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CASE REPORT

"Prevalance Of Cerebrovascular Accidents And Coronar Artery Diseases And To Assess The Proinflammatory Markers In Dental Patients"

[1]Arul Murugan.S, [2]Aravind.C*, [3]Monica.P, [4]Muthukumarasamy

ABSTRACT

Introduction: Dental disease is regarded as silent epidemic among which dental caries remains on seizures threat. Cytokines produced from oral infections. Play a major role in CHD. AIM: Correlation of s-CRP and ECG and TMT changes in dental disorder patients. Conclusion : Among the 100 patients 15 patients had high HSCRF, 10 patients had ECH changes suggestive of IHD and 12 patients had positive TMT. Incidence of hs-CRP, ECG & TMT changes in 100 dental disorder patients.

KEY WORDS : Dental caries, Bacteria. Inflammation, Biofilm,Tread Mill Test

Introduction

Dental disease is regarded as silent epidemic among which dental caries remains on seizures threat. Cytokines produced from oral infections. Play a major role in CHD

AIM

Correlation of s-CRP and ECG and TMT changes in dental disorder patients

[1]Associate Professor of General Medicine,
[2]Professor of General Medicine,
[3,4]HOD of General Medicine,
Sri Lakshmi Narayana Institute of Medical Sciences (Affiliated to Bharath University, Chennai),
Osudu, Pondicherry
Sri Lakshmi Narayana Institute of Medical Sciences, Puducherry.

***Corresponding Author**
Dr.Aravind.C
Department of General Medicine,
Sri Lakshmi Narayana Institute of Medical Sciences, Puducherry
Affiliated to BIHER University,

Conclusion

Among the 100 patients 15 patients had high HSCRF, 10 patients had ECH changes suggestive of IHD and 12 patients had positive TMT

Incidence of hs-CRP, ECG & TMT changes in 100 dental disorder patients

Need For The Study

Dental carries is one of the common chronic condition which causes prolonged low grade chronic inflammatory state. This results in elevated pro inflammatory cytokines. Many studies have demonstrated association between the elevated inflammatory markers and cardiovascular disease. The aim of the study is to assess the prevalence of the CVD among the patients with dental carries.

Review in Literature

Dental caries, also known as tooth decay, cavities, or caries, is a breakdown of teeth due to activities of bacteria. The cavities may be a number of different colors from yellow to black. Symptoms may include pain and difficulty with eating. Complications may include inflammation of the tissue around the tooth, tooth loss, and infection or abscess formation.

Pathogenesis

Teeth are bathed in saliva and have a coating of bacteria on them (biofilm) that continually forms. The minerals in the hard tissues of the teeth (enamel, dentin and cementum) are constantly undergoing processes of demineralization and remineralisation. Dental caries results when the demineralization rate is faster than the remineralisation and there is net mineral loss. This happens when there is an ecologic shift within the dental biofilm, from a balanced population of micro-organisms to a population that produce acids and can survive in an acid environment.

Enamel is a highly mineralized acellular tissue, and caries act upon it through a chemical process brought on by the acidic environment produced by bacteria. As the bacteria consume the sugar and use it for their own energy, they produce lactic acid. The effects of this process include the demineralization of crystals in the enamel, caused by acids, over time until the bacteria physically penetrate the dentin. Enamel rods, which are the basic unit of the enamel structure, run perpendicularly from the surface of the tooth to the dentin. Since demineralization of enamel by caries, in general, follows the direction of the enamel rods, the different triangular patterns between pit and fissure and smooth-surface caries develop in the enamel because the orientation of enamel rods are different in the two areas of the tooth.

As the enamel loses minerals, and dental caries progresses, the enamel develop several distinct zones, visible under a light microscope. From the deepest layer of the enamel to the enamel surface, the identified areas are the: translucent zone, dark zones, body of the lesion, and surface zone. The translucent zone is the first visible sign of caries and coincides with a one to two percent loss of minerals. A slight remineralization of enamel occurs in the dark zone, which serves as an example of how the development of dental caries is an active process with alternating changes. The area of greatest demineralization and destruction is in the body of the lesion itself. The surface zone remains relatively mineralized and is present until the loss of tooth structure results in a cavitation.

Classification

Classification done by site of lesion, location, etiology, progression and affected heart tissue and severity tooth destruction there are 6 classes of are identified.

Class I – Occlusal surfaces of posterior teeth

Class II – Proximal surfaces of posterior teeth

Class III – Interproximal surfaces of anterior teeth without incisal edge involvement

Class IV – interporoximal surfaces of anterior teeth with incisal edge involvement

Class V – Cervical third of facial or lingual surface of tooth

Class VI – incisal or occlusal edge worn away due to attrition

Treatment

Treated includes change in modification especially reduction in intake of sugar improved oral hygiene, brushing teeth twice a day, like fluoride containing tooth paste and daily dental flossing. A course of antibiotics, and required before a surgical remove the tooth of the management is non operative management of the co-operative between doctors and patients and mutual understanding.

Aims of study

To rule out CID especially ischemic changes in heart

Methods & materials

100 patients of > 40 yrs of age with dental disorders attending our OPD are the sources of data, with proper concern from the patient's hs-CRP, ECG and TMT to be conducted on the patients

Eligibility Criteria

Patients above 6th to 6th decade

With dental problem

Patients for Puducherry nearby villages

Exclusive Criteria

Immunocompromised patients

Pregnant women

Higher enzyme levels risk factor like Diabetic mellitus, Hypertension and CCF (congestive cardiac failure)

On chronic medication for the ailments

With chronic alcoholism and smoking

Tobacco and betel nut chewers

Investigations to be done

TMT

HS C - Reactive protein

ECG

Results

Among 100 patients attended our OPD 15 patients had high s-CRP, 12 patient had ST segment changes in TMT and 10 patients had ECG changes suggestive of IHD

15 patients - hs-CRP

10 patients – ECG changes

12 patients – TMT changes

Conclusion

Dental disorders are more prevalent in both rural and urban population now a days. Non invasive inexpensive investigations like hs-CRP, ECG and TMT can detect the underlying CAD in dental disorder patients, even without any cardiac complaints. Cytokines produced due to dental infections play a major role in pathogenesis of coronary artery disease. In our study 27% had ECG and TMT changes even without cardiac symptoms and risk factors.

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