

Review Article: Periodontal Profile of Diabetic Patients

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Abstract

Since beginning of night's diabetes mellitus has been considered the main systemic disease that affects the periodontium, American Diabetes Association (ADA) has added periodontal disease as the 6th complication of diabetes. Diabetes attacks the periodontium and cooperate with periodontal microorganisms to induce rapid and severe attachment loss & alveolar bone resorption. Chronic hyperglycemia has negative pathological effects on periodontal tissues through many mechanisms as qualitative change of some subgingival pathogenic microorganisms, decreased salivation, disturbance of neutrophils functions, vascular changes, (AGE) accumulation in periodontal tissues, exaggerated production of prostaglandins and excessive generation of free radicals. Therefore, understanding of all these mechanisms is the first and the most important step in the management and better periodontal treatment outcome.

Key Words: Diabetes – Periodontitis – Relations – Mechanisms.

Introduction

DIABETES mellitus and periodontal diseases are the most famous diseases affecting man kin-both are controllable rather than curable, both can influence the pathogenesis of each other.

Diabetes is the most systemic disorder that can affect oral & dental structures, the target tissue that diabetes attacks in oral cavity is periodontal tissue leading to advanced and rapid damage in the supporting tooth structures and early loss of teeth in early stages of life. On the otherhand, these periodontal complications may exacerbate problems with metabolic control leading to severe hyperglycemia and acidosis [1-3]. So, what is diabetes from our point of view as dentists? How does diabetes attack our periodontium?. These questions are hoped to be answered in the following review.

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Material and Methods

Diabetes from the point of view of a periodontist:

Diabetes is a pathological condition of dysregulation of all body metabolism including carbohydrates, proteins, and fat. This condition results from a serious defect in this amazing hormone (insulin) either in its secretion or in its activity [4,5].

Types of diabetes mellitus:

The majority of diabetic population may have either type I or type II diabetes.

In type I: Autoimmune destruction of Beta cells of pancreas occurs in early life leading to lack of this hormone. It accounts for >10% of diabetics, most often occurs in children & young adults [6].

In type II: The defect is in its function, its influence on the cells receptors to open the gate for glucose. This type accounts for more than 90% and has an adult onset.

So, insulin is the key that opens the cell door to allow glucose to enter, without this key, the cell door will still be closed & glucose will accumulate everywhere in the body except in its right place inside the cell [7].

Diabetes family includes: Type I, type II gestational Diabetes, Diabetes due to specific disorders and pre diabetes.

The normal blood sugar of human being lies within a narrow range of normal starting between 70 to less than 110 mg/dl. When we are fasting to less than 140 mg/dl. During the day, the body can accept this range, but if the fasting glucose level reaches 126 mg/dl or more and reaches during the