



Knowledge, attitude and perception of oral diseases presenting to general medicine practitioners.

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Abstract

Aim is to assess the frequency and type of oral conditions presenting to General practitioners, and to document if a second opinion for the presenting dental condition is sought.

The main objective of the study is to quantify the frequency and type of oral conditions presenting to general practitioners.

Dentofacial pain is a common presentation in general practice, and more than 50% of cases arise from dental related pathology. Dentists are well equipped and trained to deal with most of the common presentations of dental pain. Furthermore, less common and atypical dentofacial pain presentations are adequately dealt by dental specialists in the area of oral medicine and oral maxillofacial surgery. However, not all people with dental pain present to the dentist and or dental specialists. General practitioners are often the first point of contact for advise and management in cases of dental related pain; reasons for presentation to the General Practitioners, rather than the dentist. However, for various reasons, GPs may not be well equipped for management of dentofacial pain.

INTRODUCTION

Oral diseases, conditions, and orofacial trauma, are widely prevalent and costly to treat; yet they are preventable. Most of the oral conditions have an insidious onset, and are chronic and asymptomatic in nature until they have progressed to an advanced stage. Also there are several systemic diseases with oral manifestations many of which manifest earlier than their systemic counterparts. This makes the routine oral examination an extremely important and a viable area for the early detection and the treatment of the variety of oral and systemic diseases[1]. The first contact for most of the patients is usually with the general medical practitioner. Inspection of the oral cavity by the doctor has been accepted as a part of the physical examination for over a century, and if it is done on a routine basis it can considerably reduce the morbidity and mortality which result from oral diseases. [2].

Dentofacial pain is a common presentation in general practice, and more than 50% of cases arise from dental related pathology. Dentists are well equipped and trained to deal with most of the common presentations of dental pain. Furthermore, less common and atypical dentofacial pain presentations are adequately dealt by dental specialists in the area of oral medicine and oral maxillofacial surgery[3]. However, not all people with dental pain present to the dentist and or dental specialists. General practitioners are often the first point of contact for advise and management in cases of dental related pain; reasons for presentation to the General Practitioners, rather than the dentist include non classic presentation of dento facial pain, lack of coordinated after hours dental care, poor patient education, patients' prescription of their GP as the primary coordinator of integrated total care and financial considerations.[4]. However, for various reasons, GPs may not be well equipped for managing dento facial pain these include; minimal dental education in medical schools, inconsistent exposure to dental

problems, absence of management guidelines, poor localisation of dento facial pain and poor communication and collaboration with the GPs and dentists. [5].

Many patients with oral symptoms present initially to their general practitioner (GP) with a variety of problems, ranging from simple benign disease to premalignant or malignant conditions. Early recognition and diagnosis of this disease spectrum is of paramount importance in the successful treatment, and directly affects prognosis of the disease condition[6]. The primary care clinician who deals with oral pathology must therefore be in a position to identify all suspicious lesions and to seek specialist advice as quickly as possible when unsure, while also referring to the most appropriate discipline. [7]. The purpose of this article is to assess the awareness of the common oral diseases and to create awareness of the prevailing dental conditions among medical practitioners, techniques for better diagnosis, and appropriate management protocols for different dental conditions.

MATERIALS AND METHODS

A questionnaire study was carried out among 129 general physicians in districts of Coimbatore and Chennai using an online survey tool. The questionnaire was designed with simplicity in mind. There was a high number of responses, the response rate may also have been influenced by the fact that many medical practitioners consider this to be a relevant subject. The questionnaire consisted of questions which enquired about the frequency and type of commonly seen oral conditions. Questions were asked specifically about benign and malignant disease, and dental or denture-related problems. And if an appropriate second opinion was sought for those conditions. The doctors spent an average of 5 minutes to finish the survey. The study's limitation is that, the participant had to rely on his/her memory to recall accurately their recent experience about the subject.

QUESTIONNAIRE

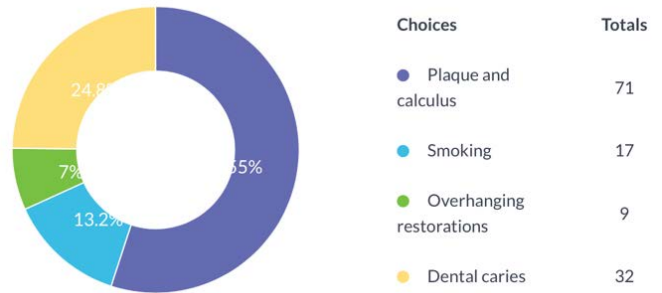
- 1) What do you think are the factors for Dental Caries?
 - A) Smoking
 - B) Brushing once daily or less than once daily
 - C) Using tooth powder
 - D) Frequent snacking and frequent food intake.
- 2) What do you think are the factors for periodontal and gingival diseases?
 - A) Plaque and calculus
 - B) Smoking
 - C) Overhanging restorations
 - D) Smoking
- 3) Do you think scaling has adverse effects on the teeth?
 - A) Thinning of tooth
 - B) Increase in interdental space
 - C) Increase in tooth mobility
 - D) Causes sensitivity of the teeth.
- 4) How often do you advise your patients to visit the dentist?
 - A) Once in 6 months
 - B) Once in a year
 - C) Once in 2-5 years
 - D) Only if pain arises
- 5) How often do you see patients with any oral symptoms and conditions in a week
 - A) Frequently (> 5 in a week)
 - B) Occasionally (2-5 in a week)
 - C) Rarely (less than 2 in a week)
- 6) How often do you manage patients with dental problems or conditions?
 - A) Frequently (>5 in a week)
 - B) Occasionally (2-5 in a week)
 - C) Rarely (less than 2 in a week)
 - D) Never
- 7) How do you treat a patient with dental abscess?
 - A) Prescribe antibiotics and painkillers
 - B) Refer to the dentist
 - C) Ignore
- 8) Do you think pregnancy women need dental check up?
 - A) Yes
 - B) No
- 9) Paedriatic patients must visit the dentist regularly.
 - A) Agree
 - B) Disagree
- 10) Ludwig's angina is a life threatening condition of
 - A) Cardiovascular system
 - B) Dental space infection
 - C) Respiratory system
 - D) Venous Disease
- 11) What is an another life threading condition that can occur due to untreated dental condition?
 - A) Cavernous thrombosis
 - B) Hodgkin's lymphoma
 - C) Myelofibrosis
 - D) Brain tumours
- 12) Periodontal Disease is a risk factor and is commonly associated with
 - A) Diabetes
 - B) Peptic ulcer
 - C) Asthma
 - D) Myocardial infarction
- 13) Systemic complications arising due to dental disease
 - A) Necrotising fasciitis
 - B) Diabetes
 - C) Leukoderma
 - D) White patches
- 14) Certain Anti- hypertensives can cause gingival enlargements
 - A) Agree
 - B) Disagree
- 15) According to you, what type of changes in the oral cavity would you associate with progression towards oral cancer or other pre malignant conditions ?
 - A) Non scrappable white patches
 - B) Blanching and stiffness of the oral mucosa
 - C) Non healing ulcers/ erosive lesions
 - D) Exophytic growth
- 16) There is a connection between General and oral health. Do you agree?
 - A) Yes
 - B) No
- 17) Are you aware of Sjögren's syndrome?
 - A) Yes
 - B) No
- 18) If yes, what are the affected regions in the Sjögren's syndrome?
 - A) Salivary and tear glands
 - B) Adrenal gland
 - C) Pituitary gland
 - D) Lymph nodes

- 19) Do you think HIV has oral manifestations?
 A) Yes
 B) No
- 20) If yes, what is the most common type of condition that can be appreciated
 A) Fungal infections (candidiasis)
 B) Viral infections
 C) Bacterial infections
 D) Gingivitis/ periodontitis
- 21) Systemic conditions with the most oral manifestations
 A) Cardiovascular
 B) Renal
 C) Gastrointestinal
 D) Respiratory

RESULTS
Table: 1

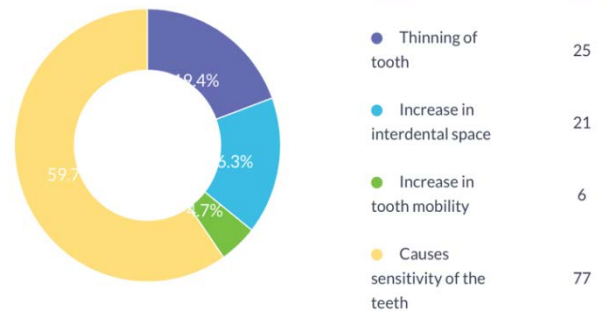
Questions	Yes	No
Do you think pregnant women need dental check ups?	115	14
Paediatric patients must visit the dentist regularly	121	8
Certain anti-hypertensives cause gingival enlargements	116	13
There is a connection between General and oral health	127	2
Aware of Sjögren’s syndrome	119	10
Do you think HIV has oral manifestations?	126	3

Graph: 2



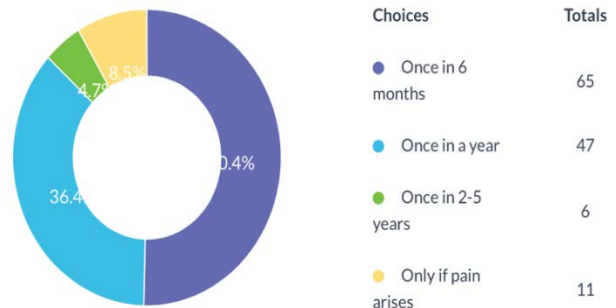
Causes for gingivitis and periodontitis

Graph: 3



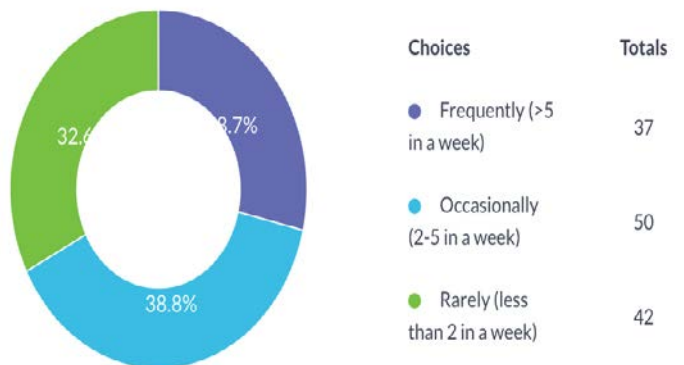
Adverse effects of scaling on teeth

Graph: 4



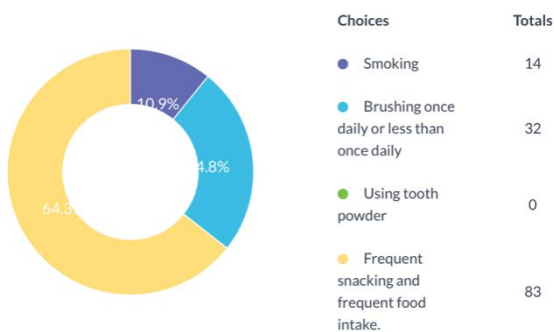
Advising the patient to visit the dentist

Graph: 5



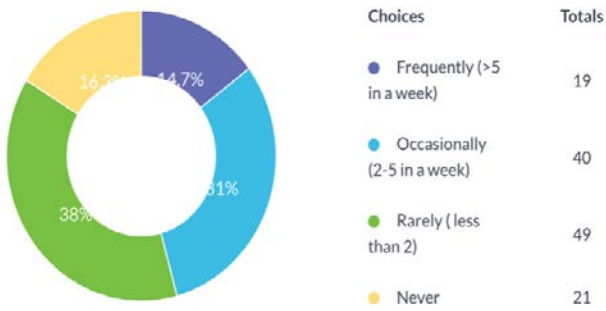
Frequency of patients visiting with oral conditions

Graph: 1



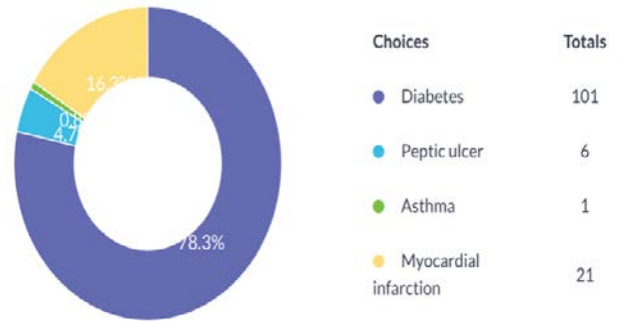
Causes for dental caries

Graph: 6



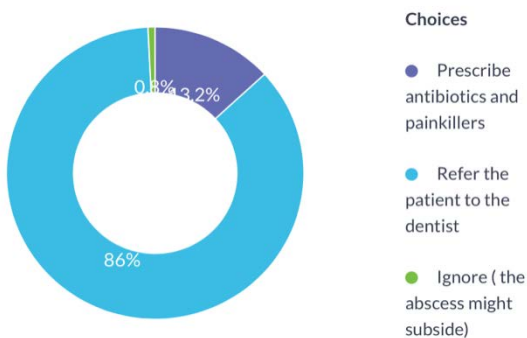
Management of patients with oral conditions

Graph: 10



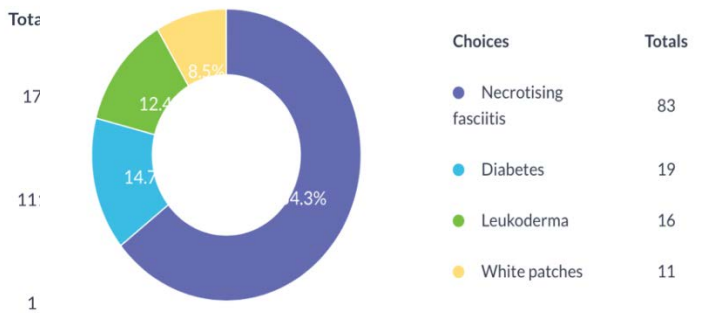
Periodontal disease commonly associated with dental condition

Graph: 7



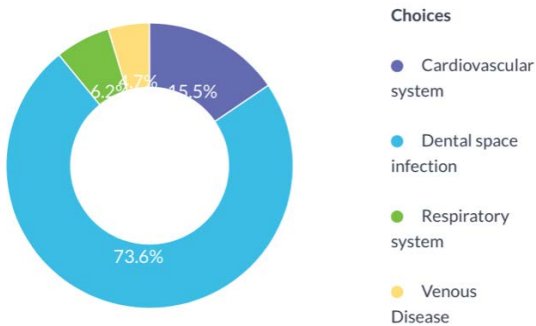
Management of patient with dental abscess

Graph: 11



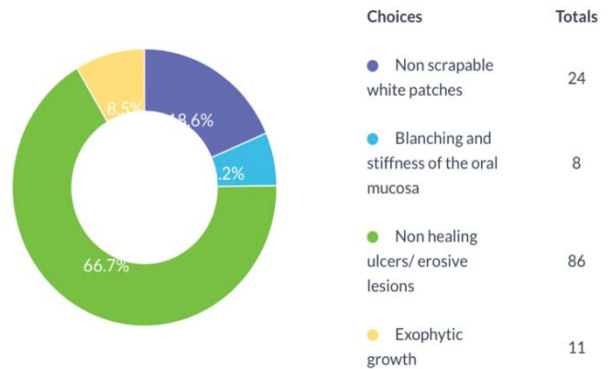
Systemic complication due to dental disease

Graph: 8



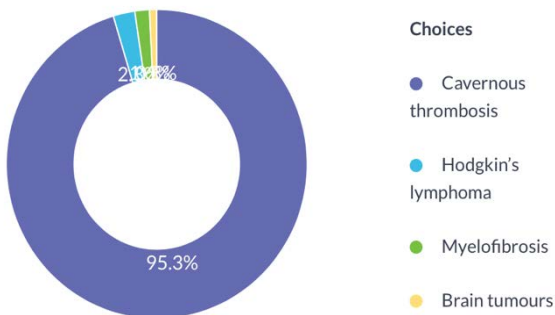
Ludwig's angina is life threatening condition

Graph: 12



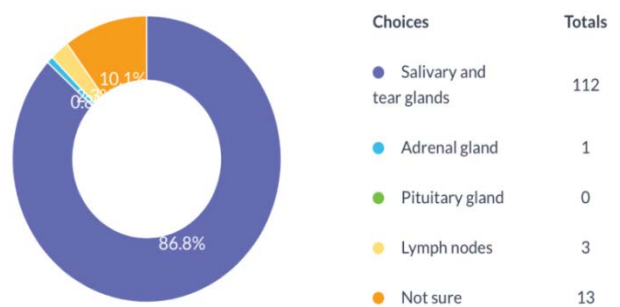
Changes associated with cancer progression

Graph: 9



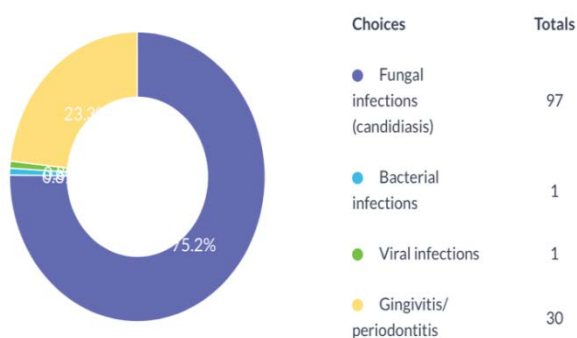
Life threatening condition due to untreated

Graph: 13



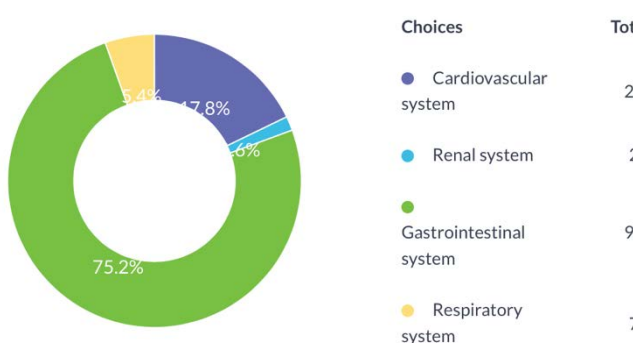
Affected region in Sjögren's syndrome

Graph: 14



Common HIV oral manifestation

Graph: 15



Systemic condition with the most oral manifestation

DISCUSSION

The mouth and face are highly accessible parts of the body, sensitive to and able to reflect changes occurring internally. The mouth is the major portal of entry to the body and is equipped with formidable mechanisms for sensing the environment and defending against toxins or invading pathogens. Poor oral conditions may adversely affect general health and certain medical conditions may have a negative impact on oral health. [8]. The relationship between oral and general health has been increasingly recognised during the past two decades. [9]. This cross sectional study was conducted to assess the dental knowledge, attitude and awareness of different medical practitioners of Chennai and Coimbatore.

The results of the study shows that medical practitioners had good dental knowledge. 83 doctors (64%) agreed that the most common cause of dental caries was frequent food intake and snacking, while other studies done by Vishal Malhotra et al, Mehrotra V et al, MC Bater, Warren jones, S Srinidhi, Navin Anand Ingle et al, Chandra J, Chandu et al, Naidu S et al, Radha et al, Patil et al, showed that 90% of doctors knew that frequent sugar intake and frequent snacking led to dental caries. The present study showed that 71 (55%) of the medical practitioners were aware that plaque and calculus was the causative factor for periodontitis and gingivitis, while Vishal Malhotra et al, Mehrotra V et al, MC Bater, Warren jones, S Srinidhi, Navin Anand Ingle et al, Chandra J, Chandu et al, Naidu S et al, Radha et al, Patil et al, had found that 80% of the doctors were aware that

plaque and calculus were the causative factor for periodontal and gingival diseases. [10,11,12].

Majority of the doctors considered in the present study agreed that pregnant women need dental checkups, which was similar to the results obtained by Dr. Rajesh et al. Doctors should be encouraged to refer pregnant patients for oral health examination. [13]. A multidisciplinary team that includes the Family Physician, Obstetricians and Dental practitioner should assume an active role in providing health education to pregnant women which can significantly decrease the possibility of oral diseases. Oral health education can be included in the medical curriculum to emphasize a positive attitude towards oral health[14].

95% of the doctors answered correctly that cavernous sinus thrombosis is a life threatening condition arising due to untreated dental condition, which was similar to the study conducted in Kanpur city. 28% saw patients presenting with dental conditions frequently (>5 in a week), while about 38% of the doctors had patients presenting with oral conditions occasionally(2-5 in a week), while in a study done by MC Bater et al, 46% reported that they saw between two and five patients with oral and dental problems every week, with a further 14% reporting seeing more than five patients on a weekly basis.[15].

78% of the doctors were confident that diabetes is associated with periodontitis, in a study done by kumar et al, 100% agreed that there exists some sort of relationship between diabetes and periodontal health, of which only 43.2% were aware of the bidirectional relationship and the remaining 56.4% reported diabetes as a risk factor of periodontitis. [16].

Dental students, receive a significant education in general medicine, general pathology and general surgery along with other basic science subjects, while on the other hand, medical students receive only minimal theoretical and practical knowledge about oral conditions. A study by Anderson et al, has demonstrated that medical practitioners are more likely to prescribe antibiotics for acute dental abscess than dentists, according to this study, 86% felt that referral of the patient to a dentist is the more appropriate way to treat a dental abscess than to prescribe antibiotics and painkillers, which was about 13%. Only 1% of the participants answered that the abscess can be ignored and that it will subside. According to the study done by Srinidhi et al, 79% of the doctors correctly identified that Ludwig’s angina is a dental space infection while according to this study, the result obtained was about 73%. 78% of the doctors correctly identified that periodontal disease is commonly associated with diabetes. 87% of the doctors correctly answered the affected regions in Sjögren’s syndrome are the salivary and tear glands. 75% chose that the systemic conditions with the most oral manifestations is the endocrine system.

CONCLUSION

From this study it can be concluded that the medical practitioners, were well aware about most of the dental conditions, along with the various oral manifestations of

systemic diseases, and life threatening conditions arising due to untreated dental conditions. It is essential that the medical practitioners keep their knowledge updated with time and get actively involved in oral health, as mouth is the mirror of the body. This can be achieved by conducting new seminars for the newly graduated doctors, and by regular examination of the oral cavity by the medical practitioners, during the patients' general examination. A multidisciplinary team that includes the Family Physician, Obstetricians and Dental practitioner should assume an active role in providing health education to pregnant women which can significantly decrease the possibility of oral diseases. Oral health education can be included in the medical curriculum to emphasise a positive attitude towards oral health.

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