

GENERAL DENTAL PRACTITIONERS PERCEPTION TOWARD ENDO-PERIO LESIONS IN PRIMARY HEALTH CARE CENTER IN KIRKUK CITY

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ABSTRACT

Background : The success rates of endodontic treatment performed in general practice are substantially lower. Several cross-sectional studies amongst the population in different countries have shown a high rate of apical periodontitis associated with root filled teeth and a high frequency of radiographically inadequate root fillings .

Participants and Methods: A Cross-sectional study design was established to study the perception of general dental practitioners using a prepared questionnaire , 100 general dentists who work in primary health care centers inside kirkuk city were included in this study, data were collected through interview with dentists.

Results: Most of the dentist (92 %) have knowledge toward causes of the disease, with little knowledge (32%) about classification of endo-perio lesions, with occasional level of satisfaction(58%) about the prognosis.

Conclusion: most of the dentists have moderate knowledge toward endo perio lesions and its treatment.

KEY WORDS : Endo perio, Dentist perception, Kirkuk, Dental health care.

INTRODUCTION

Knowledge and awareness of any problem is the first step in the path of managing it properly and preventing it in the future (Sharma *et al.*, 2015). It has been concluded from several studies that there is a substantial need for root canal treatment in the population and that a considerable amount of this need will be in the form of retreatment (Ree *et al.*,2003).

The success rates of endodontic treatment performed in general practice are substantially lower. Several cross-sectional studies amongst the population in different countries have shown a high rate of apical periodontitis associated with root filled teeth (22-61%) and a high frequency of radiographically inadequate root fillings(47-86%) (Kirkevang *et al.*, 2000).

The endodontic-periodontal lesions have been characterized by the involvement of the pulp and periodontal disease in the same tooth. This makes it complex to diagnose due to a single lesion may present signs of both endodontic and periodontal involvement (Al-Fouzan , 2014).

The world workshop for classification of periodontal diseases was recommended another classification for Periodontitis Associated with Endodontic Disease: endodontic-periodontal lesion, periodontal-endodontic lesion and combined lesion (Armitage, 1999).

Three main pathways have been implicated in the development of periodontal-endodontic lesions : Dentinal tubules, lateral and accessory canals and apical foramen (Rotstein and Simon , 2004).Moreover, the physiological pathways which involve iatrogenic root canal perforations, inappropriate manipulation of endodontic instruments can also lead to perforation of the root, vertical root fractures (Zehnder *et al.* , 2002).

Diagnosis of primary periodontal disease and primary endodontic disease generally present no clinical difficulty. In primary periodontal disease, the pulp is vital and sensitive to testing. In primary endodontic disease, the pulp is infected and non vital (Raja *et al.*,2008). The treatment protocol for endo-perio lesion include the following: If the lesion is pure endodontic, the treatment of the root canals is performed, but If the lesion involved only the

periodontium, the periodontal therapy is performed. While, If the two lesions are truly combined, recommended primarily the treatment of the endodontic lesion, then the periodontal therapy (Storrer *et al.*, 2012).

The prognosis of each endodontic-periodontal disease type varies. Primary endodontic disease should only be treated by endodontic therapy. Good prognosis is to be expected if treatment is carried out properly with a focus on infection control. Primary periodontal disease should only be treated by periodontal therapy. In this case, the prognosis depends on the severity of the periodontal disease and the patient response. The prognosis of a true combined perio-endo lesion is predominately poor or even hopeless especially when periodontal lesions are chronic, with wide loss of attachment (Rotstein and Simon, 2006; Verma *et al.*, 2011).

The prognosis of periodontal lesions is inferior to endodontic lesions and is dependent on the apical extensions of the lesion. A favorable endodontic prognosis is achieved only when the tooth is in a closed and protected environment (Newman *et al.*, 2006).

PARTICIPANTS AND METHODS

A Cross-sectional study design was established from (1st November 2015 to 30th April -2016) to study the perception of general dental practitioners in primary health care centers inside Kirkuk city toward endo perio lesion treatment.

Data of the present study were collected through using a prepared questionnaire (appendix I) to general practitioners dentists in primary health care centers inside Kirkuk city.

One hundred general practitioners (53% female and 47% male) dentists who actually respond to this study by taking and filling the questionnaire and discussing with the researcher are included in this study.

The inclusion criteria's were; General practitioners dentists work in primary health care centers inside Kirkuk city having at least three years experience and practice.

Appendix (1)

Q 1: Do you think that periodontal lesion and endodontic lesion are cause or result of the other?

1. Yes 0. No

Q2 : Do you know how to classify Endo-Perio

lesion ?

1. Yes 0. No

Q3: If the patient has Endo-Perio lesion and his/her tooth is vital, do you start with:

1. endodontic treatment ? 2. periodontal treatment ?

Q4: Do you think that Endo-Perio lesion in single- rooted teeth have better prognosis than multi- rooted teeth?

1. Yes 0. No

Q5: How you can detect the primary cause of the Endo-Perio lesion :

a- By clinical examination

b- By radiographic examination

c- By vitality tests

d- All the above

Q5: Do you think that furcation involvement is one of the signs of Endo-Perio lesion ?

1. Yes 0. No

Q6: What is your opinion about the prognosis of treatment of Endo-Perio lesion?

a- Good **b-** bad **c-** depend on the correct diagnosis and treatment plan.

Data were analyzed using the Statistical Package for Social Sciences (SPSS, version 19), and Chi-square test was used to compare between proportions. Fisher's exact test for testing the difference among subgroups, when expect count of more than 20% of the cells of the tables was less than 5. The difference were considered significant at $P \leq 0.05$.

RESULTS

When the dentists were asked that if the periodontal lesion and endodontic lesion are cause or result of the other, table (1) showed that 92% of the sample answered Yes and 8% No.

Table (1): Opinion of dentists who believed that periodontal lesion and endodontic lesion are cause or result of the other.

Do you think that periodontal lesion and endodontic lesion are cause or result of each other's	General Practitioners	%
Yes	92	92
No	8	8
<i>Total</i>	<i>100</i>	<i>100</i>

Table 2: Knowledge of dentists about classification of endo-perio lesion.

Table (2): showed that only 32% of the General Practitioners dentists know how to classify endo-perio lesions.

Do you know how to classify endo-perio lesion?	General Practitioners	%
Yes	32	32
No	68	68
<i>Total</i>	<i>100</i>	<i>100</i>

When the dentists were asked that if the patient has endo-perio lesion and his/her tooth is vital or not, only 46% of the dentists answered

they started with endodontic treatment while 54% with periodontal treatment as seen in Table (3).

Table (3):- Management of patients with vital teeth and endo-perio lesion.

Line of management	General Practitioners	%
Endodontic treatment	46	46
Periodontal treatment	54	54
<i>Total</i>	<i>100</i>	<i>100</i>

When the dentists were asked whether the endo-perio lesion in single- rooted teeth have better prognosis than multi-rooted teeth, 68% of

the dentists answered 'Yes' , while 32% answered 'No' as shown in table (4).

Table (4):- Dentist opinion about Prognosis of endo-perio lesion in single or multi-rooted teeth.

Do you think that endo-perio lesion in single-rooted teeth have better prognosis than multi-rooted teeth?	GP	%
Yes	68	68
No	32	32
<i>Total</i>	<i>100</i>	<i>100</i>

When the dentists were asked about how they detect the primary cause of endo-perio lesion, 3% of the dentists answered by clinical

examination, 2% by radiographic examination, 3% by vitality tests, and 92% answered by all the above (Table 5).

Table (5) :- Detection of the primary cause of endo-perio lesion according to opinion of dentists.

How can you detect the primary cause of the endo-periolesion?	GP	%
by clinical examination	3	3
by radiographic examination	2	2
by vitality tests	3	3
All of the above	92	92
<i>Total</i>	100	100

Table 6. shows that 47% of dentists think that furcation involvement is one of the signs of endo-perio lesion.

Table (6) :- Opinion of dentists about furcation involvement relating to endo-perio lesion.

Do you think that furcation involvement is one of the signs of endo-perio lesion?	GP	%
Yes	47	47
No	53	53
<i>Total</i>	100	100

When the dentists asked about their opinion about the prognosis of treatment of endo-perio lesion, 22% of the dentists answered good, 20%

bad, and 58% depend on correct diagnosis and treatment (table 7).

Table (7): - Opinion of dentists about the prognosis of treatment of endo-perio lesion.

What is your opinion about the prognosis of treatment of endo-perio lesion?	GP	%
Good	22	22
Bad	20	20
Depend on correct diagnosis and treatment	58	58
<i>Total</i>	100	100

DISCUSSION

As general dental practitioners treat the major part of society, so their knowledge, attitude, and perception about the endodontic and periodontal diseases and its management are of utmost importance (Jadhav et al., 2015).

Most of the dentists have knowledge that periodontal lesion and endodontic lesion are cause or result of the other, but little percent has knowledge about endo-perio lesion classification, if there is correct knowledge about classification of endo-perio lesion the dentist will achieve the correct diagnosis and adequate treatment, resulting in greater chances of obtaining success in the treatment of the periodontal-endodontic lesions (Al-Fouzan, 2014).

Almost half percent of the dentists know about protocol of treatment of endo-perio lesion,

the knowledge of these diseases processes is essential in coming to the correct diagnosis. This is achieved by careful history taking, examination, and performing special tests as reported by (Al-Fouzan, 2014).

The present study showed that more than half of dentists believe that prognosis of endo-perio lesion in single-rooted teeth is better than multi-rooted teeth, which is not perfect idea about prognosis (Storrer *et al.*, 2012), on the other hand almost half of dentists believed that furcation involvement is not one of the signs of endo-perio lesion.

Regarding the detection of primary cause of endo-perio lesion, the study shows that (92%) of the dentists showed that their opinion match correct criteria, and these finding agrees with (Parolia *et al.*, 2013).

The prognosis of treatment of endo-perio lesion is complicated, so not high percent of the

dentists have confidence to choose good answer but half of them believed that the prognosis procedure is dependant , to make a correct diagnosis the clinician should have a thorough understanding and scientific knowledge of these lesions. Despite the segmentation of dentistry into the various areas of specialization, a clinician needs to perform restorative, endodontic or periodontal therapy, either singly or in combination. Therefore, to achieve the best outcome for these lesions, a multi-disciplinary approach should be provided (Parolia *et al.*, 2013).

The treatment strategies and the clinical outcome depend on various factors including the extent of the periodontal disease, assessment of the therapeutic prognosis, with the intended regenerative procedure, tooth mobility, properly performed root canal treatment, and adequate healing time and patient compliance. (Swaminathan *et al.*, 2014).

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