بسم الله الرحمن الرحيم

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تم رفع هذه الرسالة بواسطة / حسام الدين محمد مغربي

بقسم التوثيق الإلكتروني بمركز الشبكات وتكنولوجيا المعلومات دون أدنى مسئولية عن محتوى هذه الرسالة.

ملاحظات : لا يوجد

Comparison between Antimicrobial Photodynamic Therapy and Injectable Platelet Rich Fibrin as an adjunct to Non-Surgical Periodontal Treatment

(A Randomized Controlled Clinical Trial with Microbiological Assessment)

Thesis submitted

To Oral Medicine, Periodontology, Oral Diagnosis and Radiology Department For partial fulfilment of Master degree in Periodontology

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Periodontitis is a chronic multifactorial inflammatory disease associated with dysbiotic plaque biofilms and characterized by continuous destruction of the tooth-supporting tissues. Its primary features include the loss of periodontal tissue support, manifested through clinical attachment level (CAL), presence of periodontal pocket and bleeding from gingiva and radiographically assessed by alveolar bone loss **(Papapanou et al., 2018)**.

Periodontitis is a major public health problem due to its high prevalence, as well as because it may lead to tooth loss and disability, negatively affect chewing function and aesthetics, be a source of social inequality, and impair quality of life. In addition, it accounts for a substantial proportion of edentulism and masticatory dysfunction, results in significant dental care costs and has a plausible negative impact on general health **(Caton et al.,2018)**.

Periodontal diseases are prevalent worldwide and affect up to half of global population also severe periodontitis was ranked the sixth most prevalent condition affecting individuals worldwide. It is a public health concern as it has high prevalence of periodontal disease in adolescents, adults, and older individuals. There are several risk factors for periodontal disease such as smoking, poor

oral hygiene, diabetes, medication, age, heredity, and stress **(Raitapuro et al., 2014, Nazir et al., 2017, Peres et al.,2019)**.

In United States, recent studies suggests that periodontal disease affects fifty percent of its population over thirty years of age and is the utmost cause of tooth loss among adults. According to the World Health Organization, periodontal disease affects 10–15% of adult populations worldwide **(Grzech-Leśniak et al., 2019, Al- Nasser et al., 2020)**.

WHO had reported that there is a high prevalence of periodontal diseases in Egypt 2014, the incident was 80% of the studied subjects suffered from periodontal diseases. Despite the high prevalence of periodontal diseases in the Egyptian population, no definite preventive measures are undertaken to screen, prevent or to address this important health issue. It is mandatory to know the oral and periodontal health status, associated risk factors, treatment needs, attitude toward dental treatment, and oral health beliefs, to establish a successful periodontal health program **(Slots et al., 2017, Abbas et al., 2019)**.

Classification of Periodontal Disease

The classification of periodontal disease can be defined according to its extent, severity and typology **(Papapanou et al., 2018)**.

According to classification scheme by Armitage in 1999, periodontitis is further subdivided as follows: Chronic periodontitis, representing the forms of destructive periodontal disease that are mainly characterized by slow rate progression, Aggressive periodontitis, a group of highly destructive forms of periodontitis affecting primarily young people and rapidly progressing, Periodontitis as a manifestation of systemic disease a group of systemic pathological conditions that include periodontitis as a manifestation, Necrotizing periodontal diseases, a group of conditions that share a characteristic phenotype where necrosis of the gingival or periodontal tissues is an eminent feature, periodontal abscesses, a clinical entity with distinct diagnostic features and treatment requirements **(Armitage, 1999)**.

The recent classification accommodates 4 main categories; - **(Caton et al.,2018)**

First, periodontal health, gingival disease and conditions:

- Periodontal health and gingival health
- Gingivitis: dental biofilm induced
- Gingival disease: nondental biofilm induced gingivitis

Second, periodontitis:

- Necrotizing periodontal disease
- Periodontitis
- Periodontitis as manifestation of systemic diseases

Third, other conditions affecting the periodontium:

- Systemic disease or conditions affecting the periodontal supporting tissues
- Periodontal abscesses and endo-perio lesions
- Mucogingival deformities and conditions
- Traumatic occlusal forces
- Tooth and prosthetics related factors

Fourth, peri-implant disease and condition:

- Peri-implant health
- Peri-implant mucositis
- Peri-implantitis
- Peri-implant soft and hard tissue deficiencies **(Caton et al.,2018)**.

Although 1999 classification has provided a workable framework that has been used extensively in both clinical practice and scientific investigation in periodontology during the past 17 years, the system suffers from several important shortcomings, including substantial overlap and lack of clear pathobiology-based distinction between the stipulated categories, diagnostic imprecision, and implementation difficulties **(Papapanou et al., 2018)**.

The conflicting literature findings on aggressive periodontitis are primarily due to the fact that the currently adopted classification is too broad, the disease has not been studied from its inception, and there is paucity of longitudinal studies including multiple time points and different populations **(Papapanou et al., 2018)**.

For developing a multi-dimensional periodontitis, staging and grading system was proposed, in which staging is largely dependent upon the severity of disease at presentation as well as on the complexity of disease management, while grading provides supplemental information about biological features of the disease including a history based analysis of the rate of periodontitis progression; assessment of the risk for further progression; analysis of possible poor outcomes of treatment; and assessment of the risk that the disease or its treatment may negatively affect the general health of the patient **(Papapanou et al., 2018)**.

Periodontitis staging should assist clinicians in considering all relevant dimensions that help optimize individual patient management and thus represents a critical step towards personalized care **(Tonetti et al., 2017)**.

One of the aims to stage a periodontitis patient is to classify severity and extent of an individual based on currently measurable extent of tissue damage regarding periodontitis,