Reviewer's report

**Title:** Bipolar patient treated with lithium, haloperidol and benztropine during pregnancy presented with unexpected depletion in plasma choline and phosphatidylcholine: a case report

**Version:** 2 **Date:** 12 November 2007

**Reviewer:** David J Muzina

I am familiar with the literature and believe that this case meets one of the 7 criteria for evaluation in the journal: Findings that shed new light on the possible pathogenesis of a disease or an adverse effect

**Has the case been reported coherently?** Yes

**Is the case report authentic?** Yes

**Is this case worth reporting?** Yes

**Is the case report persuasive?** Yes

**Does the case report have explanatory value?** Yes

**Does the case report have diagnostic value?** No

**Will the case report make a difference to clinical practice?** No

**Comments to authors:**

**General**

This is an interesting case report that raises several questions regarding pathophysiology of bipolar disorder and potential adverse effects of lithium treatment in a pregnant patient. It should be published and could be improved with consideration of the comments below keeping the interested clinician reading the report:

Please comment on any suspected differences in diet that may or may not have caused choline levels to drop in the 1 lithium-treated subject.

Earlier reports, although at times contradictory with magnetic resonance spectroscopy, suggested that lithium and perhaps valproate INCREASED choline levels in bipolar disorder. Additionally, there is debate about interpreting plasma choline levels in relation to brain choline concentrations. Please comment on this in the context of your case report and what might be going on in this patient beyond plasma levels dropping.
How would lower levels of maternal choline and phosphatidylcholine contribute to the outcomes observed in the infant of the lithium-treated mother? Do you make any special diet recommendations to consider in the pregnant woman on lithium?

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Revisions necessary for publication

See above.

What next?: Accept after minor revisions

Quality of written English: Needs some language corrections before being published