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Knowledge of physicians in El-Madinah El-Munawarah about The relationship between periodontal disease and systemic health

Dental Science

KEYWORDS:

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ABSTRACT

Understanding the relationship between periodontal disease (PD) and systemic health (SH) is necessary for the accurate diagnosis and treatment of both. The aim of this study was to evaluate the knowledge of medical doctors in El Madinah with regard to the association between PD and SH. This study was carried out using self-reported questionnaires that were sent to medical doctors who work at various universities and public and private hospitals in different area in Madinah. The questionnaires consisted of questions about the demographic information of the medical doctors, as well as the knowledge of those doctors about the relationship between PD and SH. In total, 159 responses .The demographic data for the physician are shown in males participants was 62.9%, and female participants was 37.1%. Doctors who had ≤ 10 years of practice constituted 83.6%, and 16.3% of the doctors had less than 10 years of practice .

Introduction:
Good oral health is an essential part of general health; however, there is a widespread perception that oral diseases are limited to the scope of dental practice.(1)

Periodontal disease:
Periodontal diseases are characterized by: gingival inflammation, loss of connective tissue, bone around the roots of teeth and eventual tooth exfoliation(2). Most periodontal diseases are and are initiated by plaque biofilm resulting in gingivitis. (3, 4).

Relationship between periodontal disease and systemic health:
Microorganisms and their products are able to access the adjacent parts of the body or distant from the mouth. (5) Systemic exposure to periodontal pathogens and toxins and periodontal-derived/elicited inflammatory mediators determine pathologic consequences in different organs. Epidemiological and interventional studies revealed close associations between periodontal diseases and systemic diseases: Cardiovascular diseases (CVDs), aspiration pneumonia, preterm delivery of low-birthweight fetuses and diabetes mellitusperiodontal disease depend to awareness and good knowledge of its causes, early identification, and effective treatment.Especially medical doctors, must be well informed about periodontal disease and its associations with systemic conditions.(6) Previous studies have shown varying levels of awareness among doctors (7) with limited awareness in developing countries. (8) Previous studies have shown physicians had inadequate awareness regarding the systemic effects of periodontal disease

The aim of this study measure the physicians' knowledge of periodontal disease, and its associations with systemic conditions, after that increase theknowledge of physicians about the relationship between periodontal disease and systemic health.

Aims:
To find out the knowledge of physicians about the relationship between periodontal disease and systemic health in El-Madinah El-Munawarah and contact with them to increase awareness toward the relationship.

Methodology:
A cross sectional analytic observational study using an online anonymous self-administered structured questionnaire will be used to collect information using a soft copy of the questionnaire and a google form will be sent to the emails and cell phones of the physicians of the private and public sectors currently employed in El-Madinah El-Munawarah.

The questionnaire:
Knowledge of physicians in El-Madinah El-Munawarah about The relationship between periodontal disease and systemic health
Dear Doctor,
The questionnaire has been designed to measure knowledge, among physicians working El-Madinah El-Munawarah about the relationship between gum disease and systemic health. The results are useful in designing knowledge and performance improvement programmes, increase the level of awareness among medical doctors.

This questionnaire is optional. The information you provide is strictly confidential and will only be used for the purpose of the study and its statistics.

If you have any questions regarding this questionnaire, please be free to call the numbers listed below.

Thank you for your cooperation.
Shadi Al-Johani (0597277927)
Jaser Al-harbi (0551737096)
Dr. AbdelRahman Murtada Ramadan.

Socio-demographic
1. What is your Age:

2. What is your Gender
a. Female
b. Male

3. How many of years of practice do you have
a. 1
b. 2-5
c. 6-10
d. 11-15
e. >15

4. What is medical ranking
a. Intern
b. Resident
c. Senior resident
d. Registrar
e. Specialist
f. Consultant

5. What is your highest qualification
a. MBBS
b. Diploma
c. MD
d. Msc
e. PhD or its equivalent

6. Where are you currently employed
a. Government hospital
b. Private hospital
c. Private clinic
d. Teaching Institute

Evaluation of the knowledge about the relationship between periodontal disease and systemic health

7. What is dental plaque
a. It is a biofilm or mass of bacteria that grows on surfaces within the mouth
b. It the rough and hardened surface that is formed
c. It is a tooth decay
d. The acid made from food debris

8. What is the effect of dental plaque
a. Difficulty in chewing
b. Localized destruction of the tissues of the tooth
c. Dyspnea
d. Difficulty in swallowing

9. What is periodontal disease
a. An inflammatory disease with superimposed infection
b. An infectious disease resulting in inflammation
c. Tooth decay
d. Loss of teeth

10. What are the causes of periodontal disease
a. Dental plaque
b. Cigarette smoking
c. Mechanical force
d. Acidic foods

11. Do you consider that periodontal disease is risk factor for
a. Bad breath
b. Dental caries
c. Dying
d. Pain

12. Do you consider periodontal disease as a predictor of
a. Mortality
b. Morbidity
c. Pain
d. Nothing

13. Do you know the signs and symptoms of periodontal disease
a. No
b. Yes

If your answer is "Yes" please the following question
14. What are primary clinical signs and symptoms of periodontal disease
a. Bad breath that will not go away.
b. Red or swollen gums.
c. Tender or gums
d. Bleeding gums.
e. Painful chewing.
f. Loose teeth.
g. Sensitive teeth.
h. Receding gums (longer appearing teeth).
i. Tooth mobility
j. Tooth migration
k. Gum pain

15. How can the periodontal disease be prevented
a. Regular toothbrushing
b. Soft food
c. Avoid cigarette smoking
d. Avoid acidic foods

16. Is there a relationship between periodontal disease and systemic health?
a. No, the oral cavity is a remote cavity, and there is no connection between the two
b. Yes
c. I don't know

If your answer is "Yes "please respond to questions 17 and 18.
17. What is the relation between systemic and periodontal disease, if any
a. Systemic diseases/conditions lead to periodontal disease
b. Periodontal disease leads to systemic diseases/conditions
c. It is a two-way process

18. Which systemic disease/conditions are related to periodontal disease?(You are free to mark more than one choice)
a. Diabetes mellitus
b. Cardiovascular
c. Renal diseases
d. Respiratory diseases
e. Anxiety/stress
f. Cerebrovascular disease
g. Preterm/low-birth-weight
h. Osteoporosis
I. Obesity
j. Hospital-acquired pneumonia

19. What is your source of information
a. Magazine
b. Media
c. Friends
d. Relatives
e. Dentists
f. Internet
g. Books
h. Medical journals
I. CMD/workshops

20. Do you usually refer patients in your clinic to a dentist?
a. No
b. Yes

If your answer is "Yes "please respond to the next question.
21. What was the most frequent reason for a referral?
a. A patient asks to be referred
b. All patients with systemic diseases/conditions related to dental diseases/conditions
c. Patients with only dental diseases
d. Presence of intraoral lesion
e. Halitosis
f. Gingival bleeding
g. Before any medical intervention to minimize oral microbial burden
h. Knowledge of relationship between periodontal disease and systemic disease

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22. If you refer patients to a dentist, what is the level of dentist do you refer to
a. A general dentist
b. A dental specialist
c. A dental consultant
d. A dental hygienist

23. If a patient requests a referral for a gum problem to which Dept. would you refer this patient
.....

24. If you referred a patient to a dentist, do you enquire about the outcome of the dental visit on a subsequent visit to your clinic?
a. No
b. Yes

25. How often do you consider a patient should see a dentist
a. Every three months
b. Every six months
c. Every nine months
d. Once a year

RESULTS:

In total, 159 responses .The demographic data for the physician are shown in males participants was 62.9%, and female participants was 37.1%, **(figure 1)**

Doctors who had ≤ 10 years of practice constituted 83.6%, and 16.3% of the doctors had less than 10 years of practice . **(Table 2)**

We ask the participants if they know about dental plaque and 67.3% of the participants had known about dental plaque and its effect on the periodontium **(Table 3)**

(66.7%) reported that they had knowledge about the relation between periodontal disease and general health. **(Table 4)**

92 Of the participants, 58% of the medical doctors referred their patients to periodontists or general dentist for different reasons. Combination between systemic condition and dental condition was the most frequent reason for patient referrals, with a percentage of 33%. **(Table 5)**

Figure 1 What is your Gender

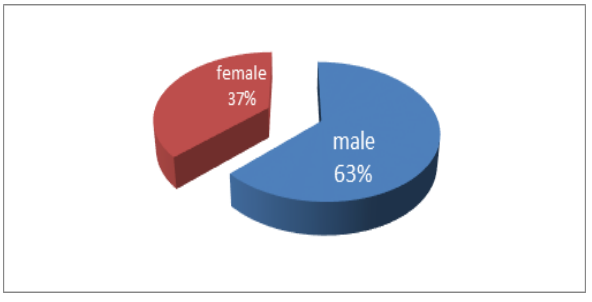


Table 2 How many of years of practice do you have ?

	N	Percent
1	36	22.6
2-5	54	34.0
6-10	43	27.0
11-15	15	9.4
>15	11	6.9
Total	159	100.0

Table 3 What is dental plaque

	N	Percent
It is a biofilm or mass of bacteria that grows on surfaces within the mouth	107	67.3
It the rough and hardened surface that is formed	32	20.1
It is a tooth decay	11	6.9
The acid made from food debris	9	5.7
Total	159	100.0

Table 4 Is there a relationship between periodontal disease and systemic health?

	N	Percent
yes	106	66.7
No, the oral cavity is a remotecavity, and there is no connection between the two	14	8.8
I don't know	39	24.5
Total	159	100.0

Table 5 Do you usually refer patients inyour clinic to a dentist?

	N	Percent
yes	92	57.9
no	67	42.1
Total	159	100.0

DISCUSSION:

The possible relationship between PD and SH has already been investigated in recent studies.1 An understanding of this connection is vital for the proper diagnosis, treatment and maintenance of both periodontal and systemic diseases. Clinical observations give the impression that medical doctors are less interested in the relationship between PD and SH when compared with periodontists.2,3 Of the few studies that have investigated the knowledge of medical doctors about the relationship between PD and SH. Most have focused on the relationship between a certain specific systemic disease/status and a certain specialty.4,5 Our study differs from these earlier ones in that we took into consideration different specialties among the doctors who participated and various systemic diseases/conditions.

We checked the knowledge of the respondents on PD symptoms with a question that asked what the primary symptom of Pd is. It is a striking finding that 42.8% of the medical doctors did not know the primary symptom of PD.

A few studies have investigated the awareness among medical doctors of an association between PD and SH.6,7,8 Pregnancy, diabetes mellitus, coronary heart disease, respiratory disease, and kidney disease are all diseases that have been investigated in this regard.

No significant relationship between the number of years in practice and the awareness of a relationship between PD and SH existed in our study. This finding is not in accordance with the findings of Rocha et al.9 who reported that the length of time in practice among obstetricians was positively correlated with the frequency of recommendation for dental examinations during pregnancy. This discrepancy may be explained by differences in study populations and years in practice.

Previous studies have investigated the referral rates of patients by medical doctors regarding the relationship between PD and SD. The referral rate (56.5%) in the present study may be considered similar when compared with the findings of Al-Habashneh et al. 10 and Owen et al. 11, with rates of 49.7% and 48%, respectively. Our findings underscore the need for promoting collaboration between dental and medical doctors to improve patient outcomes with respect to PD and associated diseases and conditions.

Conclusion:

Although the vast majority of the medical doctors reported that they knew the relationship between periodontal disease and systemic health, the findings of this study showed that this awareness was not supported by precise knowledge, and failed to lead to appropriate clinical practice. Interdisciplinary medical and dental training will likely be the solution to this problem.

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