

26th European Neurology Congress

August 06-08, 2018 | Madrid, Spain



Avathvadi Venkatesan Srinivasan

Tamil Nadu Dr. M.G.R. Medical University, India

Clinical conundrum of neuroleptic malignant syndrome - A new look and a new AVS-CUV criterion

Statement of the Study: The research question is whether the understanding of clinical conundrum of neuroleptic malignant syndrome (NMS) would become clearer when schizophrenia and affective disorders are studied separately.

Methods: Twenty schizophrenics and thirty affected disorder cases who developed NMS were studied between 1990 and 2001 prospectively. Modified criteria of Keck was used for the diagnosis of NMS. Only patients who developed fever, altered sensorium, extrapyramidal and autonomic symptoms are included, standard statistical analysis of the data which included factor analysis, correlation analysis and discriminate analysis were performed.

Summary of Results: Mean age of onset in schizophrenia was 32 years (18-58 yrs.) and in affective disorders was 43 years (15-73 yrs.). NMS developed within nine hours of starting therapy and lasted for a mean duration of 23 days. In the affective disorder group, NMS developed over a period 17 hours and lasted for a mean duration of 11 days. Fever occurred in all the cases and earlier in schizophrenia (11.9 hrs.) compared to affective disorders (16.8 hrs.). The altered sensorium occurred within 9.6 hours in schizophrenia and 25.69 hours in affective disorder. The rigidity occurred in 38.8 hours in schizophrenia and 84.9 hours in affective disorder. Rigidity followed fever and altered sensorium in both the conditions. Autonomic symptoms occurred within 48 hours in schizophrenia and 107 hours in affective disorder. The correlation analysis showed significant correlation between NMS onset with fever and altered sensorium. Cluster analysis indicated that autonomic and extrapyramidal symptoms cause for the evolution of NMS. The factor analysis of the parameter responsible for NMS in schizophrenics are extrapyramidal symptoms 0.913, autonomic symptoms 0.858, fever 0.779, altered sensorium 0.497, whereas in affective disorders extrapyramidal symptoms 0.931, autonomic symptoms 0.955, fever 0.200, altered sensorium 0.181. Four patients died in schizophrenic group. Our discriminant analysis clearly showed the importance of the parameters with the associated probability of discrimination; autonomic symptoms (0.9), extrapyramidal symptoms (0.7), altered sensorium (0.6) and fever (0.3). The misclassification rate in the case of schizophrenia is 15% and affective disorder is around 7%. AVS-CUV criterion can be used confidently in NMS. AVS-CUV criterion; clinically define autonomic symptoms and signs, extrapyramidal symptoms, altered sensorium, fever. Clinically probable: autonomic symptoms and signs, extrapyramidal symptoms. Clinically possible: altered sensorium with autonomic symptoms or extrapyramidal symptoms.

Conclusion: NMS developed earlier and took a longer time to resolve in schizophrenics compared with affective disorders. Mortality occurred only in schizophrenics. New AVS-CUV criteria have been added to the world literature.

Recent Publications

1. Gurrera R J, Mortillaro G, Velamoor V and Caroff S N (2017) A validation study of the international consensus diagnostic criteria for neuroleptic malignant syndrome. *Journal of Clinical Psychopharmacology* 37(1):67-71.
2. Gurrera R J (2017) A systematic review of sex and age factors in neuroleptic malignant syndrome diagnosis frequency.

26th European Neurology Congress

August 06-08, 2018 | Madrid, Spain

Acta Psychiatrica Scandinavica 135(5):398-408.

3. Caroff S N and Campbell E C (2016) Drug-induced extrapyramidal syndromes: Implications for contemporary practice. *Psychiatric Clinics of North America* 39(3):391-411.
4. Singh G and Akinyemi E (2017) Managing manic delirium in bipolar disorder with features of mania, catatonia, and neuroleptic malignant syndrome. *Primary Care Companion for CNS Disorders* 21:19(6).

Biography

Avathadi Venkatesan Srinivasan, driven by his quest for excellence joined Madras Medical College (MMC) and received MD (General Medicine) in 1978. Later he pursued and received DM in Neurology from his alma mater. His thirst for research, skills and the latest development in Neurology made him find his way to the National Institute of Neurology and Neurosurgery, his pioneering research work on Neuroleptic Malignant Syndrome got him bestowed with the PhD degree in 2002. It made him the first ever recipient in Neurology from the Tamil Nadu Dr. M.G.R. Medical University, since its inception in 1988. His path breaking research (6 papers) in Phantom limbs, Stroke etc., with Padma Bhusan Dr. V S Ramachandran, Director, Center of Brain and Cognition, University of San Diego remain acclamatory to his undisputed authority in Behavioral Neurology and Movement disorders. He authored more than 100 scientific papers; dozens of his other work have found places in reputed medical journals and has published 12 chapters. His research papers presented, won acclaims in 60 National conferences and in 25 International conferences held in UK, USA, Japan, Australia, China, Europe and other countries. He is the only one from India to collaborate with Dr V S Ramachandran, who is the first recipient of Padma Bhusan for his contribution to Neurosciences.

avsekhar1950@gmail.com

Notes: