The scientific interest in neurological abnormalities in schizophrenia dates to the time of Kraepelin and Bleuler, both of whom had noted neurological and behavioural changes in the early life histories of adult schizophrenic patients. Bender (1947) even asserted that childhood schizophrenia was due to developmental encophalopathies of her monumental study on the condition.[1]

Neurological soft signs (NSS) may represent complex brain function, and are probably because of disrupted neurodevelopmental or neurodegenerative aetiology of SSD and we aim to study the possible neurodevelopmental aetiology of SSD with the help of NSS and SMD.

Key questions

1. What is the correlation of NSS and SMD in psychotic disorders and what is the possibility of neurodevelopmental or neurodegenerative aetiology?

- Materials and methods

Participants' characteristics and study design

It was a cross-sectional observational study done in the Department of Psychiatry, Gauhati Medical College Hospital (GMCH), Guwahati, Assam, India during one year period between 2015 and 2016. Cases were defined as subjects having psychotic symptoms that were either defining factor or associated feature in their diagnosis according to the diagnostic criteria of ICD-10.[5] but have never been treated or never have received any form of psychotropic medications, at least in the preceding six months. Participants included in the study were of either sex, who were 15-50 years of age. Patients who were uncomplicated, who had neurological disorder, head injury or who had a history of substance abuse were excluded. The study was approved by the institutional ethics committee of GMCH and written informed consent was taken from the participants.

Tools used for the assessments

a) Socio-demographic proforma standardised in the Department of Psychiatry, GMCH.

b) NSS was assessed by the Heidelberg manual[6] developed by Schroder et al.[7]

c) SMD was assessed by the Modified Abnormal Involuntary Movement Scale (CMT), right/left and spatial orientation (RLSO), integrative functions (IF), and hard signs (HS) which varied in different structures may suggest neurodegeneration, but the absence of gliosis poses a question on this hypothesis. It has been suggested that schizophrenia is the result of ongoing neurodevelopmental process and a neurodegenerative process [17]. The neuroprogressive process is developmentally determined decrease in the connections between cortical synapses,[18] NSS and SMD represent domains generally considered sharing neurobiological mechanisms of neurodevelopmental or neurodegenerative origin of schizophrenia and related psychotic disorders, and exploring this may give an answer to many unanswered questions related to the disorder.

Although our study has its limitations like a small sample size, lack of any biological correlation, but we believe comparing both NSS and SMD in the same group of participants.

Conclusion

As psychiatry is evolving and the diagnosis is moving towards more biological basis, NSS and SMD may be considered relevant to be included in the diagnostic criteria provided the assessment is done in a uniform manner.

References


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