



CODEN [USA]: IAJPBB

ISSN: 2349-7750

INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES

<http://doi.org/10.5281/zenodo.3383280>

Available online at: <http://www.iajps.com>

Research Article

ORAL MANIFESTATION OF SYSTEMIC DISEASES IN GERIATRICS

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Article Received: June 2019

Accepted: July 2019

Published: September 2019

Abstract:

The aim of this cross-sectional study was to assess the relationship between oral manifestations and systemic diseases particularly Diabetes Mellitus and Hypertension. Oral manifestations of systemic diseases are potential indicators of an array of conditions. Truly the oral cavity is a mirror that reflects and unravels many of the human body's internal secrets. There is a significant relationship between 'oral health' and 'general health'. Systemic diseases like Hypertension, Heart disease and Diabetes Mellitus may affect oral health badly. The aim of this cross-sectional study was to assess the relationship between oral manifestations and systemic diseases particularly Diabetes Mellitus and Hypertension.

We focused on the prevalent systemic diseases, which are Diabetes and Hypertension, in Geriatrics (age above 60) in Old People Care Homes. We found that Hypertension caused gingivitis. Diabetes caused Halitosis. In diabetic patients, there is increased breakdown of fats, which is converted to ketone bodies, these ketones are excreted in breath resulting in a condition known as halitosis.

In conclusion, the relationship between Hypertension and Gingivitis was found to be significant. Diabetes was associated with halitosis.

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Please cite this article in press Muhammad Abubakar bin Nauman et al., *Oral Manifestation Of Systemic Diseases In Geriatrics., Indo Am. J. P. Sci, 2019; 06[09]*.

INTRODUCTION:

There is a significant relationship between 'oral health' and 'general health'. Systemic diseases like Hypertension, Heart disease and Diabetes Mellitus may affect oral health badly. Truly the oral cavity is a mirror that reflects and unravels many of the human body's internal secrets. There is a significant relationship between 'oral health' and 'general health'. Systemic diseases like Hypertension, Heart disease and Diabetes Mellitus may affect oral health badly. Diabetic patients have increased blood Glucose level, due to which there is an increase in the glucose level of saliva in the oral cavity. Since glucose is the source of energy for bacteria, it promotes bacterial colonization, which with time causes gingivitis and periodontitis. Hypertension for prolonged periods causes inflammatory response gingiva, inflammation is an essential component of immune response to pathogens, damaged cells, and other potent inflammatory stimuli including reactive oxygen radicals. While it provides a pivotal defense mechanism against injurious agents, inflammation itself may cause injury to surrounding healthy bystander cells at the site. Inflammation is therefore a 'double-edged sword' as this adaptive response might eventually become maladaptive after a chronic time. In blood vessel, inflammation increases vascular permeability and alters cytoskeletal elements in endothelial cells, disrupting the endothelial functions in controlling vascular health. Hence, there is a potential association between vascular inflammation and hypertension, which may result in gingivitis. This research is conducted to test these relationships and move

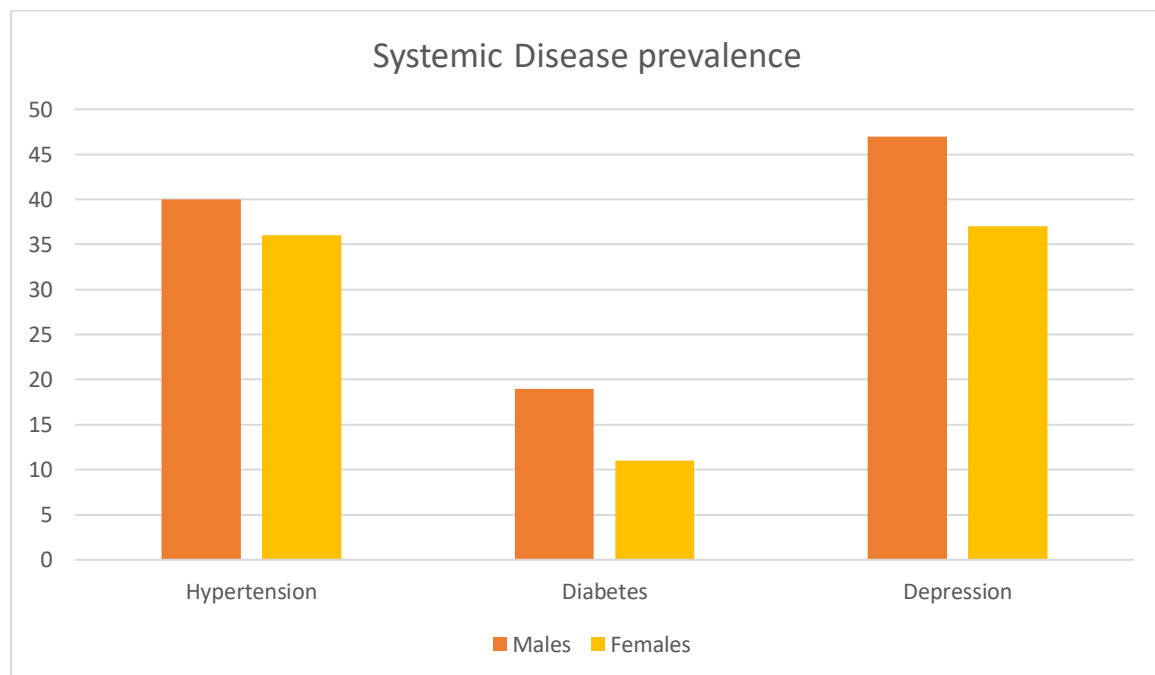
forward towards preventing and curing oral diseases by removing or managing the cause of the oral diseases.

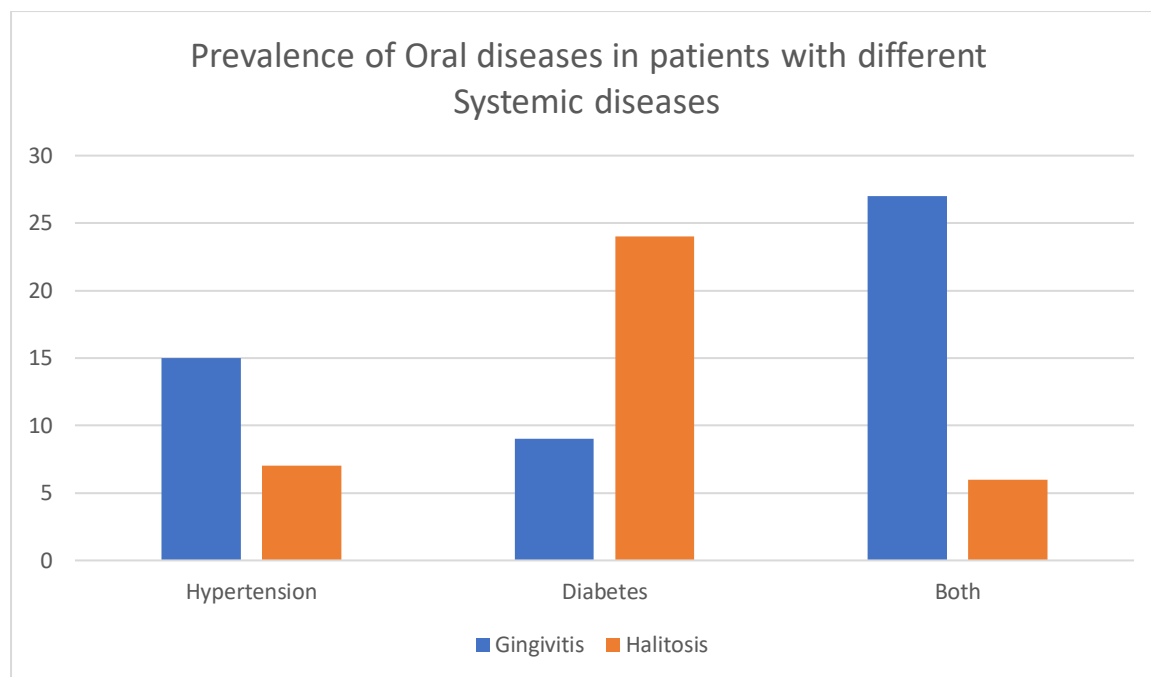
METHOD:

A cross-sectional study was planned to test these relationships between oral and systemic diseases. A survey was carried out on old age people residing in old people homes of a certain locality in Lahore, Pakistan. In this survey 109 people of age 60 years or above participated. There were 66 males and 43 females. Their health status was judged through a questionnaire. The questionnaire was mostly based on medical and dental history. It was ensured that a thorough medical and dental history is taken. The data was then analyzed and Chi square test was performed to determine the significance of relationship between systemic and oral diseases. Every disease was considered a separate factor, for example Hypertension, Diabetes, Depression, Gingivitis, Periodontitis, Halitosis.

RESULTS:

A total of 109 people of age above 60 years participated in this study, out of which 66 were males and 43 were females. 40 males and 36 females suffered from hypertension. 19 males and 11 females had diabetes 47 males and 37 females were suffering from depression. 51 people complained of bleeding gums (26 males and 25 females) out of which 9 had diabetes only and 27 had both diabetes and hypertension and 15 had only hypertension. 37 people complained of bad breath out which 20 had diabetes only and 17 had depression only.





DISCUSSION:

We focused on the prevalent systemic diseases, which are Diabetes and Hypertension, in Geriatrics (age above 60) in Old People Care Homes. Some researchers conflict on the point that depression is not a disease, but since majority consider it a disease. We found the hypothesis that Hypertension and diabetes caused gingivitis and diabetes also caused Halitosis. We found that there is a significant relationship between hypertension and gingivitis, (chi-square value 0.001). There was no significant relationship between diabetes and gingivitis, so diabetic patients with periodontitis may have it because of poor oral hygiene or other reasons. In diabetic patients, there is increased breakdown of fats, which is converted to ketone bodies, these ketones are excreted in breath resulting in a condition known as halitosis. There was no significant relationship between depression and any other oral disease. The relationship between Diabetes and halitosis was also found to be very significant, (chi-square value 0.003).

Some researchers claim that anti-hypertensive drugs maybe the cause of gingivitis instead hypertension itself, but different studies have proved that anti-hypertensive drugs are more related to gingival hyperplasia. In our study, most diabetic participants had the condition under control, since they were receiving good medical healthcare, that maybe the reason that a relationship between diabetes and periodontitis could not be established. Most patients with hypertension either did not take proper medicines or were careless with their medication

intake, so there were more chances of finding a relationship in these patients.

CONCLUSION:

Chronic Hypertension is a cause of Gingivitis and Periodontitis. Diabetes does not cause gingivitis or periodontitis but may be a co-factor which results in the onset of disease. Depression does not play role in the onset of oral diseases.

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