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The 2017 Classification Of Periodontal Diseases – Simple Or Complex? – A Questionnaire Survey Among The Post Graduate Students:

[1.]Dr.Bagavad Gita, M.D.S., Ph.D., [2.] Dr. N.Evangeline Ida

Head Of The Department, Department Of Periodontology, Sree Balaji Dental College And Hospital.
Post Graduate, Department Of Periodontology, Sree Balaji Dental College And Hospital.

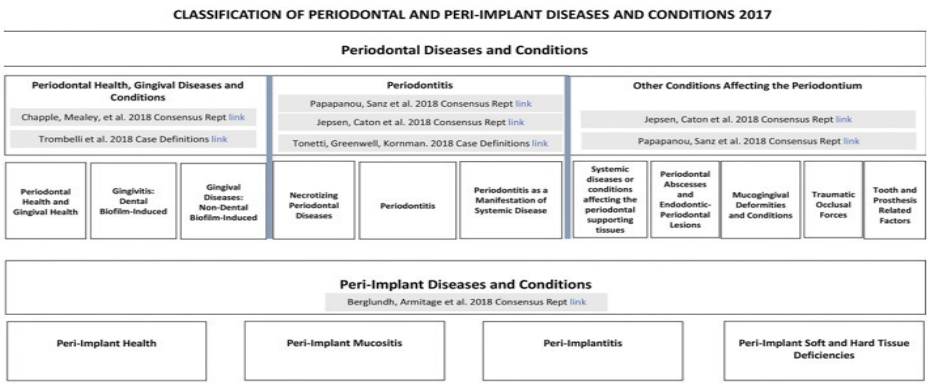
Abstract: Over the decades, various researchers and epidemiologists have done wide work in the development of periodontal diseases classification. They have been great strides towards the understanding of periodontitis but the true nature of etiopathogenesis is still not clear. A consensus report was proposed in 2017 for a new classification system for periodontal and peri implant diseases and conditions. This study aims to shed light on the current understanding of the new classification among Post Graduate students in periodontology department. This survey study was performed using an anonymous digitally distributed google forms to various universities in India. The google form included 12 questions – 9 multiple choice questions with two open ended questions, in addition to demographic data of the participant. Statistical analysis is done by SPSS Software.100 questionnaires was given out and the data was analyzed by SPSS software and the results were procured. Rating of Learning Curve for the New Classification was steep with 68.48% and the p value is <0.001. The only statement the participants disagreed was that the New Classification is easily transformative to Clinic with 47.25%.51.09 % rated the new classification as good. Though it has few limitations, it has many advantages over the older classification. Further revisions to the new classification are needed to facilitate its application in order to confer the greatest benefit to the patient.

Key words: Periodontal, newer classification, AAP, questionnaire survey.

INTRODUCTION

Based on scientific data different periodontal classification systems have been proposed for grouping diseases into distinct categories for many decades [1-3]. The main goal of classification systems is to detect a correct clinical diagnosis and apply the appropriate treatment. For each classification system, a number of studies was done to provide a framework for better understanding of the etiology and pathogenesis of periodontal diseases so as to clear the knowledge gaps. It also helps in communicating with clinicians, researchers, students, epidemiologists and public health workers. This is in addition to encouraging new treatments modalities to evolve which addressed the proposed disease categories. The last time the American Academy of Periodontology (AAP) periodontal classification guidelines were updated was in 1999.Oral health care practitioners have learned that there are multifactorial and multidimensional contributions to periodontal disease. Since the 1999 workshop, new information has emerged from population studies, basic science investigations, and the evidence from prospective studies evaluating environmental and systemic risk factors. The analysis of this evidence has prompted the 2017 workshop to develop a new classification framework for periodontitis. The 1999 International Workshop for Classification of Periodontal Disease and Conditions gives a detailed classification of periodontal conditions. Over 40 gingival diseases were plotted based on two main categories: plaque induced and non plaque induced gingivitis. The other seven main categories of disease includes periodontitis as a manifestation of systemic diseases, chronic periodontitis instead of adult periodontitis, and aggressive periodontitis as a substitute for early onset periodontitis, which was considered umbrella of all former types of periodontitis affecting young patients, namely: juvenile, prepubertal, and rapidly progressive periodontitis[2-6].The 2017 periodontal classification aimed to update the 1999 classification. It was developed in the "World Workshop on The Classification of Periodontal and Periimplant Diseases and Conditions" copresented by the American Academy of Periodontology and the European Federation of Periodontology[1](FIGURE:1). The workshop also developed a new category to include periimplant health and diseases such as periimplant mucositis and peri-implantitis[7]. Applying new knowledge and a new system faces with challenges, which includes the awareness level, the technical difficulties, the feasibility of application, and the size of the gap between theory and practice. Therefore, this study was designed to assess the level of awareness and knowledge of the new periodontal classification among postgraduate students in various universities in India.

FIGURE 1



MATERIALS AND METHOD

This survey study was performed using an anonymous digitally distributed google forms to various universities in India. The google form included 12 questions with 9 multiple choice questions with two open ended questions, in addition to demographic data of the participant (ANNEXURE). The Statistical analysis was done by SPSS Software. The first five statements of the questionnaire were descriptive in nature addressing the participant's demographics, and the 6th to 14th was a question on whether or not the participant was aware of the new periodontal classification. There was 9 multiple choice questions using the Likert scale, ranging from "strongly disagree" to "strongly agree" or from "very steep" to "easy" or from "very long to adequate" and "neutral" .There were also three open ended questions on advantages and limitations of the new classification and further comment at the end of the questionnaire.

STATISTICAL ANALYSIS

Numerical data were presented as frequencies and percentages. Chi square test was performed. Statistical analysis was performed using SPSS software. The significance level was set at $P \leq 0.05$.

RESULTS

The questionnaire was distributed to 100 postgraduate students of periodontology, 92 of whom responded. The present study was conducted on 92 periodontists, 56 of whom were females(60.87%) and 36 males (39.13%)(FIGURE:2).Among the postgraduate students,6 first years(6.67%),36 second years(40%),and 48 third years(48%) responded to the questionnaire.(TABLE :1)(FIGURE:3).

TABLE 1

		N	%	Chi-Square Value	P-Value
Year of Post Graduation	First Year	6	6.67	31.200	<.001
	Second Year	36	40.00		
	Third Year	48	53.33		
Gender	Male	36	39.13	4.348	.037
	Female	56	60.87		

The overall rating of the new classification was good with 51.09%,fair with 34.78% and very good with 14.13%(FIGURE:4,5). Rating of time taken for examination and diagnosis compared to 1999 classification was adequate with 44.57%,very long with 43.48% and neutral with 11.96%(FIGURE:6). Rating of Learning Curve for the New Classification was steep with 68.48%,neutral with 27.17% and easy with 4.35%(FIGURE:7).All these statements were found to be statistically significant with p value < 0.05.(TABLE:2).

TABLE 2

		N	%	Chi-Square Value	P-Value
Rating of New Classification	Fair	32	34.78	18.935	<.001
	Good	47	51.09		
	Very Good	13	14.13		
Rating of time taken for examination and diagnosis compared to 1999 classification	Adequate	41	44.57	18.935	<.001
	Neutral	11	11.96		
	Very Long	40	43.48		
Rating of Learning Curve for the New Classification	Easy	4	4.35	58.326	<.001
	Neutral	25	27.17		
	Steep	63	68.48		

The statement that the New Classification is easily transformative to Clinic was disagreed by 47.25%, agreed by 31.87% and neutral with 20.88% (FIGURE:8). Staging and Grading of Periodontitis is applicable in day to day practice was agreed by 65.93%, and disagreed by 34.07%(FIGURE:9). The single entity as periodontitis simplified the understanding, diagnosis, prognosis and treatment planning was agreed by 58.24% neutral by 28.57% and disagreed by 13.19%(FIGURE:10).The present revision classification completely addresses the drawbacks of 1999 classification was agreed by 68.48%,neutral with 20.65% and disagreed with 10.87%(FIGURE:11). Gingival Classification of Cairo et.al.[8] is better in assessing Mucogingival condition compared to Miller Classification [9] was agreed by 65.22%, neutral with 21.74% and disagreed by 13.04% (FIGURE:12). It is helpful in the prediction of future disease severity was agreed by 57.61%, neutral with 34.78% and disagreed by 7.61% (FIGURE:13).All these statements were found to be statistically significant.(TABLE:3).

TABLE:3

	Disagree		Neutral		Agree		Chi-Square Value	P-Value
	N	%	N	%	N	%		
New Classification is easily transformative to Clinic	43	47.25	19	20.88	29	31.87	9.582	.008
Single Entity simplified understanding, diagnosis, prognosis and treatment planning	12	13.19	26	28.57	53	58.24	28.637	<.001
Staging and Grading of Periodontitis is applicable in day to day practice	31	34.07	0	.00	60	65.93	9.242	.002
The present revision classification completely addresses the drawbacks of 1999 classification	10	10.87	19	20.65	63	68.48	52.457	<.001
Gingival Classification of Cairo et. al. is better in assessing Mucogingival condition compared to Miller Classification	12	13.04	20	21.74	60	65.22	43.130	<.001
It is helpful in the prediction of future disease severity	7	7.61	32	34.78	53	57.61	34.587	<.001

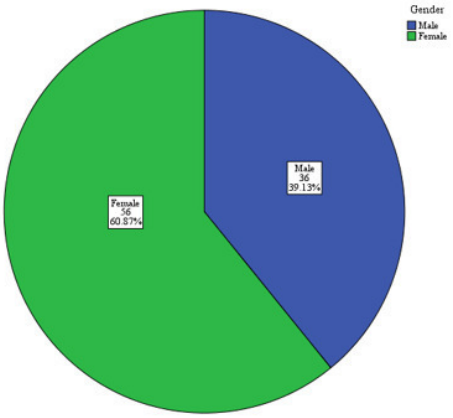


FIGURE 2
Represents the percentage of number of males and females participated in the survey.

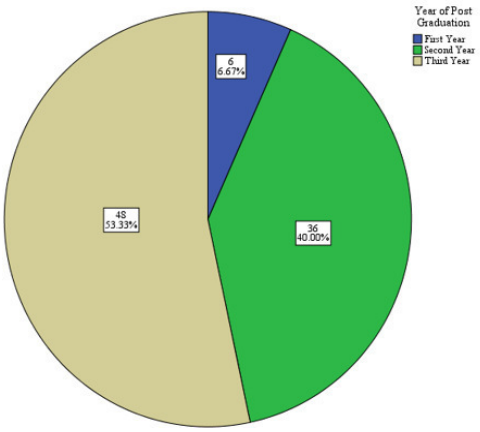


FIGURE 3
Represents the percentage of the number of postgraduate students participated in the survey.

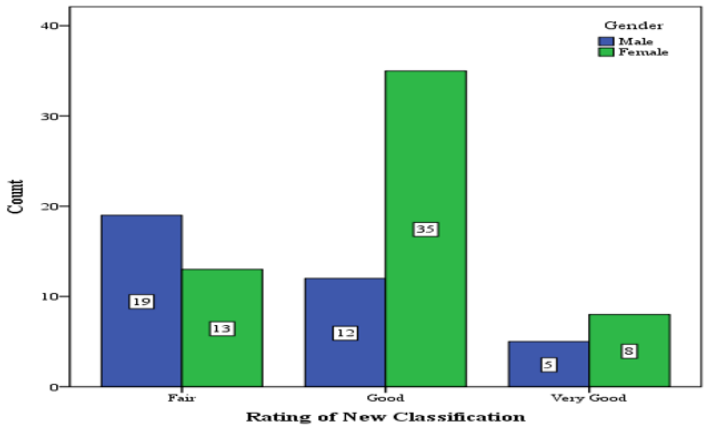


FIGURE 4
Represents the percentage of rating of new classification by the participants in accordance with their gender

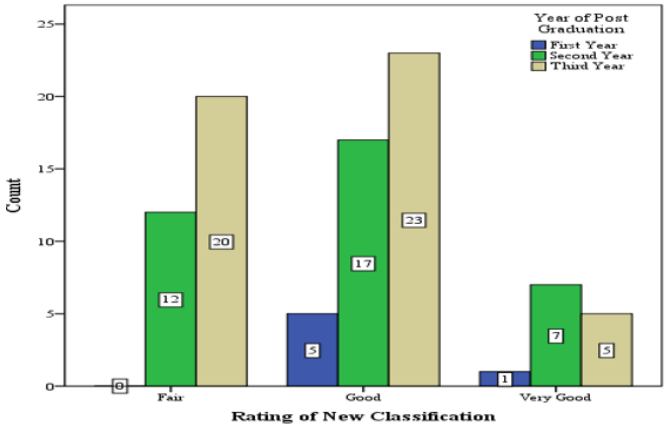


FIGURE 5
Represents the percentage of the rating of new classification by the postgraduate students in accordance with their academic year
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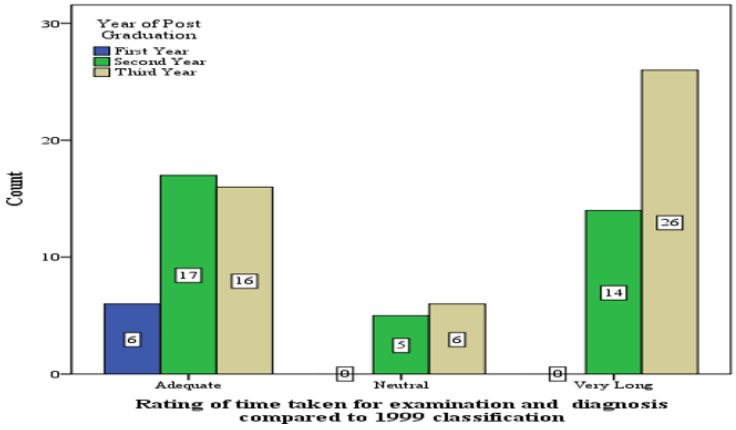

FIGURE 6
Represents the percentage of rate of time taken for examination and diagnosis compared to 1999 classification

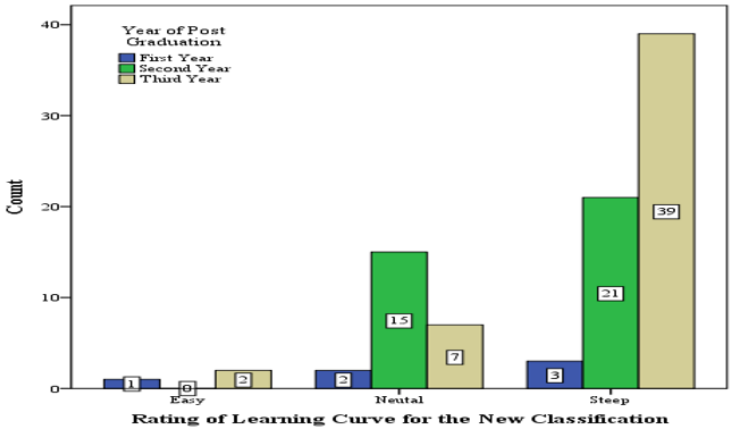

FIGURE 7
Represents the percentage of the rating Learning Curve for the New Classification.

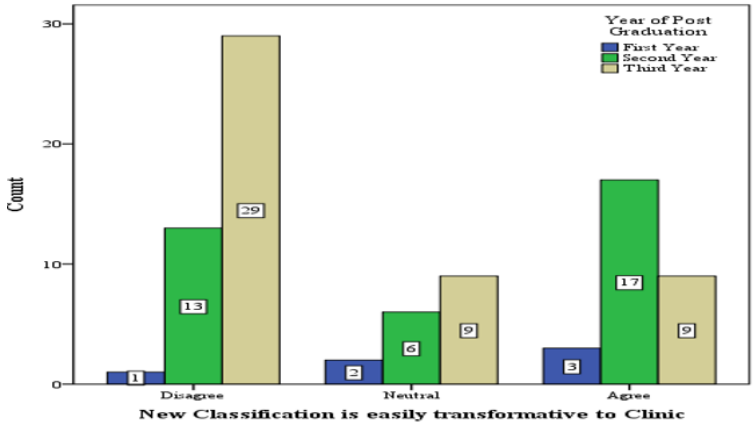

FIGURE 8
Represents the percentage of response to the statement that new classification is easily transformative to clinical practice

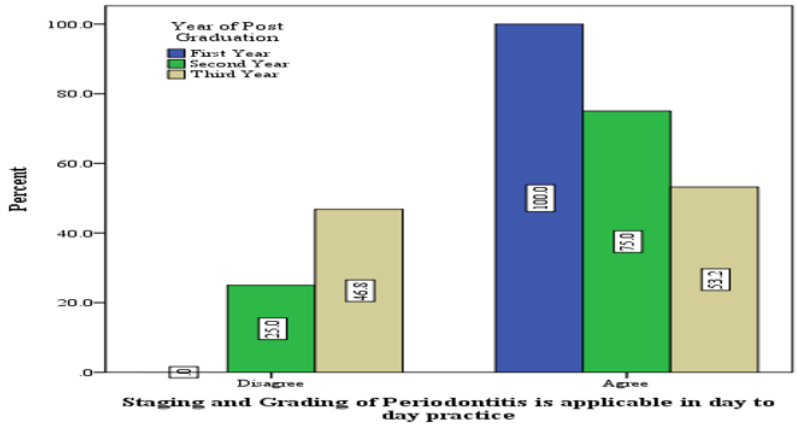

FIGURE 9
Represents the percentage of response to the statement that the staging and grading is applicable in day to day practice

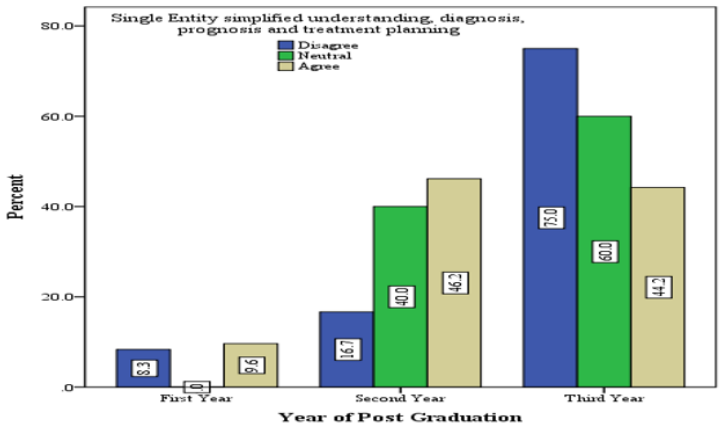

FIGURE 10

Represents the percentage of response to the statement that the single entity of periodontitis simplified the understanding, prognosis and treatment planning

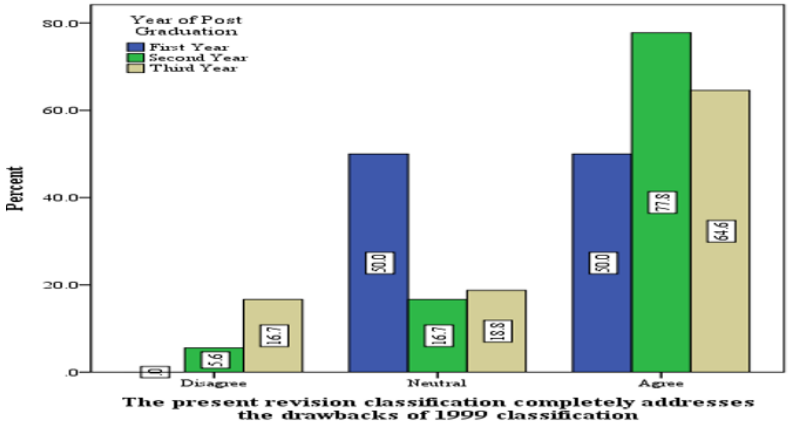

FIGURE 11

Represents the percentage of response to the statement tha the present revision of classification completely addresses the drawbacks of 1999 classification

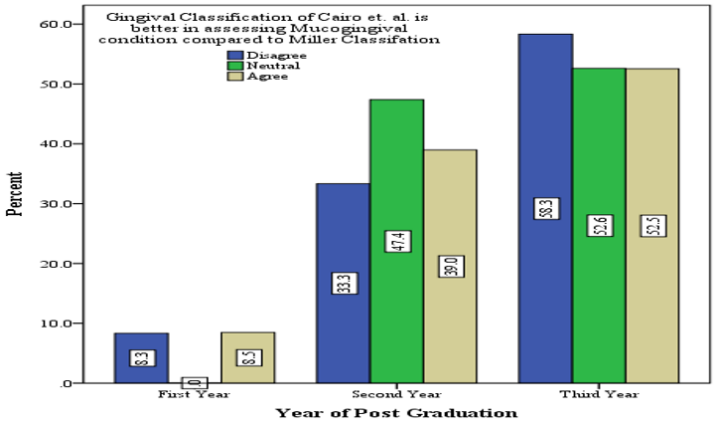

FIGURE 12

Represents the percentage of response to the statement that the cairo et al classification is better in assessing the mucogingival condition than the Millers classification

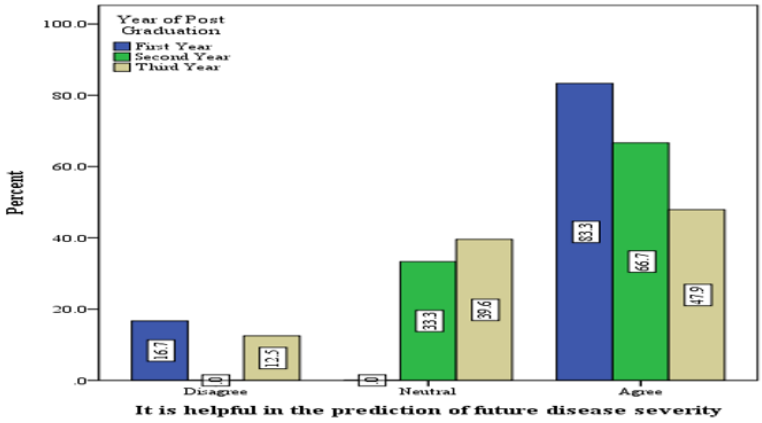

FIGURE 13
Represents the percentage of response to the statement that it is helpful in the prediction of future disease severity

DISCUSSION

Over the decades, various researchers and epidemiologists have done wide work in the development of periodontal diseases classification. They have been great strides towards the understanding of periodontitis but the true nature of etiopathogenesis is not clear. Other classification systems was based on infectious etiology which would be a misfit to the current understanding. Hence a classification system that would be easy to understand and fulfils the treatment needs would be more suitable at this juncture. This article is aimed at discussing the American Academy of Periodontology 1999 classification and present 2017 the World Workshop Classification System. Our survey aimed to assess awareness and clinical application of the new classification among Postgraduate students of periodontology of various universities in India. The questionnaire was distributed to 100 dentists and was completed by 92. This might be due to a lack of motivation, a busy academic life making it difficult to complete volunteer tasks, and perhaps also a lack of clinical application of the new classification by many postgraduate students. The overall rating of the new classification was responded as good by 47 participants with 51.09%, fair by 32 participants with 34.78% and very good by 13 participants with 14.13%. Rating of time taken for examination and diagnosis compared to 1999 classification was responded as adequate by 41 participants with 44.57%,very long by 40 participants with 43.48% and neutral by 11 participants with 11.96%. Rating of Learning Curve for the New Classification was responded steep by 63 participants with 68.48%, neutral by 25 participants with 27.17% and easy by 4 participants with 4.35%. The only statement the participants disagreed was that the New Classification is easily transformative to Clinic with 47.25%. There was two open ended questions about the advantages and limitations of the new classification.14.2% participants stated that the new classification had a good clarity.12% participants stated that the new classification included the peri implant diseases and conditions.4.4% participants stated that the new staging and grading system as an advantage.5.5% participants stated that the cairo et al classification was better in assessing the recession than the millers classification. 12% participants stated that the diagnosis based on the new classification system was expensive because of the need of more radiographs for each diagnosis.14.2% stated that the new classifiction had a steep learning curve.8.8% stated that the time taken for diagnosis based on the new classification was lengthy. Some of the other opinions on new classification was that it provides personalised treatment plan and Replacing aggressive periodontitis with a grading system was disagreed by participants. Marwa M. Hegab et al in 2020 conducted a similar study among periodontists and postgraduate students [10].The questionnaire was manually distributed to 188 dentists and was completed by only 91, giving a response rate of 48.4%. The study concluded that the clarity of the new classification was the only significant predictor with the overall satisfaction rate 28.6%. To the best of our knowledge, this article was the first report in literature addressing the new classification. Although the participants stated some of the limitations in the newer classification, it addresses the drawbacks of the 1999 classification and helps to update our knowledge on understanding the periodontal status of the patient.

CONCLUSIONS

51.09 % rated the new classification as good. Though it has few limitations, it has many advantages over the older classification. Further revisions to the new classification are needed to facilitate its application in order to confer the greatest benefit to the patient.

CONFLICT OF INTEREST

Conflict of interest declared none.

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