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Post Encephalitis Neuropsychiatric Sequelae - Case Series

Dr. Mruthyunjaya N.[1], Dr. Shashidhara H. L.[2], Dr. Veena V.[3], Dr. Abhishek S.[4],

Dr. Kaushal G.[5], Dr. Vinod G. Kulkarni[6]

[1]MD, Associate Professor, Department of Psychiatry, SSIMS & RC, Davangere, Karnataka, India
[2]DNB, Associate Professor, Department of Psychiatry, SSIMS & RC, Davangere, Karnataka, India
[3]MBBS, Postgraduate, Department of Psychiatry, SSIMS & RC, Davangere, Karnataka, India
[4]MBBS, Postgraduate, Department of Psychiatry, SSIMS & RC, Davangere, Karnataka, India
[5]MBBS, Postgraduate, Department of Psychiatry, SSIMS & RC, Davangere, Karnataka, India
[6]MD, Professor and HOD, Department of Psychiatry, SSIMS & RC, Davangere, Karnataka, India

Correspondence Author:

Dr. Kaushal G.
MBBS, Post graduate, department of psychiatry, SSIMS and RC, Davangere, Karnataka, India
Contact No.: 7406215542
E-Mail: g.kaushal73[at]gmail.com

Abstract: ***Encephalitis is an inflammation of the brain due to variety of causes resulting in various neuropsychiatric manifestations both during short term as well as long term. However, the varied presentation following encephalitis requires apt assessment so as not to miss the precedence of symptoms suggestive of encephalitis in view of prompt diagnosis and appropriate management as well as to avoid unnecessary long-term treatment with psychotropics. Here we report 3 such interesting cases of post encephalitic patients presenting with varied neuropsychiatric sequelae. Among 3 of the cases, we report here, one patient presented with conversion disorder, another with features of BPAD and one more with psychosis. Case appropriate management in each patient yielded positive results in treating them effectively.***

Keywords: Organic Mania, post encephalitic sequela, organic psychosis

1.Introduction

Encephalitis is an inflammation of the brain resulting from either direct infection or the immune response to an infection (i.e., post infectious encephalitis or acute demyelinating encephalomyelitis).[1] It is characterized by fever, alteration in consciousness, seizures, neurological findings and behavioural disturbances. Neuro-psychiatric manifestations in the domains of personality, behaviour, emotionality, attention, executive function, speech, language and memory are also seen, however not very common.[1]

Conversion disorder is an illness of symptoms or deficits that affect voluntary motor or sensory functions.[2] However, there are very few case reports of conversion disorder presenting with psychosis like symptoms.[3] Sometimes a post-encephalitic sequela has also been presented with manic/hypomanic symptoms as per some case reports. This type of Manic states which seem to be unrelated to manic-depressive illness were termed as "secondary mania" by Krauthammer and klerman.[4]

In some instances, psychotic symptoms might be the presenting feature of encephalitis, which might be overlooked. However, psychotic symptoms may also present as a sequela of encephalitis. Hence, organicity needs to be ruled out in all such cases before treating it as psychiatric disorder. In this regard, we report three such cases with varied presentation.

Case Vignette-1:

A 11year old male child, born of a non-consanguineous marriage, with apparently normal birth and developmental milestones appropriate for age, with average scholastic performance, studying in fifth standard, hailing from rural background, presented with one week history of fever, vomiting and with history of talking to self, smiling to self, irrelevant talk, reduced interaction developing from the fourth day of fever. He got admitted in Paediatric department on the seventh day of fever with blood investigations and Lumbar Puncture suggestive of Viral Meningitis, was referred to Psychiatry department on the next day where authors worked. Upon detailed history taking it was found that, about 20 days prior to present admission the child had a four days history of fever, swelling in parotid region and was admitted in the Paediatric department of another medical College. The child was diagnosed to have parotitis with aseptic meningitis. However, he had developed above mentioned psychosis like symptoms from the sixth day of onset of fever which lasted for the next three days and eventually subsided without any specific psychiatric treatment and was discharged subsequently. He remained symptom free for the next ten days and subsequently developed the current symptoms. Few unmet needs like change of school, inability to adjust adequately to the new school, parents being uneducated and staying away from the child in their farmland in another village, and also child wanted to join another school where his cousin studies could be made out. Assessment of psychotic symptoms during first admission

was not possible as the admission was in different hospital. However, no significant stressor could be elicited, with no modelling. Child was brought up by his paternal grandmother who had submissive parenting. History of exacerbation of symptoms when people were around was noted by his aunt. During the interview, the child was less interested & appeared indifferent to the questions asked, evaded eye-to-eye contact and answered few questions preferring single word answers.

In view of the above, child was observed in the ward by nursing staff and residents where in changes in his behaviour in the form becoming gesticulating to things, showing few mannerisms, talking and smiling to self were noted in presence of others, and however while left alone no such behaviours were seen, upon which a provisional diagnosis of conversion disorder was made.

Subsequently, on day two of admission, in view of continuing symptoms, the child was given a verbal aversion by explaining about psychotic disorders and about the need for long term medications and sometimes the need for ECT. Efforts were put to make his grandmother understand in this regard and were advised to continue the child in the same school until the completion of current academic year. A dramatic change in the behaviour was noted immediately in his attitude towards interview, obeying commands, answering the questions, and in his body posture and mannerisms. However, no pharmacological intervention was done.

On the following day, psychosis like symptoms completely disappeared, following which the child was discharged and was asked to follow-up after ten days.

Case Vignette-2:

A 24year old female, third born of a non-consanguineous marriage, with apparently normal development and childhood, educated up to second pre university course, belonging to a middle socioeconomic status, unmarried, coming from a rural background, with well-adjusted and responsible premorbid personality, presented with history of fever for 20days, excessive talkativeness, excessive religiosity and decreased sleep for 15days. Often expressing excessive happiness regarding her having blessed by God and hence she is special as told by a priest three years ago and she was also blessed with a good-natured groom to marry and he was from a wealthy family as well. In contrast to this, sometimes she also felt sad and cried as she had to get married and soon, she will have to leave her parents and live with the in laws soon after marriage which was very painful for her. However, this change in her behaviour was noticed by her family members only for the past 15 days following fever, where as she had been engaged about one and half months ago. Also, there was history of excessive religiosity in the form of praying more frequently compared to earlier, and spending about three hours in temple until she was brought back by family members. History of firm belief that her neighbours have subjected her to black magic causing her illness as they were jealous of her getting a good match for marriage even though this belief was not shared by her family members. No history of similar complaints in past or family. MSE revealed speech with increased tone, tempo, volume, decreased reaction time, ideas of grandiosity and ideas of persecution, mood being predominantly happy, labile affect with impaired judgement and poor insight. Higher mental function tests were evaluated in routine MSE which was normal; however no cognitive screening was done.

She was treated by a psychiatrist and was started on tab Chlorpromazine 100mg twice daily, tab Risperidone three mg and tab Escitalopram ten mg in the night, there was minimal improvement in the excessive talk and religiosity by the second day and patient developed side effects of increased daytime drowsiness and tremors of hands, following which five days later patient came to our hospital and she was continued with earlier medications. As per Maudsley's prescribing guidelines it is advisable to stop antidepressant when patient is diagnosed with acute mania or Hypomania, however the MSE revealed mixed episode and as the patient is female in fertility age group, in view of which Tab. Quetiapine was considered and was started with dose of 100mg twice daily. Tab. Trihexyphenidyl two mg in the morning was added.

However, Tab. Escitalopram was not stopped considering the labile affect and also as patient was scheduled to get married in near future and was started with ten mg in the night, even though commonest side effect of SSRIs is insomnia, due to the ease of taking medications, dose was kept in the night as other medications were having sedative properties. Tab. Risperidone was increased to a total dosage of five mg in the night, and Tab. Chlorpromazine was stopped. Following which she perceived significant improvement in her mood (irritability) and talkativeness. However, she reported tremulousness of hands and mild slurring of speech. Hence, Tab. Risperidone was tapered down to three mg and rest of the medications were continued as earlier. With the above medications she reported significant improvement over the next ten days. Patient was advised to continue on same treatment and was advised to follow up.

Case Vignette-3:

A ten year old female patient, third born of a four children family, of a non-consanguineous marriage, with normal birth history, having achieved developmental milestones appropriate for age, having good scholastic performance, was referred to us on fourth day of admission, from paediatric department with history of altered behaviour since four days in the form of sudden emotional outbursts with excessive crying spells lasting for five to ten minutes, with history of sudden onset of mutism since one day characterised by increased reaction time to verbal commands followed by slurring of speech and history of sudden episodes of screaming & increased aggressive behaviour, all of which were following a history of fever & vomiting four days ago lasting for two days. However, no histories of headache, neck rigidity, convulsions, loss of consciousness were reported. History of one episode of Generalized Tonic-Clonic Seizure reported at two years of age, which was treated with Tab Valproate 200mg ODup

to the age of five years, currently off treatment for five years with no history of seizures since treatment initiation i.e., seven years. There was no history of similar complaints or psychiatric illness in the family.

On Mental status examination, she was conscious, cooperative with slurring of speech and without thought or perceptual abnormalities. Her mood was found to be euthymic with no liability. Cognitive screening was not done as her higher mental functions were within normal limits. Lab investigations: ALP (Alkaline phosphatase) was slightly raised (183.4 IU/L) while rest of the liver function parameters were within normal limits. EEG & MRI were normal, confirmatory CSF study was not done by the paediatricians.

Upon considering history and examination findings along with laboratory parameters, a diagnosis of post-encephalitic sequelae simulating psychosis was considered and she was started on Tab. Risperidone one mg half HS and was followed up after one week. She reported complete improvement in her symptoms during follow up and was discharged with same prescription for the following week.

2.Discussion

The onset of conversion disorder is generally from late childhood to early adulthood and is rare before ten years of age or after 35 years of age. Paralysis, blindness and mutism are the most common conversion disorder symptoms. Other symptoms are muscle weakness, gait disturbance, aphonia, deafness, convulsions and tremors. In conversion disorder, patients are cooperative, welcome evaluations, search for answers to their symptoms, yet present with historical gaps and vagaries. There are cases where patients have presented with psychotic symptoms as a sequela of encephalitis. However, as per studies, there is a low incidence of psychosis following meningitis in relatively shorter duration and the onset is usually above 13 years of age.[6] Although a provisional diagnosis of conversion disorder was made, features like uncooperativeness, less interest in interview, absence of modelling, were against the diagnosis. Psychosis as a sequela of encephalitis is another differential diagnosis. Features like short time period between onset of fever and psychosis like symptoms and child's young age are against the diagnosis. Conversion disorder can be treated in two ways, by symptom removal and reducing distress. Aversion approach would help in symptom removal and other efforts were done to reduce distress.

In our second case patient had increased talkativeness, mood liability, grandiose thoughts with mixed picture which was similar to the case reported by Fisher CM.[5] The onset of manic symptoms during early adulthood is fairly common, the onset preceded by fever, the mixed picture of the maniac symptoms and patient presented to the psychiatry department after 20 days of fever which was then subsided however history was suggestive of encephalitis which should give a clue towards possibility of post encephalitic sequelae as in the present case. Due to the varied presentation of this condition, a prompt assessment and appropriate treatment should be the goal. Management with conventional treatment as per presentation is sufficient as per some studies.[6]

In our third case report we found various behavioural disturbances in the form of sudden emotional outbursts with crying spells, sudden onset of mutism, slurring of speech, sudden episodes of screaming & increased aggressive behaviour which is partly in par with a retrospective study conducted by J Ramírez-Bermudez et.al., on Frequency of neuropsychiatric signs and symptoms in patients with viral encephalitis at Mexico which revealed that the psychiatric disorders in the acute phase were psychomotor agitation (67%), drowsiness (55%), disorientation (47%), visual hallucinations (43%) and aggressiveness (34%). On the long term, memory disorders (16%), aggressiveness (9%), aphasia (8%), visual hallucinations (8%), and auditory hallucinations (7%)were noted in about 70 patients and the mortality rate was found to be 6%.[7]

Similar features were reported by C. Benjamin et.al., in a case report of a seven-year-old girl, following non-HSE (possibly post-mycoplasma Para infectious) encephalitis, various manifestations reported were personality, behavioural, emotional, executive, speech and language changes, as well as attentional and memory difficulties. Which were consistent with formal assessment which demonstrated striking difficulties in language and verbal expression, attention and speeded processing, executive and memory (notably delayed verbal memory) difficulties.[8]

3.Conclusion

Though the incidence of conversion disorder as well as psychosis is very rare in young age group,[9] the current cases provide an insight into the presence of psychosis like symptoms in a case of conversion disorder as well as varied presentation with behavioural manifestations including that of mixed manic and depressive (BPAD) symptoms following encephalitis. Viral encephalitis or other types of encephalitis are known to present with varied symptoms. When presented with psychosis/ conversion / Manic symptoms or other symptoms suggestive of psychiatric illness, it poses a diagnostic challenge. A team consisting of Paediatricians and Psychiatrists with prompt assessment and management of symptoms accordingly would be beneficial in treating the condition successfully and shorten the duration of need for treatment with psychotropics.

References

[1] Canadian paediatric society. Encephalitis. Paediatri child health. 1998 Jan- Feb; 3 (1): 47.
[2] Shahid Ali, et al. Conversion Disorder-Mind versus Body. Innov Clin Neurosci. 2015; 12 (5-6): 27–33.
[3] Feldman MD, Ford CV. Factitious disorder. In: Sadock BJ, Sadock VA, editors. Comprehensive textbook of psychiatry. 7th ed. Philadelphia: Lippincott Williams & Wilkins; 2000. pp. 1533–43.

[4] Krauthammer, Charles. Secondary Mania. Archives of General Psychiatry.1978; 35 (11): 1333.
[5] Fisher, C. M. Hypomanic symptoms caused by herpes simplex encephalitis. Neurology.1996; 47 (6): 1374–1378.
[6] Khandaker GM,et al. Childhood infection and adult schizophrenia: A meta-analysis of population-based studies. Schizophr Research. 2012; 139 (1-3): 161–8.
[7] J Ramírez-Bermúdez, et al. Frequency of neuropsychiatric signs and symptoms in patients with viral encephalitis. Rev Neurol. 2005 Aug 1-15;41 (3):140-4.
[8] C. Benjamin et.al. Pre- and post-encephalitic neuropsychological profile of a 7-year-old girl. Neuropsychol rehabil. 2007; (4/5):528–550.
[9] Jayant KG, Pallab Majumder, Pragya Pant, Ranju Dutta, Bal Dev Bhatia. Clinical Profile and Outcome of Conversion Disorder in Children in a Tertiary Hospital of North India. Journal of Tropical Pediatrics. 2007; 53 (3):213–214.