DIAGNOSIS AND MANAGEMENT OF COMMON ORAL LESIONS IN SAUDI ARABIA AMONG DENTAL SENIOR DENTAL STUDENTS: KNOWLEDGE AND ATTITUDE

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ABSTRACT

Objective: The aim of this study was to assess the level of knowledge and attitude of Saudi senior dental students in diagnosing and management of common oral lesions.

Materials and Methods: An electronic self-administered questionnaire comprising of 22 close-ended questions related to clinical cases was used in this study. Eighteen questions were for assessing students' knowledge and four questions for assessing their attitude, interest and source of information in diagnosing and management of common oral lesions. Data of 53 female students were entered and analyzed using the Statistical Package for Social Sciences (SPSS) software version 16 (SPSS Inc., Chicago, Ill, USA).

Results: The students' response rate was 92%. A 94% of the students were able to correctly diagnose the clinical cases and 78.5% of them were able to correctly manage them. Most students (61.22%) rated their knowledge as moderate, while 30.61% considered it to be little, and 8.16% rated it as high. Regarding students' interest to treating oral lesions in the future, vast majority (59.18%) expressed the little interest while 26.53% were very interested and 14.29% were not interested.

Conclusion: The present study demonstrated adequate knowledge of senior female dental students at King Saud University in diagnosing and managing common oral lesions. On the other hand, majority of students showed little interest towards oral medicine clinics. This finding highlights the need to establish appropriate educational strategies to increase student enthusiasm toward oral medicine.

KEY WORDS: Knowledge, attitude, senior dental students, oral lesions, Saudi Arabia.

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INTRODUCTION

Oral mucosal diseases can affect different populations due to various risk factors such as age, sex, systemic diseases, and smoking. The treatment of these diseases may be challenging due to diagnostic inaccuracies [1].

The prevalence and incidence of oral mucosal lesions in the Arab Gulf region are not well-documented compared with dental caries and periodontal diseases. Almobeerik et al. reported that oral mucosal lesions are more prevalent among women in Saudi Arabia and that the most common oral mucosal lesions are Fordyce granules, leukoedema, and traumatic lesions (2). Another study by Alwayli et al. reported the prevalence and type of oral lesions among Saudi women in Riyadh and found that pyogenic granuloma, dental infections, lichen planus, and aphthous ulcers are the most common oral and mucosal lesions observed [3]. Alattas et al. reported on oral mucosal lesions among smokers in Jeddah, Saudi Arabia, and found that 88% of tobacco users have soft tissue lesions that range from non-malignant to premalignant and malignant lesions [4]. Moreover, Jahanbani et al. studied the prevalence of oral mucosal diseases in relation to many other factors, such as age, sex, and tobacco use, among 295 patients and observed that 49.3% of them had oral lesions, with Fordyce granules, fissured tongue, leukoedema, and hairy tongue being the most prevalent lesions [5]. Another study conducted in Kuwait in 2013 on the prevalence and risk factors of oral lesions reported that the buccal mucosa and gingiva were the most commonly affected sites. White lesions were detected in almost half of the screened patients (47%), and smoking status and old age were identified as risk factors [6].

Accurate diagnosis of oral mucosal lesions is difficult and must be achieved after a comprehensive systematic examination of the entire oral cavity [6]. This examination includes a thorough dental and medical history and visual and manual clinical examination considering the signs and symptoms of diseases, which should direct dentists toward accurate diagnosis and eventual treatment [1]. Although visual examination is an essential diagnostic tool for the diagnosis of oral lesions, clinical experience in oral medicine plays an important role in diagnostic accuracy [7]. Successful management of oral mucosal lesions depends on accurate diagnoses, which are linked to dentists' and/or physicians' knowledge and attitude toward the treatment of common oral conditions [8].

Oral diagnosis and oral medicine courses are essential components of the dental curriculum at King Saud University. Before graduation, all senior dental students should have adequate knowledge to diagnose and manage common oral mucosal lesions.

However, data on senior dental students' knowledge and attitudes toward diagnosing and treating common oral/mucosal lesions in Saudi Arabia are lacking. Therefore, this study aimed to assess senior dental students' knowledge and attitudes toward diagnosing and managing common oral/mucosal lesions.

MATERIALS AND METHODS

This study was approved by the Ethics Committee of the College of Dentistry Research Center at King Saud University (Reg. No. FR0385). This cross-sectional, descriptive study was conducted at the Girls campus of the College of Dentistry, King Saud University, Riyadh. An electronic self-administered questionnaire consisting of two main parts was designed and administered voluntarily to all final-year dental students (53 female students) at the end of their final year (2022/2023).

The questionnaire was constructed based on (1) common oral and mucosal lesions in Saudi Arabia [(2, 3)] and (2) the AAOM clinician's guide to the treatment of common oral conditions [(9, 10, 11, 12)]. A senior faculty member reviewed the questionnaire for content, clarity, and bias.

The first part of the questionnaire consisted of 18 questions for nine clinical cases regarding the diagnosis and management of common oral/mucosal lesions in Saudi Arabia. A high-definition clinical picture and brief scenario were provided for each clinical case. The second part consisted of four questions regarding the dental students' attitude, confidence, and sources of knowledge regarding the treatment of patients with these common oral conditions.

Data were entered and analyzed using the Statistical Package for Social Sciences (SPSS) software version 16 (SPSS Inc., Chicago, Ill, USA). Descriptive statistics, including frequencies and percentages, were used for all items.

RESULTS

A total of 49 dental students returned the questionnaires, with a response rate of 92%. The students' performance in diagnosing and managing the nine most common oral mucosal conditions in Saudi Arabia is shown in Table 1. The students were able to correctly diagnose most of the nine cases, with an accurate of 94% (414/441). The lowest rate of correct diagnosis was observed for aphthous stomatitis (75.5%), followed by lichen planus (83%) and torus palatinus (84.9%), while the highest rate of correct diagnosis was recorded for mucocele (92.4%), followed by pyogenic granuloma and oral candidiasis (90.5%).

TABLE (1). Students' performance in diagnosis and managing most common oral mucosal lesions in Saudi Arabia included in this study

	Correct answers	Student's response n (%)			
		Correct	Wrong	didn't know	skipped
1	Fordyce Granules	47 (88.7%)	2 (3.7%)	2 (3.7%)	2 (3.7%)
2	Excisional biopsy & F.U	40 (75.5%)	8 (15%)	3 (5.6%)	2 (3.7%)
3	Pyogenic granuloma	48 (90.5%)	1 (1.8%)	2 (3.7%)	2 (3.7%)
4	Excisional biopsy & F.U	43 (81%)	5 (9.4%)	3 (5.6%)	2 (3.7%)
5	Mucocele	49 (92.4%)	2 (3.7%)	0	2 (3.7%)
6	Excisional biopsy & F.U	49 (92.4%)	2 (3.7%)	0	2 (3.7%)
7	Oral candidiasis	48 (90.5%)	1 (1.8%)	2 (3.7%)	2 (3.7%)
8	Topical antifungal & F.U	48 (90.5%)	1 (1.8%)	2 (3.7%)	2 (3.7%)
9	Migrating glossitis	47 (86.8%)	1 (1.8%)	2 (3.7%)	3 (5.6%)
10	No treatment	15 (28.3%)	31 (58.5%)	4 (7.5%)	3 (5.6%)
11	Lichen Planus	44 (83%)	4 (7.5%)	2 (3.7%)	3 (5.6%)
12	No treatment &F.U.	29 (54.7%)	16 (30.1%)	5 (9.4%)	3 (5.6%)
13	Aphthous stomatitis	40 (75.5%)	5 (9.4%)	5 (9.4%)	3 (5.6%)
14	Palliative measures &F.U.	37 (69.8%)	9 (17%)	4 (7.5%)	3 (5.6%)
15	Torus palatinus	45 (84.9%)	2 (3.7%)	3 (5.6%)	3 (5.6%)
16	No treatment	40 (75.5%)	7 (13.2%)	3 (5.6%)	3 (5.6%)
17	1ry herpetic gingivostomatitis	46 (86.9%)	1 (1.8%)	3 (5.6%)	3 (5.6%)
18	Antiviral and analgesic	45 (84.9%)	1 (1.8%)	4 (7.5%)	3 (5.6%)

F.U = Follow up.

Approximately 78.5% (346/441) of the students were able to correctly manage most of the nine cases. The lowest rate of correct management was observed for the treatment of migratory glossitis (28.3%), followed by lichen planus (54.7%) and aphthous stomatitis (69.8%), while the highest rate of correct management was observed for mucocele (92.4%), followed by oral candidiasis (90.5%) and primary herpetic gingivostomatitis (84.9%).

In general, 3.7%–5.6% of the students skipped various questions, and 3.7%–9.4% of the students responded "I do not know" to different questions.

Table 2 presents students' knowledge perception, satisfaction, and attitudes toward diagnosing and managing common oral mucosal conditions in the future. Most students (61.22%) rated their knowledge as moderate, while 30.61% considered it to be little, and 8.16% rated it as high. Most students (59.18%) were moderately satisfied with their knowledge, while low satisfaction was reported by 30.61% and high satisfaction by 8.16%. Most students (59.18%) expressed little interest in treating patients with oral lesions in their clinics, while 26.53% were very interested and 14.29% were not interested.

Table (2). Students' knowledge perception, satisfaction and attitude towards diagnosis and managing common oral mucosal conditions.

Question	Response	Count	Percentage
1. Rate your knowledge	None	0	0.00%
	Little	15	30.61%
	Moderate	30	61.22%
	High	4	8.16%
2. Are you satisfied with your knowledge	Very low	1	2.04%
	Low	15	30.61%
	Moderate	29	59.18%
	High	4	8.16%
3. Your enthusiasm to treat patients with oral lesions	Not interested	7	14.29%
	Little interested	29	59.18%
	Very interested	13	26.53%

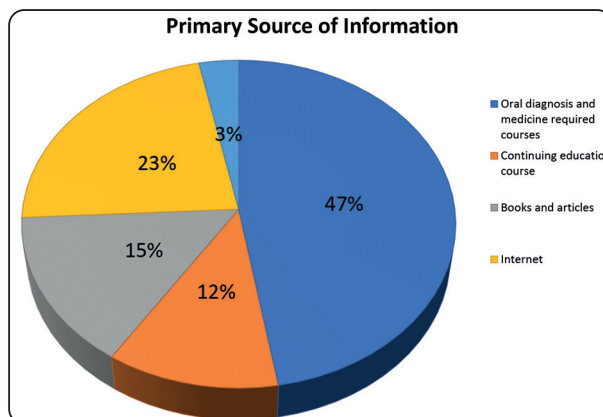*N.B.: 4 students skipped these 3 questions*

Fig. (1) Illustrates the sources of information regarding common oral conditions.

Oral diagnosis and medicine courses were the primary sources of information for most students (89.8%), followed by the internet (42.86%). Books and scientific articles, and continuing education courses were additional sources for 28.57% and 22.45% participants, respectively.

DISCUSSION

Dental students at King Saud University are required to take several courses on oral diagnosis and oral medicine before graduation. These courses comprise two main parts: theoretical lectures and practical clinical sessions on patients. Senior dental students should have valuable knowledge to perform a thorough examination of the oral cavity and detect and manage the most common oral lesions.

This study evaluated the knowledge and attitude of senior dental students toward the diagnosis and management of common oral lesions in Riyadh, Saudi Arabia. The students have encountered similar cases and received guidance in the diagnosis and management during all required clinical sessions. Students' knowledge was tested using multiple-choice questions accompanied by clinical pictures and brief scenarios.

In our study, there was an acceptable proficiency level of students regarding the diagnosis and

management of the most common oral lesions. Students were able to correctly diagnose 94% and manage 78.5% of cases which constant with Almobeerik et al findings [2]. This suggests that most senior students have little difficulty in diagnosing common oral lesions; however, managing these cases is more challenging. One possible explanation is that students are required to repeatedly perform complete oral examinations for all patients in all clinical courses, which enhances their ability to detect and diagnose the most common oral lesions. However, students have no authority to prescribe medications, which decreases their confidence to manage these cases.

Most students had no difficulty in diagnosing and managing mucoceles, primary herpetic gingivostomatitis, pyogenic granuloma, or oral candidiasis, which could be explained and supported by their prevalence in Riyadh, as reported by Alwayli et al. [3].

More than half of the students rated their knowledge and satisfaction in diagnosing and managing common oral lesions as moderate. Students' self-knowledge ratings were lower than their actual knowledge 94% a~74% as shown in this study. Moreover, most students (61%) reported little interest in diagnosing and managing oral lesions, regardless of their acceptable rate of knowledge. This result is difficult to explain, but it may be related to the decreased number of cases encountered during the dental program. Another explanation may be the lack of hands-on work in these cases compared to the routine dental work of general dentists. This could make it less interesting than other courses.

Another finding supporting the low interest among students is their source of information, which is the required series of lectures in oral diagnosis and oral medicine courses. This little interest could be due to limited job opportunities for oral medicine specialists compared with other specialties. Another

reason may be the limited availability of positions in oral medicine postgraduate programs.

These findings highlight the need to implement new educational modalities in undergraduate courses in oral diagnosis and medicine using updated problem-based learning techniques and increasing clinical exposure to enhance students' skills through experience. Another suggestion is to encourage students to attend continuing education courses in oral medicine offered by well-known and accredited dental societies.

One limitation of this study is its inability to generalize the findings to all senior dental students at King Saud University as this study was conducted exclusively at the girls' campus. Further studies including all dental students from different dental schools in Saudi Arabia are recommended.

CONCLUSION

Senior female dental students at King Saud University demonstrated adequate knowledge in diagnosing and managing common oral lesions. On the other hand, majority of students showed little interest towards oral medicine clinics. This finding highlights the need to establish appropriate educational strategies to increase student enthusiasm toward oral medicine cases.

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