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Assessing Knowledge and Diagnostic Skills of Medical Interns and General Physicians about Common Benign and Malignant Oral Lesions in Qazvin

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Received: April 21, 2019; **Published:** June 06, 2019

Abstract

Background: Early and accurate diagnosis of oral diseases is essential for a successful treatment. Considering the recent implementation of the Family Doctor Program and in general, the easier and faster access to the physician, most patients with oral lesions prefer their personal doctors and visit them more frequently. Therefore, general practitioners should learn and be made aware of the diagnosis and treatment of oral lesions.

Objective: The aim of this study was to assess the knowledge and diagnostic skills of medical interns and general practitioners about common benign and malignant lesions in Qazvin.

Materials and Methods: This cross-sectional study was performed on 62 general physicians and 80 medical interns in 2013. Data in this research was gathered through a questionnaire consists of 26 questions, illustrated below. The data was analyzed using the SPSS software, Student's t-test, Chi-squared and ANOVA and Pearson correlation coefficient.

Results: The response rates of 86% and 92% were obtained from interns and general practitioners, respectively. The mean knowledge score (5.64 out of 9) and the mean diagnostic skills score (4.89 out of 8) of all participants were found to be sufficient correlation between the knowledge and diagnostic skills score and the age, date of graduation and Dermatology experience and ENT internship course ($P < 0.05$). The majority of participants (81.3%) were interested in gaining more information about oral lesions.

Conclusion: This study demonstrated a relative good level of knowledge and diagnostic skills on oral lesions in both groups. Considering the high interest of both groups in obtaining more information, additional training in medical schools and educational programs on detection of oral lesions are recommended.

Keywords: *Benign and Malignant Oral Lesions; Knowledge; Diagnostic Skills; General Practitioners; Medical Interns*

Abbreviation

ENT: Ear, Nose and Throat.

Introduction

Oral health reflects the overall health of an individual. The oral mucosa is affected by the general health and occurrence of systemic diseases may be detected by oral examination; including the Behcet disease, Pemphigus vulgaris, Erythema multiforme, Tuberculosis, Syphilis, Lupus erythematosus, Crohn diseases, etc [1]. Successful and effective diagnosis and treatment of such diseases are challenges shared by the medical and dental practitioners.

In oral medicine, early diagnosis and appropriate referral are paramount and often lifesaving for many patients (e.g. early diagnosis of oral cancer).

Oral cancer is asymptomatic in early stages. Delay in diagnosis can lead to advancement of symptoms and sometimes claims the patient's life. Effective oral care requires a thorough understanding of oral cancer and treatment and frequent communication with the oncology team [2].

The recent implementation of the Family Doctor Program and the easier and faster access to the general practitioners, especially in remote areas, results in patients with oral lesions initially approach their personal physicians for consultation and diagnosis.

However, due to the traditional and academic separation isolation of medical and dental fields, general practitioners have limited knowledge in relation to oral mucosal disorders to make accurate diagnosis.

Some oral disease information is provided to the medical students in ENT and Dermatology courses; but it is not sufficient and is not even an independent course at the medical education curriculum [3].

Some researches have been conducted in examining the knowledge of medical students and general practitioners about oral lesions. In a study, the university of Kerman and Zahedan medical interns' knowledge about common oral diseases was assessed. Their average knowledge score was 3.65 out of 6, and average practice score was 5.7 out of 9 [4]. In another study in Mashad Medical University, the mean knowledge and diagnostic skills score of medical interns was 3.5 and 1.73 (out of 4) respectively [5]. In a study, the knowledge level of Qazvin general practitioners about oral cancer was assessed, and their average score was 60 (out of 100) and found to be at moderate level [6]. Another study in the USA showed that osteopathic medical students have deficiency in their knowledge about clinical presentation, association of HPV and Oropharyngeal cancer and screening recommendation [7]. Also, in a similar study in Ireland, most participants requested further education on the oral cancer (Shanahan and Healy 667).

Considering the importance of oral medicine, there is a need for assessing general practitioners' and medical students' knowledge about common oral diseases. In line with these goals, the present study assessed the level of knowledge and diagnostic skills of general practitioners and medical interns about common benign and malignant oral lesions in Qazvin University of Medical Sciences in 2013.

Materials and Methods

The present study was a cross-sectional questionnaire -based study which had two main variables: the knowledge and diagnostic skills of common benign and malignant oral lesions.

Participants' demographic characteristics were investigated corresponding to the main variables. The study population consisted of 80 medical interns of Qazvin medical university and 62 general practitioners. Conducting and random sampling methods were used on groups of interns and general practitioners, respectively.

Data gathering tool employed in this research is the questionnaire consisting of 26 questions created by researchers. The contents of the questionnaire were validated by oral medicine specialists and the test-reset method was used to check its reliability. The Spearman correlation coefficient turned out to be 0.65 which was appropriate. The questionnaire consisted of three parts: the first part concerned demographic characters including: age, sex, date and place of graduation, semesters of the interns and completion of the internship dermatology and ENT courses. The second section assessed the level of knowledge of oral lesions and included 9 questions. The third section consisted of 8 questions about the diagnostic skills making use of images.

Score of 1 was assigned for each correct answer and 0 for each wrong answer or unanswered question. The knowledge score was classified by sufficient level (with a range of 6 to 9) and insufficient level (0 to 5). Also, the diagnostic skill score was classified by sufficient level (0 to 4).

Data were analyzed using the SPSS software, students t-test, chi-squared and Pearson correlation coefficient.

Results and Discussion

54.7% of participants were men and 45.3% were women. The age range was 25-55 and the average age of subjects was 30.6. The average knowledge score of subjects was 5.63 for interns and 4.95 for general practitioners (out of 8) that were found to be at sufficient level (Table 1).

Knowledge and Diagnostic Skills Status	Sufficient		Insufficient	
	Number	Percentage	Number	Percentage
Knowledge	71	55.5	57	44.5
Diagnostic Skills	81	63.3	37	36.7

Table 1: *Knowledge and domestic skills level of interns and GPs about oral lesions (Total = 128).*

We found no significant difference between the two groups regarding knowledge and diagnostic skill score ($p > 0.05$). We found that a number of participants characteristics were associated with knowledge and diagnostic skill score: age and graduation time of general practitioners, which were significantly inversely associated. Also, interns with a completion of ENT and Dermatology internship courses were associated with high diagnostic skill score compared with interns with a lack of internship completion (Table 2).

Variable	Mean Knowledge Score	Mean Diagnostic Skill Score	P Value
Age			
≤ 25	5.67	4.81	
26-35	6.31	5.63	
36-45	5.3	4.8	
46-55	4.1	3.4	
Graduation Time*			
≤ 5	6.53	5.89	
6-10	6.42	5.41	
11-15	4.85	4	
> 15	4.46	4.07	
Internship Course**			
ENT	5.48	4.11	
Dermatology	5	3.49	
Both Options	5.68	5.36	

Table 2: *Investigating statistic relationship between knowledge and diagnostic skills, and age, graduation time and completion of internship course.*

**: This variable is related to GPs; **: This variable is related to interns.*

47.7% of subjects' knowledge of diagnosis and treatment of oral lesions is limited to ENT specialty and 43% of them were familiar with oral medicine specialty. In total, 35.1% of general practitioners and 66.2% of interns believed that their personal knowledge is inadequate and 81.3% of them were interested in gaining more information about oral diseases.

The present study indicates that knowledge and diagnostic skills of general practitioners and interns on the common oral lesions are at a sufficient level (more than half of the total score) and there was no significant difference between interns' and general practitioners' knowledge and diagnostic skills score.

Oral Lesions	Percentage of Correct Diagnoses
Leukoedema	28.1
Squamous Carcinoma	63.3
Erythema Multiforme	76.6
Benign Migratory Glossitis	84.4
Oral Lichen Planus	42.2
Pyogenic Granuloma	56.2
Oral Malignant Melanoma	78.9
Angular Cheilitis	59.4

Table 3: *Percentage of correct diagnoses of oral lesions.*

In a research by Chamani and colleagues in Kerman and Zahedan Medical Universities, knowledge and diagnostic skills of interns were equal to the average. The mean knowledge score was 3.65 (out of 6) and the mean diagnostic skills score was 5.7 (out of 9) [4]. In Shouryabi's research in Ahwaz, the mean knowledge score was 5.3 (out of 8). These studies yielded similar results to our study [8]. However, in the research conducted by Sarabadani in Mashad, average score for diagnostic skills was 1.73 (out of 4) which is less than half of the total score and is not in sync with our study [5]. These differences can be attributed to the variations in academic courses, educational curriculum in different universities. It should also noted that these studies were conducted by using different questionnaires.

It was found that higher level of knowledge about oral lesions and diagnostic skills were associated with the time of graduation from medical school and passing an ENT and Dermatology course by interns. Patton and colleagues found that a high score on the knowledge index was associated most strongly with the year graduation [9]. Yellowitz study also indicated that there is a direct relationship between knowledge and the time of graduation [10]. On the basis of these finding, it is believed that there is a need for providing postgraduate training on diagnosis and treatment of oral diseases to general practitioners.

However, the Khalili study showed that there was no significant relation between graduation date and knowledge about oral medicine which is not consistent with our study.

It was understood that only 25% of the subjects stated that they would recommend a patients with suspicious oral lesions and patients at high risk of developing oral cancer to visit an oral medicine specialist. In a study conducted in Ireland by Christine., *et al.* this value was 25.4% [11]. In Shouryabi's study in Ahwaz University only 10% of interns were referring their patients to the oral medicine specialist [8]. But in a study by Sardella in Milan University, results indicated that 47% of patients coming to the oral medicine department were referred by general practitioners [12]. Also, in our study, the majority of general practitioners and interns (57%) were not aware of the oral medicine specialty. This lack of knowledge could be due to a limited relationship between the medical and dentistry schools, and the lack of theoretical and practical oral medicine courses in medical university curriculums.

Establishing a minimal amount of education in oral pathology and medicine is proposed by several European organizations. In the United Kingdom, for example, the General Dental Council has proposed guidelines and learning goals in the fields of oral pathology and oral medicine [13].

It is believed that offering continuing education programs in oral medicine would go a long way in enhancing the early diagnosis of oral lesions. Optimally, educational programs should focus on physical examination of the oral cavity; and reviewing the criteria, establishing a need for referral to specialist for a biopsy, definitive diagnosis, and treatment.

Conclusion

In many healthcare centers in the world, patients have easy and instantaneous access to general practitioners [14]. Since the majority of oral diseases are largely preventable and/or amenable through early intervention, the disparities and health effects of such diseases could be alleviated, through increased academic training. Through oral screening examinations, preventive interventions, patient

counseling, and referral and collaboration, physicians could have a positive influence on diagnosis and treatment of oral diseases [15]. Inter-professional collaboration between dental and medical faculties can be a valid approach in realization of this goal [7]. Therefore, it is recommended that developing retraining programs for general practitioners and considering independent oral medicine courses for medical students are effective and are crucial in combatting oral diseases [16].

Bibliography

1. Paleri V., *et al*. "Evaluation of Oral Ulceration in Primary Care". *British Medical Journal* 340 (2010): c2639.
2. Glick Michael. "Burkets Oral Medicine". Peoples Medical Publishing House USA (2015).
3. Mccann Patrick J., *et al*. "Training in Oral Disease, Diagnosis and Treatment for Medical Students and Doctors in the United Kingdom". *British Journal of Oral and Maxillofacial Surgery* 43.1 (2005): 61-64.
4. Chammani G and MR Zarei. "Study of the Level of Awareness and Diagnostic Skills of Medical Interns Regarding Common Oral Diseases and Their Manifestations at the Medical College of Kerman and Zahedan". *Journal of Shahid Sadoughi University of Medical Sciences* 11.2 (2003): 51-59.
5. Sarabadani J., *et al*. "Oral Medicine Course Offer in General Medical Students Training Curriculus". *Future of Medical Education Journal* 4.3 (2011): 17-20.
6. Khalili M and H Aghababaei. "Knowledge, Attitude and Practice of General Physicians in Relation with Oral Malignancies". *Journal of Qazvin University of Medical Sciences* 32 (2004): 68-72.
7. Mccready Zachary R., *et al*. "Oral Cancer Knowledge, Behavior, and Attitude Among Osteopathic Medical Students". *Journal of Cancer Education* 30.2 (2014): 231-236.
8. Shouryabi M and A Razavi Satvati. "Evaluation of Medical Students' Skills in Diagnosing Oral Lesions and Their Performance in the Treatment of These Lesions in Ahvaz University of Medical Sciences". *Journal of Dental Sciences* 10.3 (2013): 205-210.
9. Patton Lauren L., *et al*. "Knowledge of Oral Cancer Risk Factors and Diagnostic Concepts among North Carolina Dentists". *The Journal of the American Dental Association* 136.5 (2005): 602-610.
10. Yellowitz JA., *et al*. "Survey of US Dentists' Knowledge and Opinion about Oropharyngeal Cancer". *Journal of the American Dental Association* 131.5 (2000): 653-661.
11. Riordain Richeal Ni and Christine Mccreary. "Oral Cancer - Current Knowledge, Practices and Implications for Training among an Irish General Medical Practitioner Cohort". *Oral Oncology* 45.11 (2009): 958-962.
12. Sardella A., *et al*. "Accuracy of Referral to a Specialist Oral Medicine Unit by General Medical and Dental Practitioners and the Educational Implications". *Dental Education Journal* 71.4 (2007): 487-491.
13. Odell EW., *et al*. "Minimum Curriculum in Oral Pathology". *European Journal of Dental Education* 8.4 (2004): 177-184.
14. Shayegh S and M Nasr Esfahani. "The Study of Knowledge and Attitude Level of Dental Students in Faculties of Dentistry in Iran Regarding Dental Health Services in Therapeutic and Health Network". *Daneshvar Medicine* 15.71 (2007): 53-56.
15. Mouradian Wendy E., *et al*. "An Oral Health Curriculum for Medical Students at the University of Washington". *Academic Medicine* 80.5 (2005): 434-442.
16. Smith J., *et al*. "Cardiopulmonary Resuscitation Skills in Non Consultant Hospital Doctors-the Irish Experience". *Irish Journal of Medical Science* 162.10 (1993): 405-407.

Volume 18 Issue 7 July 2019