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Application of 2017 new classification of periodontal diseases and conditions: A commentary

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Introduction

Periodontal diseases such as gingivitis and periodontitis are among the common burden of oral health diseases. Gingivitis, by definition, is an inflammatory disease that happened due to bacterial dysbiosis in the gingival area (Trombelli *et al.*, 2018). It is characterized by bleeding on probing, erythematous gingival as well as gingival swelling. The lesion is limited to the gingival area only and does not involve other periodontal structures such as cementum, alveolar bone process, periodontal ligaments, and connective tissue fibers. Meanwhile, periodontitis is a more severe form of gum disease characterized by clinical attachment loss, bone loss, gingiva recession, and tooth mobility (Caton *et al.*, 2018).

In Malaysia, the prevalence of periodontal disease can be considered as high. Based on the information from the National Oral Health Survey of Adults (NOHSA), in the year 2010 (Ministry of Health, 2011), 94% of the adult population has gum problems whether it is gingivitis or periodontitis. Gingivitis is a well-known diagnosis at the early stage of periodontal disease. Based on the new classification of periodontal disease (Trombelli *et al.*, 2018), the patient is considered as having gingivitis when the bleeding on probing (BOP) score is more than 10%. It is further classified into localized and generalized, with 30% of the BOP score as the cut point. If BOP is more than 30%, the patient is then diagnosed with generalized gingivitis, and less than 30% is considered localized gingivitis. However, this classification of gingivitis may raise some issues as it is disregarding the factors such as the presence of calculus and smoking habit. It seems that even if the patient has a lot of calculus deposition, due to the BOP score of less than 10%, they are still considered healthy, whereas calculus is a well-known risk factor for the initiation of periodontal disease. Regarding calculus, the previous NOHSA survey revealed that 42.2% of the adult population have calculus deposition inside the oral cavity. This report indirectly showed that calculus is not a healthy deposit inside the mouth, and it can cause harm to the periodontium if it is not removed properly. Similarly with smoking habit. This habit is only mentioned in periodontitis classification, but not in gingivitis. Patients with a smoking habit may have a small percentage of BOP due to the constriction of blood vessels at the gingival area. However, the patient is still considered healthy even though smoking provides a negative impact on oral health.

Meanwhile, periodontitis has multiple factors for its initiation and progression.

Untreated gingivitis, together with the patient's susceptibility and environmental factors may lead to periodontitis (Caton *et al.*, 2018). Once a patient is diagnosed with periodontitis, the patient is considered a periodontitis case for the rest of their life as this disease is not reversible and the destruction of the periodontium is not going to be regenerated in total (Chapple *et al.*, 2018).

Recently, periodontitis has been classified into various stages and grades (Tonetti *et al.*, 2018). The stages and grades will give information regarding the disease's severity, extension, and progression. Stages consisted of three main components which are severity, complexity, and extension. The severity component consisted of interdental clinical attachment loss (CAL), radiographic bone loss, and tooth loss due to periodontitis. Meanwhile, complexity refers to the additional clinical findings such as the pattern of bone loss, presence of deep probing depth, tooth mobility, and furcation involvement that indicate more complex treatments are required. The stages of periodontitis range from stage I to stage IV. The treatment for stage I is considered simple while treatment for stage IV is considered complex and may require multidisciplinary efforts (Tonetti *et al.*, 2018).

Grades in periodontitis consisted of two components which are primary criteria and grade modifiers. The primary criteria are looking at the amount of bone loss based on radiographic findings, while grade modifier consists of two main risk factors of periodontitis which are smoking and diabetes mellitus (Tonetti *et al.*, 2018).

In Malaysia, 18.2% of the population has severe gum disease which is defined as having a probing pocket depth measurement of more than 6mm. If we transfer the information of this cohort into the new classification system, it means that around 20% of our population is having Stage III or Stage IV periodontitis.

On the other hand, the recent diagnosis classification of periodontitis and gingivitis may give an easier understanding to classify the problems and prepare a proper treatment plan. Oral hygiene instruction and mechanical debridement are mandatory to prevent and treat the problems. It is undeniable that more advanced treatment modalities are available, but those are only adjunct to the regular scaling and root surface debridement. European Federation of Periodontology (EFP) provided a guideline of treatment according to the stages and grades, but it is still focusing on prevention, removal of soft and hard deposits, and controlling systemic factors such as smoking and diabetes mellitus.

Nevertheless, early prevention, accurate diagnosis, and proper planning will provide better periodontal care for the community. The current diagnosis system can help clinicians to understand better the diseases, hence providing accurate treatment for any degree of periodontal problems. It is hope that we can implement the new classification on next NOHSA survey, and perhaps we can see a different status of periodontal diseases in Malaysia.

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