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## LITHIUM THERAPY AND THE RISK OF ACUTE HEMOLYSIS IN G6PD DEFICIENT BIPOLAR PATIENTS

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**Introduction:** Glucose-6-phosphate dehydrogenase (G6PD) deficiency is the most common enzyme deficiency worldwide. In this condition acute hemolysis is caused by exposure to an oxidative stressor in the form of an oxidative drug, an infection or aliments. G6PD deficiency can be associated to different psychiatric conditions, but little is known about the risk of acute hemolysis in G6PD deficient patients that are treated with antipsychotics and mood stabilizers.

**Aims:** A clinical description is presented in order to illustrate the possible risk of acute hemolysis with Lithium therapy in a G6PD patient.

**Methods:** A 33 years old male of hispanic origin and a G6PD enzyme deficiency was admitted presenting a first episode of mania. Lithium treatment was initiated.

The patient was clinically examined daily. Extensive laboratory evaluation was performed, including complete blood cell count, liver, renal and thyroid function tests, serum electrolytes and glucose levels, urinalysis, lithium blood dosage. Neuroimaging studies were also performed excluding secondary causes of mania.

**Results:** At J7 of lithium therapy the patient presented with jaundice and a blood count revealed a drop in the number of red blood cell (from 3,42 T/L to 2,42 T/L) with an increase of bilirubin (87,2  $\mu\text{mol/l}$ ) which revealed an episode of acute hemolysis. Lithium therapy was discontinued immediately. Red blood cell count continued to drop for another 7 days and returned to normal after 2 weeks of discontinuation of Lithium therapy.

**Conclusions:** Lithium might be a trigger of acute hemolysis in bipolar patients with G6PD deficiency associated.