Encephalomalacia is the softening or loss of brain tissue after cerebral infarction, cerebral ischemia, infection, craniocerebral trauma, or other injury. In the imaging classification of traumatic brain injury, encephalomalacia is a type of chronic condition secondary to injury of the brain. Cerebral softening leads to the brain changes which can have varied clinical manifestations. Although very few published data on encephalomalacia are available in the case of human beings, most of the articles are related to infants and children but rarely adults. Almost all of them are related to neurological and/or seizure disorders. In adults with encephalomalacia, rare case reports are available who presented with psychiatric morbidities in the form of progressive mental decline, borderline dementia, features of depression, delusion, and oedipism. Here, we present a case of encephalomalacia in an adult female who presented with psychiatric symptomatology suggestive of psychosis.

CASE REPORT

Miss S, a 21-year-old unmarried female from a lower socio-economic background, was brought to the Department of Psychiatry with the complaints of 2 weeks duration characterized by abusive and assaultive behavior, irrelevant talk, decreased personal care, decreased sleep, and decreased food intake. The above symptoms started abruptly with disturbances in sleep. She would sleep for 2–3 hours with breaks at night. She would become irritable on trivial issues. She would get aggressive and would even attack her family members without any provocation. She stopped talking to people but rarely would talk to the family members only. On being questioned, she would either remain mum or would answer in few words which would not make much sense to others. She would often use abusive language without any reason. She would not participate in her routine chores and need assistance even for her personal care. On several occasions, she was found talking to self, occasionally laughing without any reason, and crying to self. She would hardly ask for food and need to be fed under supervision.

There was no precipitating factor. There was no history suggestive of any substance abuse, anxiety, panic, obsession, compulsion, phobia, depression, unconsciousness, seizures, or any trauma.

Her premorbid functioning revealed no abnormality. In the past, there was no history suggestive of any psychiatric illness, seizures, and head injury. In her family history too,

We report an adult female who had changes suggestive of encephalomalacia in bilateral temporal and basifrontal region in the magnetic resonance imaging of the brain but presented with psychiatric symptomatology suggestive of psychosis instead of neurological manifestations. Encephalomalacia is softening of the brain tissue which may lead to the brain changes and present with varied clinical manifestations. Most of the cases reported previously were in infants and children and almost all of them were related to neurological disorders. However, cases with psychiatric symptomatology were rarely reported, that too in adults. The authors discussed the psychiatric symptom profile, their management and emphasized the importance of imaging of the brain and its association with psychiatric manifestations.

Keywords: Brain imaging, encephalomalacia, psychosis

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Das and Yadav: Psychosis in a case of encephalomalacia

nothing significant could be detected. She was educated up to the 12th standard and was an average student. Her menstrual cycles were regular.

On general examination, her pulse rate and blood pressure were within the normal limits, and nothing abnormal was detected in other parameters. On central nervous system examination, there were no signs of raised intracranial tension or meningitis. She had otherwise no neurodeficit except brisk deep tendon reflex at the left knee. No abnormality was detected in fundoscopy. No abnormality was detected in the respiratory, cardiac, and gastrointestinal system.

On mental status examination, she was thinly built, was looking appropriate to her stated age, unkempt, and untidy with disheveled hair. Eye-to-eye contact was not maintained. She was withdrawn and not cooperative. There was no catatonic feature. Rapport could not be established properly. Her motor activity was increased with minimal speech productivity. She was restless, would not reply to the interviewer’s questions. She uttered one or two words that were irrelevant, incoherent, and not goal-directed. The mood remained irritable and affect was indifferent and not communicable. No delusion or hallucination could be elicited. Insight could not be assessed.

On investigation, her hemoglobin was 12.4 g%, total leukocyte count was 7400/cu.mm, and platelet count was $358 \times 10^3/mm^3$. Fasting blood sugar was 97 mg/dL and postprandial was 112 mg/dL. Blood urea level was 33 mg%, and serum creatinine was 0.4 mg/dL. Her sodium level was 142 mEq/L, and potassium level was 4.3 mEq/L. Her thyroid profile and electroencephalogram were within the normal limits. Magnetic resonance imaging (MRI) of the brain revealed confluent areas of gliosis and encephalomalacia in the bilateral temporal and basifrontal regions [Figures 1 and 2].

An impression of organic psychosis NOS was made. She was treated with risperidone 3 mg, trihexyphenidyl 2 mg, and lorazepam 1 mg. She was completely symptom-free when she came for follow-up after 7 days. She cooperated for the Mini-Mental Status Examination and the score was 29 out of 30. She was advised to continue the same treatment. Follow-ups after 1 and 2 months revealed no abnormality. The medicines were tapered and stopped during this period. She never turned up after that.

**DISCUSSION**

In our case, the patient presented with using abusive languages, irrelevant talk, was assaultive, had decreased personal care, decreased sleep, and decreased appetite. One study showed that after a head injury, psychoses usually had a gradual-onset and a subacute or chronic course. Paranoid delusions and auditory hallucinations were the predominant features. The cases presented with schizophrenia-like psychosis and had more widespread brain damage on neuroimaging, especially in the left temporal and right parietal regions. They were more impaired cognitively too.[8] In contrast, our case had an abrupt onset and subacute course, behavioral abnormalities in the form of motor agitation was present, although no delusion and hallucination could be detected. In our case, encephalomalacia in MRI of the brain was located in the bilateral temporal and basifrontal region. The study on head injury indicated that patients with lesions limited to ventromedial frontal lobes showed more aggressive and violent behaviors compared to that of the patients with nonfrontal head injuries.[9] It has already been estimated that a significant number of patients with traumatic brain injury presented with depression and psychoses of various types.[10] Although in our case core features of psychosis in the form of delusion and hallucination were absent, we emphasize behavioral abnormalities and the importance of imaging of the brain in case of adult patients with psychotic manifestations even in the absence of a history of head injury, neurological symptoms, and signs. Further studies are needed with more cases to establish a correlation between encephalomalacia of various parts of the brain and the type of psychiatric morbidities.

**Declaration of patient consent**

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will
Das and Yadav: Psychosis in a case of encephalomalacia

Figure 2: Magnetic resonance imaging of the brain shows encephalomalacia in the left temporal lobe

not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest
There are no conflicts of interest.

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