Applicability of 2017 classification of periodontal and peri-implant diseases and conditions among postgraduate students of department of Periodontics- A Questionnaire Survey

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Abstract:

The World Workshop on the Classification of Periodontal and Peri-implant Diseases and Conditions was co-sponsored by the American Academy of Periodontology (AAP) and the European Federation of Periodontology (EFP) and included expert participants from all over the world. Planning for the conference, which was held in Chicago on November 9 to 11, 2017, began in early 2015.

As 26 months have passed since publication, we wanted to know whether it has been implemented or not. So, this is a small attempt to assess implementation of 2017 classification of periodontal and peri-implant diseases and condition in daily OPD cases of department of periodontics among post-graduate students.

Materials and methods

The method used to collect the responses from each participant was based on questionnaire type. An online google form was created on 27/10/2020 displaying 15 questions. The participation of the subjects was voluntarily answering the questions and was considered their consent for the same. All their responses were kept confidential and used for academic purpose only. The study protocol was approved by the local institutional research committee.

Study design

This is cross-sectional type of survey to check the applicability of 2017 classification of periodontal and peri-implant diseases and conditions among postgraduate students in periodontics

Results: The results are extrapolated from the online generated graphs

Conclusion: 97% of post graduates are aware of the classification because of compulsion from their guides. Out of that only 68% of post graduates have started using it, that to recently from Jan-2020 just before the lockdown.

Keywords: New classification, Periodontitis, Gingivitis, Peri-implant diseases, Questionnaire survey.

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INTRODUCTION:

Classification is the systematic arrangement of classes or groups based on perceived common characteristics. It helps in the diagnosis, prognosis, and treatment planning of the disease. It helps to understand the etiology, pathology of the disease.[1] Most importantly, it helps to communicate among clinicians, researchers, educators, students, epidemiologists, and public health workers.

Among various dental ailments, periodontitis has always had a high popularity. It is defined as microbially associated, host-mediated inflammation that results in loss of periodontal attachment, subsequently leading to edentulism.[2] Until recently, the accepted standard for the classification of periodontal diseases was the one agreed upon at the 1989 World Workshop in Clinical Periodontics. This classification system, however, had its weaknesses. In particular, some criteria for diagnosis were unclear, disease categories overlapped, and patients did not always fit into any one category.[3] Also, too much emphasis was placed on the age of disease onset and rate of progression, which are often difficult to determine. Finally, no classification for diseases limited to the gingiva existed.[3] In 1999, an International Workshop for a Classification of Periodontal Diseases and Conditions was organized by the American Academy of Periodontology to address these concerns and revise the classification system which is widely used in clinical practice for 17 years across the globe. But it had some drawback as:[4]

1. Inappropriate emphasis on the severity of the periodontal disease
2. Grouping of aggressive periodontitis as a separate category.
3. Absence of peri-implant diseases in the classification
4. Absence of categorizing gingivitis as localized or generalized
5. Absence of neoplasms related to the periodontium
6. Inappropriate classification criteria for recession.

With the increase in knowledge and understanding of the subject, the new classification of periodontal diseases and conditions hence was proposed by the joint committee of the American Academy of Periodontology (AAP) and European Federation of Periodontology (EFP) in the workshop held in Chicago on November 9 to 11, 2017, began in early 2015.[5]

This classification is proposed internationally and is in routine use for all postgraduate students in Periodontology worldwide. As 26 months have passed since publication, we wanted to know whether it has been implemented or not. This is a small attempt to assess the implementation of the 2017 classification of periodontal and peri-implant diseases and conditions in daily OPD cases of the department of Periodontics among postgraduate students.

SUBJECTS AND METHODS:

Settings and source of data:

The survey population consists of postgraduate students in Periodontics irrespective of the year in which they are in. The method used to collect the responses from each participant was based on questionnaire type. An online Google Form was created on October 27, 2020 displaying 15 questions. The questionnaire was formulated simply and clearly. The participation of the subjects was voluntarily answering the questions and was considered their consent for the same. All their responses were kept confidential and used for academic purposes only. The local institutional research committee approved the study protocol.

Study design and sample size:

This is a cross-sectional type of survey to check the applicability of the 2017 Classification of Periodontal and Peri-implant Diseases and Conditions among postgraduate students in Periodontics. The number of participants who responded to this survey was 43. The sample size considered was 43.

Inclusion criteria
- All Postgraduates students of First, Second and Third year were included.
- Postgraduates all over Maharashtra were considered.

Exclusion criteria
- The participants who were not aware of this classification were excluded from answering the rest of the questions.

STATISTICAL ANALYSIS:
RESULTS:

The survey was conducted in October 2020 created online on Google Forms. A total of 43 participants responded to the survey to assess the applicability of the 2017 Classification of Periodontal and Peri-Implant Diseases and Conditions. This sample comprised all postgraduate students of First, Second and Third year in Periodontics with 20.9%, 32.6%, and 46.5% of students. Out of 43 students, 88.4% belong to Government/Private University, and rest 11.6% belongs to Deemed University. This classification is in routine use for all Postgraduates students in Periodontics since 2018, and almost 93% are aware of this classification *(Graph 1)*
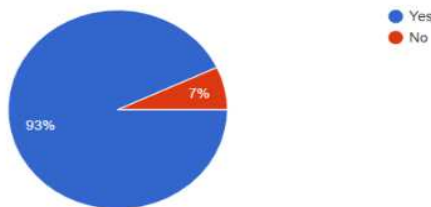
Graph 1: Are you aware of 2017 classification of periodontal and peri-implant diseases and conditions?

55% of postgraduates responded that this classification is given by both the American Academy of Periodontology and the European Federation of Periodontology *(Graph 2)*
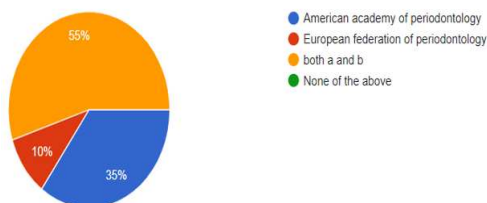

Graph 2: Who have/has given this classification?

58.8% of students opted that 19 review and 4 consensus reports have been published for the classification *(Graph 3)*.
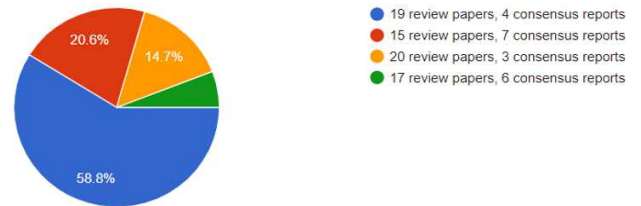

Graph 3: This classification is commissioned with

Diagnosing the cases according to 2017, classification was started by 68.3% of postgraduate students *(Graph 4)*. The classification was proposed in 2017, and 43.8% have started diagnosing their cases from Jan- June 2020, 28.1% from Jun-Dec 2019, 15.6% from Jan- June 2019, and 12.5% Jun-Dec 2018 *(Graph 5)* .
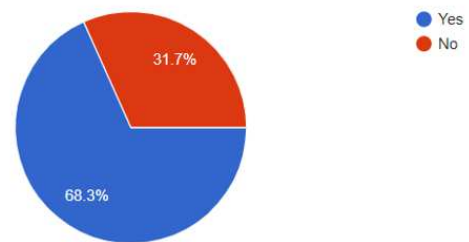

Graph 4: Have you started diagnosing your patient in your daily OPD according to this classification?
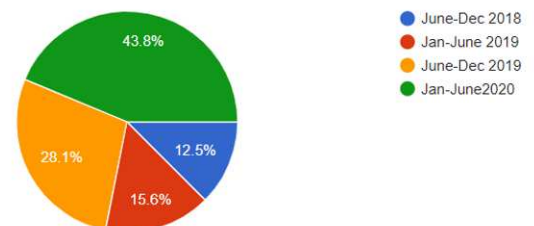

Graph 5: When have you started diagnosing OPD cases according to this classification?

Till today 41.2% of students have diagnosed 1-10 cases, 26.5 % of students diagnosed more than 30 cases. 20.6% and 11.8% of students have diagnosed 11-20 and 21-30 cases *(Graph 6)*. 56.8% of students

feel that it is not easy to diagnose OPD cases according to this classification *(Graph 7)*.
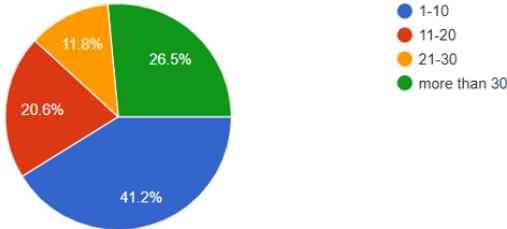

Graph 6: Number of cases diagnosed
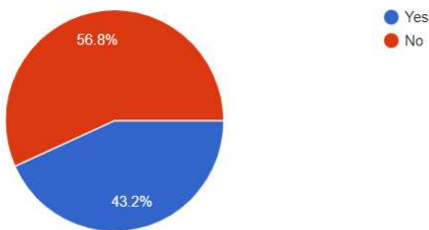
Graph 7: Is it easy to diagnose a patient in your daily OPD, according to this classification?

To diagnose according to this classification, 46.8% of students take two appointments. 34.3% and 11.4% of students take 1 and 3 appointments to diagnose *(Graph 8)*. Most of the students (40%) have implemented this classification because of the enforcement of the guide. 37.1% of participants have implemented it because of their own will. 20% and the rest of them have been implemented because of enforcement by ISP or IDA and by principle *(Graph 9)*
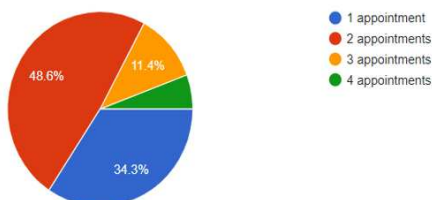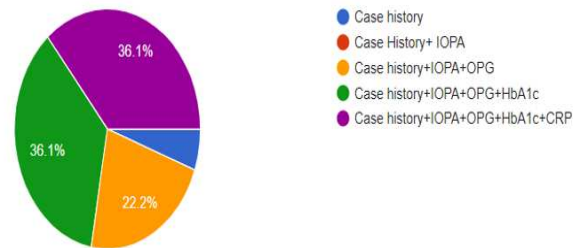

**Graph 8: Appointments taken for diagnosis**
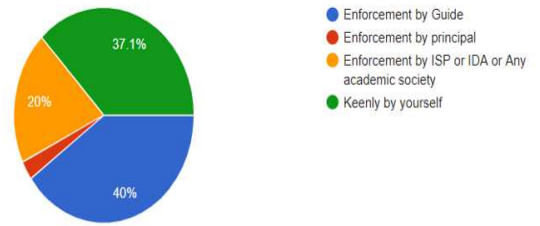
Graph 9: Implementation of this classification by

To use this classification, 36.1% of students think that case history+ IOPA+OPG+HbA1c+CRP are required patient related data *(Graph 10)*. 89.5% students opted that extent+ severity+ complexity+ grade modifiers are the key elements in 2017 classification *(Graph 11)*.


**Graph 10: Patient required data to use this classification**
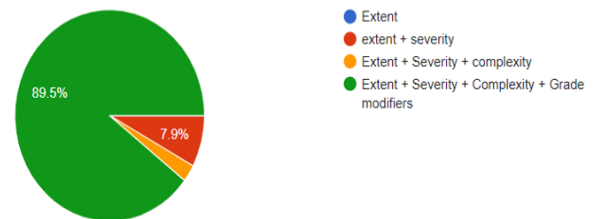
**Graph 11: Key elements in 2017 classification**

Peri-implant health, peri-implant mucositis, peri-implantitis were opted in classifying peri-implant diseases and conditions by 97.4% of postgraduates *(Graph 12)*. 92.5% of students can differentiate between periodontitis and non- periodontitis patients *(Graph 13)*. 40% of post-graduates said that extent+ periodontitis+ stage+ grade+ stability+ risk factors is the correct order of diagnosis *(Graph 14)*. 70% of students feel that the 1999 classification of periodontal diseases is easier than the 2017 classification *(Graph 15)*.
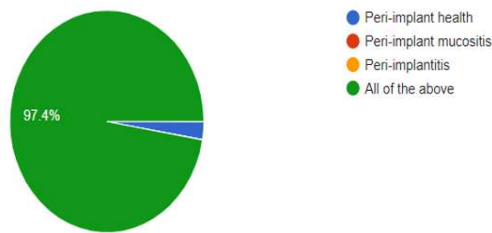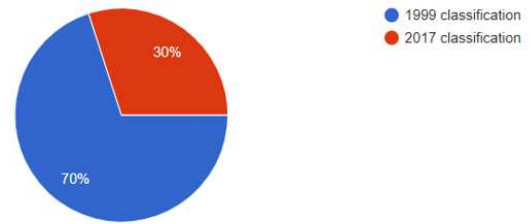

Graph 12: Classifying peri-implant diseases and conditions
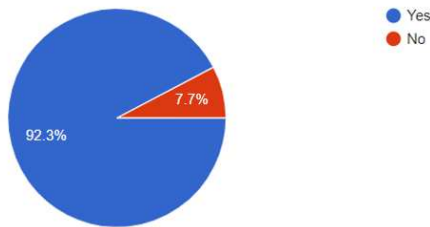
Graph 13: Are you able to differentiate between periodontitis and non-periodontitis patients?
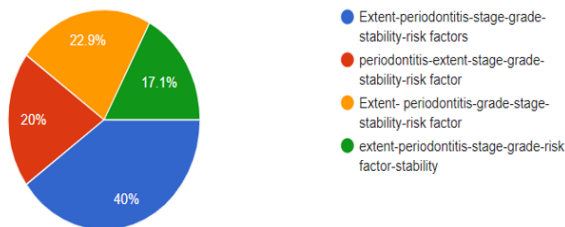
Graph 14: Correct order of diagnosis

Graph 15: Which classification is easier?

DISCUSSION:

The survey attempted to know the applicability of the 2017 Classification of Periodontal and Peri-implant Diseases and Conditions among postgraduate students in Periodontics. This classification is in routine use for all Postgraduates students in Periodontics since 2018, and almost 93% are aware of this classification.

Though these many students are aware, only 68.3% have started diagnosing their daily OPD according to this classification. Most of the students (43.8%) started diagnosing their OPD cases from Jan-June 2020. The majority of students (41.2%) have diagnosed only 1-10 cases in their daily OPD till date.

58.8% of students think it is not easy to diagnose according to this classification, and 48.6% take two appointments to diagnose. 40% of total students diagnose their OPD cases using this classification due to enforcement by their guides.

The most number of variations in the answer is seen for question no. 10; that is, 36.1% of students opted for both the options d and e.

Almost 90% of the student population knows the key elements required for diagnosing the 2017 classification.

The peri-implant workgroup is the new addition to this classification, including peri-implant health, mucositis, and implantitis, in which 97.4% of students have given the correct answer. 92.3% of the population was able to differentiate between periodontitis and non-periodontitis patients. According to this classification, the 14th question asked for the correct diagnosis, and 14 responses (40%) presented with the correct answer. After

comparing both the classification, 70% of students feel that the 1999 classification is more comfortable to diagnose.

CONCLUSION:

The classification is now 26 months old, at least from its publication. In the era of instant information transmission, the classification would have been used for at least 20 months from now. Our survey indicates that 97% of postgraduates are aware of the classification because of their guides' compulsion. Out of that only, 68% of postgraduates have started using it recently from Jan-2020, just before the lockdown.

According to this classification, the total number of patients diagnosed is minuscule because of the Covid pandemic. Thus, the classification is not understood well by the students and may take another 2 years to comprehend the classification.

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