Commentary

Catatonia is a common disorder that occurs in a wide variety of psychiatric, neurological, and medical conditions.[1] It can be a presentation in both depressive and manic episodes of bipolar disorder patients. Catatonia is a motor dysregulation syndrome that is becoming more recognized clinically and in ongoing research.[2,3] Underlying neurobiological mechanism of catatonia is glutamatergic dysfunction resulting in glutamate hyperactivity. A "top-down modulation" of basal ganglia due to deficiency of cortical gamma-aminobutyric acid (GABA), the primary inhibitory neurotransmitter of the brain, may explain the motor symptoms of catatonia.[4] Dramatic response with benzodiazepine may be due to increase in GABA activity by benzodiazepines. Despite various underlying causes and myriad presentations, most patients respond well to benzodiazepines or electroconvulsive therapy (ECT).[1]

This issue of *Journal of Neuroscience in Rural Practice* includes case report titled "*Catatonia in a patient with bipolar disorder type I.*"[5] In this particular case, the patient received levetiracetam for the treatment of catatonia, which resulted in improvement of condition. This finding is new and has not been reported in scientific literature so far. Levetiracetam, an antiepileptic drug (AED), acts as a indirect GABA facilitator and inhibitor of glutamate transmission is also useful for management of psychiatric disorders.[6] However, it can cause a various behavioral side effects as reported in previous studies.[7] Chouinard *et al*.[8] reported the case of a 43-year-old woman who developed symptoms compatible with catatonia after being exposed to levetiracetam for the treatment of epilepsy. Due to these contradictory fi ndings, the role of levetiracetam in catatonia remains ambiguous. Moreover, nonuse of conventional treatments such as benzodiazepines and ECT in the present case report is questionable. Although the use of levetiracetam in management bipolar disorder could be justified,[9] currently there is no literature support for use of the same in catatonia. In future, considering pharmacological actions of levetiracetam, it could be interesting to study it as a possible treatment utility in management of catatonia. However, more research is required to test this hypothesis.

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