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Research Article

Perception Mapping of Indian Neurologists on New ILAE Epilepsy Classification -

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ABSTRACT

Introduction: After the gap of 28 years, the International League Against Epilepsy (ILAE) recently (2017) commissioned a new operational classification of seizure types and epilepsies. This study was aimed to capture the viewpoints of Indian neurologists (neurophysicians and neurosurgeons) regarding perception and clinical implementation of new epilepsy classification.

Methods: This paper-based survey questionnaire was administered to neurologists across India.

Results: Out of total 114 respondents, 75% were conversant with new ILAE-2017 classification. Sixty two percent survey respondents defined epilepsy as "two or more unprovoked seizure attacks more than 24 hours apart" which in-line with the newer definition. Majority (78%) of neurologists were in "agreement" for replacing old terminologies with new ones like "simple partial seizure" with "focal aware seizure" and complex partial seizures with "focal impaired awareness seizure". More than ¾th (87/114) of our respondents agreed that New classification is a step towards individualized approach in epilepsy management. "New classification is better in terms of providing transparency of terminology" was the general perception expressed by most (65%) of survey respondents. Overall, 73% neurologists were ready to adopt new classification while more than half of respondents opined that implementation into clinical practice would be easier for the newer one.

Conclusion: The present survey clearly suggests that Indian neurologists perceive new ILAE 2017 classification easier to implement in clinical practice and will be a new step towards individualized approach in epilepsy management.

INTRODUCTION

Classifications for seizures and epilepsy were previously constructed in 1981, 1985 and 1989 [1-3]. Having seizure and epilepsy classifications are exceedingly important for the clinicians and care teams, patients and families, and researchers. From a patient standpoint, it provides a nameable diagnosis/etiology and improves understanding. For clinicians and the patient's care team, these classifications enhance communication and discussion. From a research standpoint, having these classifications enables investigation of drug or surgical treatments, responses, and typical clinical courses for different types of seizures and epilepsy.

Based on decades of accumulated clinical experience, the International League Against Epilepsy (ILAE) commissioned a new operational classification of seizure types and epilepsies. The new 2017 classifications [4,5] when compared to the 1981/1985/1989 classifications, utilize alternative terms and contain several important additions. These changes improve the intuitiveness, transparency and versatility of the classifications, and allow for inclusion/classification of previously unclassifiable seizure and epilepsy types [6]. However, an intrinsic limitation of the classification, is the attempt to box cases as seen in clinical practice into schematic categories, leaving no room for variants and atypical clinical presentations. Another limitation is the lack of flexibility which hampers the ability to link the instrument to the preceding classifications in order to preserve continuity and monitor disease trends in time and space [7]. While it is always a challenge to learn a new classification system, particularly one that has remained essentially unchanged for over three decades [6].

The new classification provides flexibility in providing as much information as possible using specific terms within the categories. Additional terms in the expanded seizure classification will help to categorize seizures with similar semiology. These additional terms will enable researchers to utilize them for targeted drug therapy, correlations with genetics, or important features of seizures. Use of more specific terms will enable clinicians and researchers to better communicate about more specific groups of patients with epilepsy [6].

There are different opinions regarding the new ILAE 2017 classification for epilepsy within the neurologist (neurophysicians/ neurosurgeons) across the world. Therefore, this study is conducted to know the Indian consensus regarding the new ILAE 2017 classification perception and clinical implementation.

METHODOLOGY

This study is a paper-based questionnaire survey. The survey questionnaire comprised of 9 questions, which were multiple choice (Table 1), the respondents can answer one more answers from the options provided. The questionnaire regarding the consensus of the new epilepsy classification was prepared. The questionnaire was validated by key neurologists, incorporated their comments and then finalised the same.

The neurologists, of various parts of India were asked to fill the questionnaire during personal visit with them. All survey forms were collected and analysed to prepare results.

RESULTS

Respondents

Responses were received from 114 participants neuroclinician (respondents) across the India had been responded to the questionnaire. Most of the respondents are neurophysicians (n = 81, 71%) and rest are neurosurgeons (n = 33, 29%). Most of the respondents are working in the government/academic-teaching government hospitals (n = 32, 28%), some are in corporate hospitals (n = 15, 13.16%), private hospitals (n = 14, 12.28%). Fifty three (46.49%) respondents didn't answered the type of practice.

Perception regarding new ILAE 2017 classification

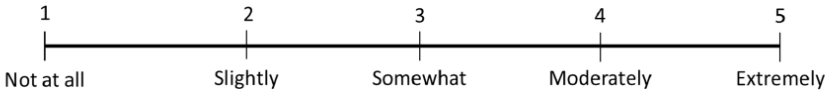
When asked about the conversance level to new ILAE 2017 classification, 84 (73.68%) respondents were conversant with new ILAE-2017 classification. Out of 84 (73.68%) conversant respondents, 14 (12.28%), 50 (43.86%), and 20 (17.54%) respondents are extremely, moderately, and somewhat conversant respectively with new classification. Only six (5.26%) respondents answered as they are not at all conversant with new ILAE-2017 classification, while 12 (10.52%) respondents didn't answered the questions.

Definition of epilepsy

Most respondents (n = 71, 62.28%) considered ≥ 2 unprovoked seizure attacks > 24 hr apart is a criterion for epilepsy definition. Some respondents (n = 15, 13.16%) answered ≥ 2 unprovoked seizure attacks within 24 hr, and only three (2.62%) respondents answered one unprovoked seizure in lifetime, when asked about the criteria for

1. Are you conversant with the new ILAE-2017 classification of epilepsy?
(Kindly indicate your response as per Likert scale)

Level of conversance



2. According to your opinion, which of the following criteria define epilepsy?
   a. 1 unprovoked seizure in lifetime
   b. ≥2 unprovoked seizure attacks within 24 hr
   c. ≥2 unprovoked seizure attacks more than 24 hr apart
   d. Patient with epilepsy syndrome
3. Kindly indicate your viewpoint on criteria for epilepsy resolution.
   a. Seizure free for last 5 years with AEDs
   b. Seizure free for last 10 years with AEDs
   c. Seizure free for last 10 years with no AEDs for last 2 years
   d. Seizure free for last 10 years with no AEDs for last 5 years
4. Does the old classification define epilepsy subsets?

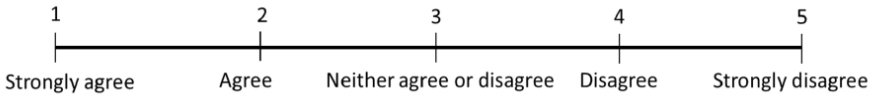
Partial clonic seizure

   a. Yes
   b. No
   c. Opinion reserved

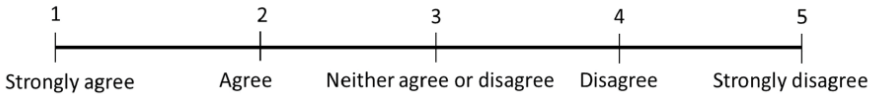
Infantile spasm

   a. Yes
   b. No
   c. Opinion reserved

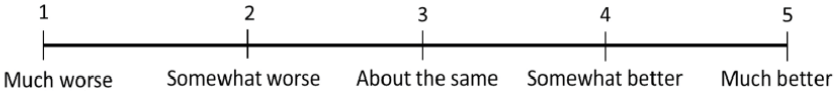
5. New classification has replaced the term "simple partial seizure" with "focal aware seizure" and complex partial seizures with "focal impaired awareness seizure" What is your level of agreement? *(Kindly indicate your response as per Likert scale)*



6. The ILAE-2017 classification is a step towards precise labeling of all seizure patients and thereby specific treatment assignment (individualized approach in the management of epilepsy. What is your level of agreement? *(Kindly indicate your response as per Likert scale)*



7. The ILAE-2017 classification aims to provide more transparency of terminology to the patients and care-givers. How would you compare old versus new classification in the respect? *(Kindly indicate your response as per Likert scale)*



8. Will you adopt new classification while managing patients with epilepsy?
   a. Yes
   b. No
   c. Opinion reserved

9. Which epilepsy classification is easy to implement in practice?
   a. Old
   b. New
   c. Opinion reserved

Table 1: Survey questionnaire related to ILAE 2017 classification.

epilepsy definition. The description of the answers by respondents when asked about the criteria for epilepsy definition are mentioned in table 2.

The majority of respondents (n = 40, 35.09%) considered that, in current clinical practice seizure free for last 5 years with Antiepileptic Drugs (AEDs) is best way to define epilepsy resolution. Thirty one (27.19%), and 26 (22.81%) respondents answered that seizure free for last 10 years with no AEDs for last 2 years, and seizure free for last 10 years with no AEDs for last 5 years for the epilepsy resolution respectively. Seizure free for last 10 years with AEDs is a criterion for epilepsy resolution is answered by only seven (6.14%) respondents.

New terminologies in new ILAE classification

Forty eight (42.10%) respondents reported that old classification doesn't include the terminology like "partial clonic". While old classification include the "partial clonic" terminology responded by forty three (37.72%) respondents. "Opinion reserved" was answered by twelve (10.53%) respondents, and 11 (9.65%) respondents didn't answered the question.

When asked about the inclusion of terminology "infantile spasm" in the older classification, 34 (29.82%) respondents responded it is there in older classification, while 43 (37.72%) respondents opined for non-inclusion in older classification. Opinion reserved response given by 15 (13.16%) respondents, and 22 (19.30%) respondents didn't answered the question.

Opinion taken for agreement regarding new terminologies, majority (78%) of respondents were in "agreement" for replacing old terminologies with new ones like "simple partial seizure" with "focal aware seizure" and complex partial seizures with "focal impaired awareness seizure". The response regarding the level of agreement for new terminologies by various respondents are described in figure 1.

New classification is better in terms of providing transparency of terminology was the general perception expressed by most (65%) of survey respondents. The response is mentioned in table 3.

Table 2: Criteria for epilepsy definition according respondents (n = 117) opinion.

Criteria for epilepsy Definition	*n*	%
A. 1 unprovoked seizure in lifetime	3	2.63
B. ≥ 2 unprovoked seizure attacks within 24 hr	15	13.16
C. ≥ 2 unprovoked seizure attacks > 24 hr apart	71	62.28
D. Patient with epilepsy syndrome	6	5.26
B C & D	1	0.88
C & D	8	7.01
Not answered	10	8.77

Table 3: Perception expressed (on Likert scale) for transparency of terminology provided by new ILAE classification.

	n	%
Much worse	1	0.88
Somewhat worse	6	5.26
About the same	20	17.54
Somewhat better	62	54.38
Much better	12	10.53
Not answered	13	11.4

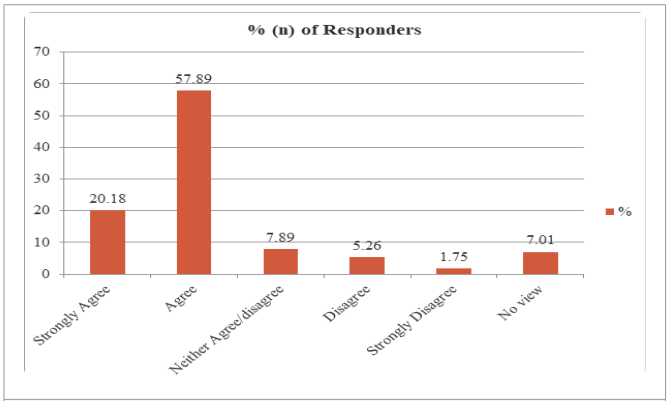


Figure 1: Level of agreement by various respondents for new terminologies.

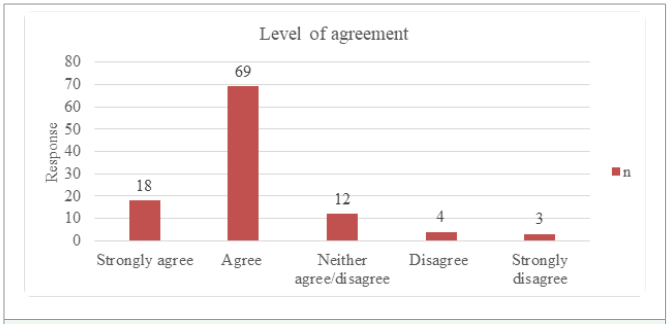


Figure 2: Response for new ILAE classification is a "Step toward individualised approach" for management of patient with epilepsy on like scale.

Application of new ILAE classification in clinical practice

More than three fourth (87/114) of our respondents agreed that new classification is a step towards individualized approach in epilepsy management. Figure 2 depicts the response by respondents regarding new ILAE classification is a "Step toward individualised approach" for management of patient with epilepsy.

Most respondents (n = 83, 72.81%) reported that they will adopt new ILAE classification in their clinical practice, while only four (3.51%) respondents won't ready to adopt. Fourteen (12.28%) respondents responded for opinion reserved, and 13 (11.40%) respondents didn't answered for the question.

New ILAE classification is easy to implement in the clinical practice is reported by 58 (50.88%) respondents, while 30 (26.32%) respondents responded that old classification is easy to implement. Opinion reserved was the answer chosen by thirteen (11.40%) respondents, same no of respondents (n = 13, 11.40%) didn't answered the question.

DISCUSSION

This study showed the perception of Indian neurologists (neurophysicians/neurosurgeons; respondents) toward new 2017 ILAE classification. The respondents of this study have the diverse clinical practice eg., some in academic, government, private, and corporate hospital.

The aim of the new ILAE revised definition of epilepsy is to bring the various terms used in epilepsy management in concordance for common use as the clinicians may formed different practical definitions and used for various specific purposes [8]. The new definition of epilepsy is more complicated than is the old definition,

even though most of the clinicians are conversant with the new terminologies specified just recently.

One of the main reasons to revise the epilepsy classification was to use more accessible, transparent language suitable for clinicians, scientists, and patients [4].

This new classification provides a better understanding of the types of seizures that the person suffers from.

The majority of the clinicians are ready to use the new ILAE classification in their clinical practice suggesting the welcome attitude of most of Indian clinicians towards the new ILAE classification.

CONCLUSION

In conclusion, the present survey clearly suggests that new ILAE classification will provide better transparency of terminology for treating doctors and care-givers. Indian neurologists have perceived new ILAE 2017 is classification easier to implement in clinical practice and will be a new step towards individualized approach in epilepsy management.

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