A Creutzfeldt-Jakob like syndrome due to lithium toxicity.

Sir: Smith and Kocen recently reported two patients with a Creutzfeldt-Jakob like syndrome due to lithium toxicity. We report two additional subjects with a lithium induced organic brain syndrome with myoclonus and pseudoperiodic EEG discharges. In one case a confusional state appeared during maintenance therapy (lithium carbonate, 450 mg daily with serum level always in the normal range before hospitalisation), while in the other case organic brain syndrome with choreo-atetoid movements and action myoclonus was associated with elevated serum levels (2-6 mEq/l). In both cases a complete clinical and EEG recovery occurred. Clinical and EEG features are summarized in the table.

Although there are several reports regarding lithium toxicity on the central and peripheral nervous system, to our knowledge action myoclonus and periodic-like complexes have rarely been described.

Our cases confirm that a Creutzfeldt-Jakob-like syndrome may be due to lithium toxicity. In psychiatric patients toxic conditions such as barbiturate intoxication, withdrawal states and psychotropic drugs overdosage must be always considered in the pathogenesis of periodic EEG discharges even when clinical features and EEG suggest a diagnosis of Creutzfeldt-Jakob disease.

Our data clearly confirm the diagnostic value of serial EEG records in the differential diagnosis between toxic encephalopathy and Creutzfeldt-Jakob disease.

Table Features of the two cases

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<thead>
<tr>
<th></th>
<th>Case 1</th>
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<th>Case 2</th>
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</thead>
<tbody>
<tr>
<td><strong>Age (yr)</strong></td>
<td>59</td>
<td>F</td>
<td>56</td>
<td>M</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td>F</td>
<td>Manic-depressive psychosis</td>
<td>M</td>
<td>Depressive psychosis</td>
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<tr>
<td><strong>Diagnosis</strong></td>
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<tr>
<td><strong>Lithium therapy</strong></td>
<td>900 mg/daily</td>
<td>3 years</td>
<td>450 mg/daily</td>
<td>10 years</td>
</tr>
<tr>
<td><strong>dosage duration</strong></td>
<td>3 years</td>
<td>2-6 mmol/l</td>
<td>na</td>
<td></td>
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<tr>
<td><strong>blood level</strong></td>
<td></td>
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<tr>
<td><strong>Neurological examination</strong></td>
<td>Confusional state, myoclonus of face, arms and legs, athetoid movements</td>
<td>Psycorganic syndrome</td>
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<tr>
<td><strong>EEG</strong></td>
<td>Periodic-like complexes at 0.5-1.5 Hz</td>
<td>Clinical and EEG normalisation in 4 weeks</td>
<td>Periodic-like complexes at 1-2 Hz</td>
<td>Clinical and EEG normalisation in 12 weeks</td>
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<td><strong>Follow-up</strong></td>
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References


References