirect immunofluorescence (IIF). 37 students (67.3%) opted for DIF. 5 students (9.1%) opted for biopsy. 1 student (1.8%) opted for clinical assessment.
9. What do you prefer for treatment of oral pemphigoid lesions?

A total of 45 students (81.8%) opted for corticosteroids. 10 students (18.2%) opted for intravenous immunoglobulin.
10. Are you confident to enough to diagnose and treat such patients?

An average score of 6.45 was given by students. The lowest score of 3 and the highest score of 10 was given by students to evaluate their level of confidence in diagnosing and treating such patients.

DISCUSSION

A diagnosis of an autoimmune blistering disease is suspected based on the identification of characteristic findings, a thorough clinical evaluation, and a detailed patient history. A diagnosis may be confirmed based on a variety of specialized tests including blood tests

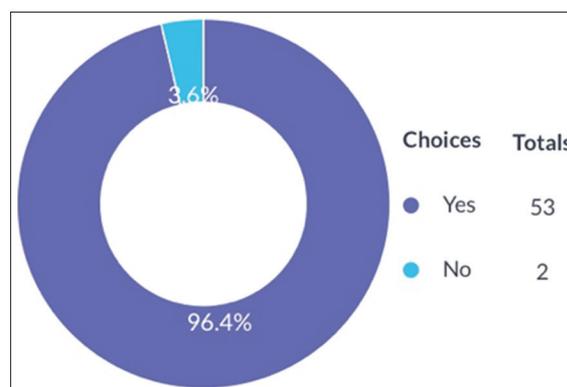


Figure 1: Awareness of Diagnostic techniques for pemphigoid lesions

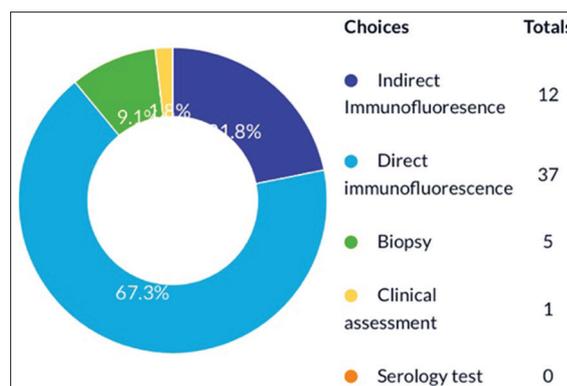


Figure 2: Ttechniques involved in diagnosis of oral pemphigoid lesions

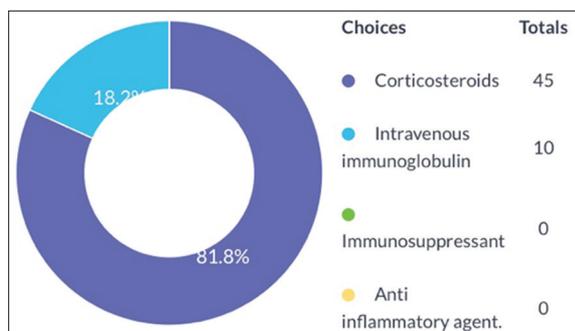


Figure 3: Treatment of oral pemphigoid lesions



Figure 4: Confidence levels to diagnose oral pemphigoid lesions

or skin biopsy. Blood tests can reveal the characteristic antibodies associated with specific autoimmune blistering diseases. A skin biopsy is a small sample of affected tissue that is taken and examined under a microscope, which may reveal characteristic findings. Physicians may also perform DIF on a skin biopsy sample. DIF is considered the gold standard for diagnosis.^[12,13] DIF will show linear localization of immunoglobulin G and/or complement protein, C3, along the DEJ, also known as the basement membrane. DIF is a procedure that utilizes labeled antibodies to detect immunoglobulin binding and complement deposits in tissue. The diagnosis of BP may be further confirmed by the characterization of circulating autoantibodies using methods such as IIF, enzyme-linked immunosorbent assay, Western blotting, and immunoprecipitation.

The treatment of oral pemphigoid lesions should be aimed at decreasing blistering formation and pruritus, promoted the healing of blisters, and improved quality of life while having a minimally adverse profile. Local skin care with antibacterial ointment to cover eroded blisters is recommended for all patients to decrease the likelihood of developing a secondary bacterial infection.^[14] High potency topical corticosteroid creams are typically used as the first-line treatment. If topical application is not an appropriate option, oral corticosteroids, such as prednisone, may be considered. Since the cumulative effects of long-term corticosteroid therapy are undesirable, treatment aims at the lowest dose over the shortest period of time.

The use of immunosuppressive medications like azathioprine has been controversial. Their efficacy is generally inconclusive with significant potential adverse events, given prolonged use. In this era of biological therapies, new antibody modulators, including rituximab and omalizumab, have been

suggested for the treatment of oral pemphigoid lesions.^[15] It was proposed that they would have a more benign adverse event profile and more selective mechanisms of action.

In the present study, the students were aware of the term vesiculobullous lesions, the types of oral pemphigoid lesions, and the signs and symptoms of the disease. They were also aware of the diagnostic techniques used. However, they were not confident in choosing the best diagnostic techniques for the evaluation of the disease. Most of the students answered that the best techniques for diagnosing oral pemphigoid lesions as IIF which is only the confirmatory test. The best diagnostic techniques used were combination of clinical, histopathological, and immunological assessment. The students were aware that the corticosteroids are widely used in the treatment of the disease. The students were not confident enough to diagnose and treatment such patients. Hence, there is a need to increase the awareness of students in diagnosing and treating the oral pemphigoid lesions.

CONCLUSION

Oral pemphigoid lesions (PV), potentially fatal disease, require early diagnosis as well as early treatment to prevent future complications. The diagnosis of PV is based on three main factors, clinical features, histopathology, and immunofluorescence studies. Many a time, keen observation of the oral symptoms, leading to a histopathologic examination, will suffice for a final diagnosis. This, in turn, can facilitate early treatment which will be highly beneficial to the patient's recovery. Nevertheless, long-term regular follow-up is essential to identify the possible remissions of this disease.

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