

Original Article

The Frequency of Medically Compromised Patients Visiting Chettinad Dental College and Research Institute : A Retrospective Study

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Abstract

"Mouth Is The Mirror Of The Body". The incidence of systemic diseases has increased presently due to changes in the life style of an individual. There is a rapid advancement in the treatment modality of systemic disease which has resulted in the enhanced life span of an individual. A two way relationship exists between oral diseases and systemic diseases which is the prime focus today. Hence this study analyzes the frequency of systemic problems among patients visiting the Chettinad Dental College and Research Institute. **Materials and Methods:** In this retrospective study medical records of patients visiting CDCRI was analyzed for the year 2011, 2012, and 2013 in the presence of systemic disease. The list of extracted data from each patient's documents contained the history of cardiovascular diseases, respiratory, renal diseases, endocrine diseases like diabetes mellitus and thyroid, hematological disorders, gastrointestinal diseases. This data was tabulated and frequency distribution of each disease was analyzed using SPSS software. **Results:** Around 92,177 patients' medical records were analyzed retrospectively for 3 years (2011, 2012, and 2013). 3,820 patients had medically compromised conditions which accounted for 4.14%. The percentage of systemic disease accounted are the following: cardiovascular disease (39.29%), Diabetes mellitus (35.45%), Respiratory disorders (8.69%), thyroid (6.23%), Hepatitis (2.46%), Skin (2.43%), Epilepsy (2.02%), Renal disorders (2.01%), Blood dyscrasias (1.34%), which is depicted in the tabulation and graph. **Conclusion:** As there is increased prevalence of systemic disorders, primarily, a modification in the treatment modality can be done only with a perfect medical charting. Secondly, more emphasis should be given to annual dental checkups as a "healthy mouth leads to healthy body".

Key words : Systemic disorders, Prevalence, Focal infection.

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Introduction

"Mouth is the mirror of the body". The incidence of systemic diseases has increased presently due to changes in the life style of an individual. There is a rapid advancement in the treatment modality of systemic disease which has resulted in the enhanced life span of an individual. A two way relationship exists between oral diseases and systemic diseases which is the prime focus today.

Hence a good oral health is necessary to maintain a healthy systemic condition. The knowledge of the importance of focal infection causing systemic diseases resulted in increased number of medically compromised patients visiting the dental college. Hence this study analyzes the frequency of systemic problems among patients visiting the Chettinad Dental College and Research Institute (CDCRI).

Materials and Methods

In this retrospective study medical records of patients visiting CDCRI was analyzed for the year 2011, 2012, and 2013 for the presence of systemic disease. The list of extracted data from each patient's documents contained the history of cardiovascular, respiratory,

renal, endocrine diseases like diabetes mellitus, thyroid, hematological disorders, and gastrointestinal diseases. This data was tabulated and frequency distribution of each disease was analyzed using a SPSS software.

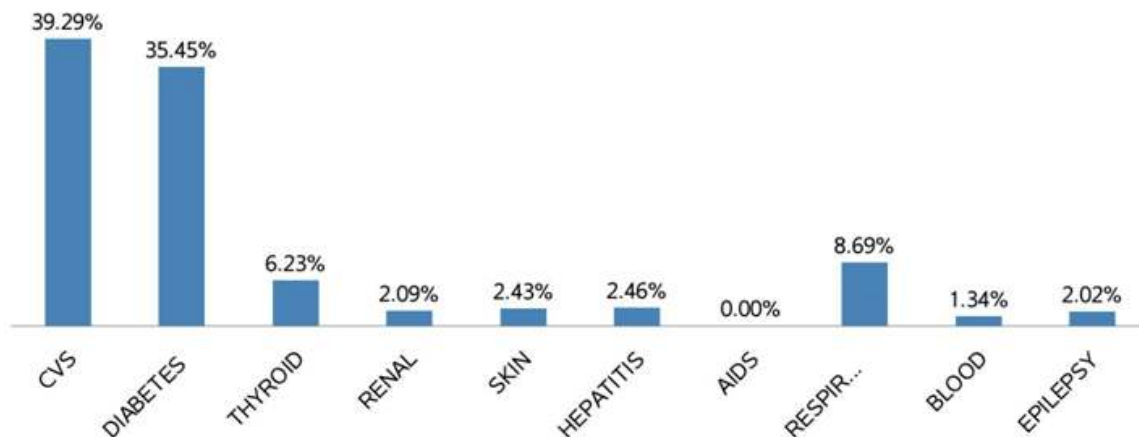
Results

Around 92,177 patients' medical records visiting the Chettinad Dental College and Research Institute were analyzed retrospectively for 3 years (2011, 2012, and 2013). 3,820 patients had medically compromised conditions which accounted for 4.14% of the total population with oral disease who had visited the Chettinad Dental College and Research Institute. Between 4.14% of the medically compromised patients visiting Chettinad Dental College and Research Institute the frequency of each systemic problem is mentioned below as a percentage. The percentage of systemic disease accounted are as follows: cardiovascular disease (39.29%), Diabetes mellitus (35.45%), Respiratory disorders (8.69%), thyroid (6.23%), Hepatitis (2.46%), skin (2.43%), Epilepsy (2.02%), Renal disorders (2.01%), Blood dyscrasias (1.34%), which is depicted in the tabulation and graph (Table 1), (Graph- 1).

Table-1: Total Statistics with Percentage of systemic disorders (2011, 2012, 2013)

YEAR	TOTAL OP	CVS	DIABETES	THYROID	RENAL	SKIN	HEPATITIS	RESPIRATORY	BLOOD DYSCRASIAS	EPILEPSY
2011	27456	592	546	94	24	24	26	155	11	17
2012	27161	516	476	78	29	16	25	71	24	20
2013	37560	393	332	66	27	53	43	106	15	38
TOTAL	92177	1501	1354	238	80	93	94	332	50	75
PERCENTAGE		39.29%	35.45%	6.23%	2.01%	2.43%	2.46%	8.69%	1.34%	2.02%

Graph 1: Total Statistics with Percentage of systemic disorders (2011, 2012, 2013)



Discussion

The prevalence of medically compromised patients visiting the Chettinad Dental College and Research institute was studied from the medical records of the dental patients for 3 years retrospectively - (2011, 2012, 2013). A total of 92,177 patient's medical records were screened. Among these records 3820 patients were medically compromised, which accounted for 4.14%. The frequency distribution of each systemic disease accounted for the following, cardiovascular disease was (39.29%), Diabetes mellitus (35.45%), Respiratory disorders (8.69%), thyroid (6.23%), skin (2.43%), hepatitis (2.46%), renal (2.01%), blood dyscrasias (1.34%), epilepsy (2.02%).

Hence the focus in the present study was to analyze the number of medically compromised patients visiting the dental college. It enables us to lay more emphasis on the modification of treatment modality for these patients. Secondly, the awareness of the relationship between oral and systemic disease among patients can be analyzed. Today, oral diseases are interrelated with systemic diseases. There is a two way relationship between cardiovascular and periodontal disease. Periodontal disease is the 6th complication of diabetes. Al-bayaty et al, stated that among 303 medical conditions encountered, 289 individuals were medically compromised and showed a prevalence rate of 42%, Hypertension (12.6%), Diabetes mellitus (6.1%), asthma (5.8%), arthritis (4.7%), allergy (8.3%)¹. Fenlon et al, revealed the medical status of 1500 patients attending a primary health care centre. The incidence of each disease accounted for the following: cardiovascular disease (10.4%), endocarditis risk (5.8%), hepatitis (7.8%), leukemia (0.3%), bleeding disorders (3%), and allergy (7%)².

Cottone et al, surveyed 4,365 patients between 1975 and 1976. 1833 patients were medically compromised. The frequency of the positive response in the various groups were the following: genito-urinary disease (19.8%), allergy (19.2%), respiratory disorders (19.2%), gastrointestinal disorders (17.9%), cardiovascular diseases (15.8%), endocrine disorders (8.3%), and musculoskeletal disorders (15.1%). Increased prevalence of genitourinary disease was seen which is attributed to variations in the locality³. Natto et al, assessed periodontal bone loss among medically compromised patients visiting a dental hospital in Saudi Arabia. The most common prevalent disease was diabetes mellitus⁴. Nery et al, revealed that in a total of 581 patients out of 581 periodontal patients studied, the most prevalent medical problem encountered was cardiovascular disease⁵.

Dhanuthai et al, studied 58,317 patients and discovered that 7,167 patients were medically compromised. The incidence of heart disease was more prevalent which is correlated with our study⁶. Almask, Awartanifa et al, studied the medical records of 740 patients between Jan 2002 to June 2002. The age range was 18-64yrs; diabetes mellitus, hypertension, asthma, rheumatic heart disease were commonly seen. This is compatible with our study⁷. Georgiou et al, discovered that the prevalence of cardiovascular disease was highest among 1000 adult patients visiting the dental clinic which is in concurrence with our study⁸. Aggarwala et al, related the increased prevalence of cardiovascular disease among 3,786 medically compromised patients studied. This also correlated with our study⁹. Burgausz et al however, in contrary to our study, in a study among 1,509 patients the incidence of gastrointestinal

disease was more prevalent¹⁰. The results of the present study showed increased incidence of cardiovascular disease followed by diabetes mellitus, and respiratory disease. All the above mentioned disorders are associated with a medical emergency. Hence, further studies are required to assess the etiology, the interlinked pathogenesis and risk factors of the disease. One of the most prevalent dental causes of these systemic diseases is periodontal disease. Periodontal disease can precipitate cardiovascular disease, respiratory disease, and it's the 6th complication of diabetes. Hence it's advisable to have regular dental check up annually as "prevention is better than cure".

Conclusion

Based on the results of the study there seems to be an increased incidence of cardiovascular disease followed by diabetes and respiratory disorder which is attributed to environmental changes, life style and age. As there is increased prevalence of systemic disorders, primarily a modification in the treatment modality can be done only when a perfect medical charting is done. Secondly, more emphasis should be given to annual dental checkups as a "healthy mouth leads to healthy body". Hence further studies are required to analyze the etiology of these disorders.

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If it is Alzheimer's, your judgment is as good as your physician's!

Have you noticed significant memory lapses that you felt are worthy of being reported in the recent past? Then you are potentially a candidate for developing Alzheimer's later in your life. That appears to be the conclusion of a study conducted in Sanders-Brown Center on Aging, University of Kentucky. In that study, the investigators asked 3701 men aged over 60 a simple question: "Have you noticed any change in your memory since you last came in?". The responses obtained led the investigators to conclude that the subjective memory complaints are early markers of Alzheimer disease. This has also been the observation of several other epidemiologists. The researchers consider that encouraging as it is now possible to intervene early to reduce the effects of cognitive memory impairment. (Science Daily, 21 February 2014. (www.sciencedaily.com/releases/2014/02/14022114124.htm))

- Dr. K. Ramesh Rao