

## Original Article

# Perception Regarding Oral Health & Disease Among Medical Practitioners of Durg, Chhattisgarh – A Cross Sectional Study

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### Abstract

**Objectives:** The study was undertaken to address this crucial issue, in an attempt to assess the perception regarding the common oral and dental problems among the general medical practitioners in Durg district of Chhattisgarh state.

**Methodology:** A descriptive cross sectional questionnaire survey was conducted among registered medical practitioners in Durg district of Chhattisgarh state. A pre tested questionnaire was used for the survey. The study was carried out over a period of 2 weeks in the month of January 2015. The questionnaire was personally administered by the investigator.

**Results:** The response rate was 85%. 50% of the study subjects reported that patients with oral problems report to their clinic frequently. Around 34% of the study subjects only examined and prescribed medications whereas 66% of the study subjects examined the patients and perform adequate referral to dentists. The knowledge of the medical practitioners was inadequate.

**Conclusion:** Screening and referral by medical practitioners would surely benefit their patients by improving access to dental care.

**Key Words:** Oral health, perception, tooth diseases, physicians, referral

### Introduction

Oral health is an essential component of health throughout life. Oral health contributes to morbidity and mortality throughout one's lifespan<sup>1</sup>. Poor oral health and untreated dental diseases have a long lasting impact on individual's quality of life affecting basic human needs such as ability to eat and drink, swallow, maintain proper nutrition, smile and communicate<sup>1</sup>.

Oral diseases have important side effects on overall health, while systemic conditions may also influence oral health<sup>1</sup>. Therefore, oral health needs to be addressed by a multi-professional approach and at the same time be integrated into health promoting strategies and practices<sup>2</sup>. In addition, the common risk factor approach for chronic diseases calls for multi – professional collaboration<sup>3,4</sup>. Thus oral health promotion is needed within health care practices of physicians.

Oral diseases are usually overshadowed by other health needs, which are perceived to be more obvious and urgent by the attending physician, the individual patient themselves and their relatives<sup>5</sup>. But recently the dynamic interaction between oral diseases and systemic diseases has become a thought provoking and a research leading hypothesis. Researchers have studied in detail the potential mechanisms by which oral bacteria may contribute to systemic inflammation<sup>6</sup>. A large number of clinical studies have investigated the association between oral diseases and myriad systemic conditions, including cardiovascular diseases<sup>7</sup>, diabetes<sup>8</sup>, pneumonia<sup>9</sup>, rheumatoid arthritis<sup>10</sup>, and pregnancy outcomes<sup>11,12</sup>. This makes routine oral examination an extremely important and a viable area for the early diagnosis and prompt treatment of oral and non oral diseases<sup>13,14</sup>.

India is a country with varied ethnic groups, geographic characters, culture, and religion with population of 1.22 billion<sup>15</sup>. Among them, 68.84% of the population is residing in rural areas where only 10% of manpower resources are available and vice versa in urban areas. The dentist population ratio is 1:10,000 in urban areas and 1:250,000 in rural areas<sup>16</sup>. For the population residing in rural areas, oral health care is provided by the general medical practitioners. Hence medical practitioners need to actively participate and play a pivotal role in oral health promotion. The need of the hour is for medical practitioners to have adequate knowledge about oral health as they are the one to whom majority of the population approach.

Health professionals have the potential to promote and improve oral health of the masses by delivering oral health messages, advocating regular dental visits and also conducting activities within their scope of duties. Dental knowledge of qualified medical practitioners is different when compared to the general public and also to that of dental practitioners. Even though they are qualified in the medical faculty their knowledge about dental diseases, relationship of oral health with systemic diseases and life threatening dental diseases are scarce<sup>17</sup>. Not much research on general physicians' awareness of oral health in the central region of India is available on search of literature. Hence, this study was undertaken to address this crucial issue, in an attempt to assess the perception regarding the common oral and dental problems among the general medical practitioners in Durg district of Chhattisgarh state.

## Methodology

### 1. Study design

A descriptive cross sectional questionnaire survey was conducted among registered medical practitioners in Durg district of Chhattisgarh state. A pre tested questionnaire was used for the survey. All questions used in the questionnaire were close ended.

### 2. Sample size and sampling method

Sampling frame comprised of all the medical practitioners registered with Indian Medical Association (IMA) of Durg district. A list of all the registered medical practitioners in Durg was obtained from the local branch of IMA. All the medical practitioners were personally contacted and those who provided consent and returned the completed questionnaire were included in the study.

Inclusion criteria:

- Medical practitioners registered with the Indian Medical Association of Durg branch
- Practicing in private clinics in Durg
- Providing consent to be included in the study and returning a completely filled questionnaire

### 3. Ethical Clearance & Informed consent

The study protocol was approved by the Institutional Review Board of Rungta College of Dental Sciences & Research, Bilai. Individual written informed consent was obtained from each of the study participants after explaining the objectives of the study.

### 4. Questionnaire

The questionnaire of the study was developed from previously validated survey<sup>18</sup> with certain required modifications. First, the questionnaire was assessed for face and content validity by experts in dental public health for relevancy and clearness. Then, a pilot survey was conducted among medical practitioners (n=10) and based on the study subjects opinion regarding the clarity of questions, the questionnaire did not required any revision. The internal consistency of the questionnaire was checked by subjecting the data to Cronbach's alpha test. The Cronbach's alpha was found to be 0.93 (93%) reflecting a high degree of reliability.

The questionnaire included the demographic details and the information related to importance of oral health, oral health maintenance, relationship of oral diseases with systemic diseases and oral diseases and their management.

### 5. Collection of data

The study was carried out over a period of 2 weeks in the month of January 2015. The questionnaire was personally administered by the investigator. The medical practitioners were approached personally and the purpose of the study was explained. It was also mentioned that responses would remain confidential. It took around 10 minutes to complete the questionnaire. The filled questionnaire was collected after being answered by the participants and subjected to statistical analysis.

### 6. Statistical analysis

Data obtained from this questionnaire was analysed using the SPSS statistical package (version 18; Chicago, IL, USA). The data was subjected to descriptive analysis (frequency distributions).

## Results

Out of 102 study subjects, 63 (61.8%) were males and 39 (39.2%) were females (Table 1). The mean age of the study subjects was  $35.35 \pm 9.07$  with a range of 25–60. The experience of the practitioners varied from 1–34 years with a mean of  $8.06 \pm 8.55$  years. One hundred and two completely filled questionnaires out of the one hundred twenty distributed, giving a response rate of 85%. 50% of the study subjects reported that patients with oral problems report to their clinic frequently. Around 34% of the study subjects only examined and prescribed medications whereas 66% of the study subjects examined the patients and perform adequate referral to dentists. The results of the study are shown in the following table (Table 1).

Table 1 : Results			
A. Perception of study subjects regarding relation of oral health with general health			
Question	Agree	Disagree	Neither agree nor disagree
Oral health is an integral part of general health	102 (100%)	00	00
Oral health has an influence on the overall quality of life.	99 (97.1%)	00	03 (2.9%)
Certain systemic diseases can manifest in the oral cavity	99 (97.1%)	03 (2.9%)	00
Oral diseases have an implication on certain systemic diseases/conditions like cardiovascular diseases, Pregnancy, low birth weight babies, preterm baby etc.	93 (91.2%)	03 (2.9%)	06 (5.9%)
Dental care is important for pregnant women	99 (97.1%)	03 (2.9%)	00
B. Perception of study subjects regarding aetiology and prevention of dental caries			
Dental caries (tooth decay) and gum diseases are plaque mediated diseases	93 (91.2%)	00	09 (8.8%)
Dental caries is a complex disease but can be prevented by adopting healthy oral health behaviours	90 (88.2%)	00	12 (11.8%)
Micro-organisms that cause dental caries are transmitted mainly from the mother to the child	18 (17.6%)	60 (58.9%)	24 (23.5%)
Frequent consumption of sugar containing food is more detrimental than the quantity of the sugar consumed	63 (61.8%)	33 (32.3%)	06 (5.9%)
Proper brushing of teeth and flossing will enable to prevent both dental caries and gum diseases	75 (73.5%)	24 (23.6%)	03 (2.9%)
Fluorides have a protective role against dental caries	102 (100%)	00	00
C. Perception of study subjects regarding maintenance of dentition			
Proper maintenance of deciduous dentition is not important because they are going to be replaced by permanent dentition.	27 (26.5%)	69 (67.6%)	06 (5.9%)
Artificial teeth can perfectly replace the function of natural teeth. Hence, too much care for natural teeth is unwarranted.	33 (32.4%)	63 (61.7%)	06 (5.9%)
D. Perception of study subjects regarding oral cancer aetiology			
Question	Agree	Disagree	Neither agree nor disagree
Tobacco is the only risk factor for oral cancer	42 (41.2%)	54 (52.9%)	06 (5.9%)
All precancerous lesions of the oral cavity invariably lead to oral cancer if the predisposing factors are removed	30 (29.4%)	60 (58.8%)	12 (11.8%)

<b>E. Perception of study subjects regarding alignment of teeth and para-functional habits</b>			
Question	Agree	Disagree	Neither agree nor disagree
Alignment of teeth is done for aesthetic purpose only	69 (67.6%)	27 (26.5%)	06 (5.9%)
Para-functional habits like thumb sucking, lip biting, lip sucking and nail biting are very common among children. Do these habits need to be curbed?	102 (100%)	00	00
<b>F. Perception of study subjects regarding oral diseases</b>			
Question	Agree	Disagree	Neither agree nor disagree
Soft drinks can cause loss of dental enamel which is the hardest tissue in the human body	99 (97.1%)	03 (2.9%)	00
Saliva can be used in the diagnosis of oral as well as certain systemic diseases	81 (79.4%)	18 (17.7%)	03 (2.9%)
<b>G. Perception of study subjects regarding periodontal diseases</b>			
Question	Options	Response	
In oral cavity, periodontal diseases affects:	a. Enamel & Dentin	3 (2.9%)	
	b. Mucosa of lip, cheek, hard and soft palate	3 (2.9%)	
	c. Gums and tooth socket	60 (58.8%)	
	d. All of the above	36 (35.4%)	
<b>H. Perception of study subjects regarding traumatic dental injuries</b>			
Question	Options	Response	
A tooth fallen out of socket due to trauma can be re-implanted into the tooth socket	a. Possible, can be done	60 (58.8%)	
	b. Should not be done	21 (20.6%)	
	c. Don't know	21 (21.6%)	
Mouthguards are useful in preventing sport related injuries/trauma	a. Agree	96 (94.2%)	
	b. Disagree	03 (2.9%)	
	c. Neither agree nor disagree	03 (2.9%)	

## Discussion

Oral diseases are of public health interest and are preventable. Early detection of oral diseases facilitates prompt treatment and restoration to normal health and function. Delay in referral has a devastating effect on the associated morbidity and mortality. The role played by medical practitioner to improve the oral health of the population depends on his knowledge about oral disease and its impact on general health.<sup>19-22</sup>

Interdisciplinary approach has become the patient management strategy in recent decades. This approach requires close cooperation between doctors and dentists. A team of well informed medical practitioners and dentists can benefit the society. Medical practitioners can act as good source of knowledge providers to the general public.<sup>23-26</sup>

Rapid growth in information technology has placed a significant burden on the public to acquire relevant information. Poor literacy skills can affect public's ability to seek further health information and make informed healthcare decisions. Medical practitioners form an important link in the dissemination of relevant knowledge to the general public.<sup>23-29</sup>

This cross sectional study was undertaken to assess the perception of general medical practitioners regarding oral diseases. In the present study there was a unanimous agreement among the medical practitioners that oral health is a part of general health. Most of the medical practitioners were of the view that certain systemic diseases can manifest in oral cavity and oral diseases have an implication on certain systemic diseases such as diabetes mellitus and cardiovascular disorders.

The results are in concordance with studies by Patil A et al., Srinidhi S et al<sup>19</sup> and Umesh et al<sup>26</sup>. This finding suggests that the respondents were conversant with the vast body of evidence linking oral and systemic health.<sup>30-33</sup>

This could be because the MBBS curriculum in India includes a dental posting in which they have an exposure to dental health aspects which improves their awareness, knowledge and attitude towards dentistry. The implications of the knowledge include the dilemma of patients being managed by these respondents that may need a dental referral, but are denied due to the ignorance of physician.

It was also observed that most of the medical practitioners in our study felt confident with the oral examination. Most of them asserted that they did examine the oral cavity of their patients routinely, though this response could also have been made due to an interviewer bias. The results of this study agreed with those of the study of Morgan et al.<sup>34</sup>

Results of the study showed that medical practitioners were aware regarding the causes of dental diseases. Around 92% of the respondents answered that dental caries and periodontal diseases are plaque mediated. This is comparatively more than a study reported by Srinidhi S et al<sup>19</sup>. But, only 17.6% of the medical practitioners were aware of the fact that dental caries causing bacteria can be transmitted from the mother to the child. Child-rearing habits which facilitate saliva transfer from adults to the child, such as sharing of food and utensils and habits which involve close contact, such as breast feeding and sleeping beside the mother, were also significantly associated with colonization of *S. Mutans*.<sup>35,36</sup>

Regarding maintenance of dentition, many of the medical practitioners did not give importance to maintenance of deciduous dentition as they were of the view that it is eventually going to be replaced. Surprisingly, around one third of the respondents replied that too much care for natural teeth is unwarranted as artificial teeth can perfectly replace the function of missing teeth. This highlights that more comprehensive knowledge need to be provided to the medical practitioners.

However, knowledge regarding oral cancer was not up to mark. Around 40% of the medical practitioners believed that tobacco is the sole risk factor for oral cancer and around 30% were of the opinion that all pre cancerous lesion of oral cavity invariably lead to oral cancer even if the pre disposing factors are removed.

It is however, unrealistic to expect all the medical practitioners to be conversant with all the nuances of the oral health and diagnosis. The identification of specific areas that have important health implications for the patient, and at the same time, the conditions to which the doctors can be easily sensitized to, is therefore a priority.

Limitations of the study are that the number of items in our instrument (questionnaire) had to be limited,

because of the nature of the sample. We did not expect the busy medical practitioners to devote more than 15 minutes of their time in answering our questions. Hence, though the questions covered a gamut of important areas, no in-depth probing could be carried out. Hence a focus group interview would probably be a better way for gathering more information in the specific area.

## Recommendations

- To conduct seminars for newly graduated medical practitioners to update their dental knowledge especially on common misconceptions.
- To encourage newly graduated medical practitioners to examine the oral cavity (including teeth and gums) during their general examination for patients.
- To encourage the setting up of multi speciality clinics including medical practitioners and dental practitioners for the benefit of providing services under one roof.
- To conduct continuing education programmes to improve their knowledge, attitude and awareness about various dental diseases.

## Conclusion

To conclude, the knowledge regarding oral health and disease among medical practitioners was inadequate. Therefore, it is imperative to educate and empower medical practitioners about oral health to change the perception of dentists as the only ones responsible for maintaining good oral health in the population.

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