Reviewer's report

Title: Phagocytic ability of neutrophils and monocytes in neonates.

Version: 2 Date: 1 March 2011

Reviewer: Pascal M Lavoie

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Clarifications from previous comments:
The authors mention that "Data on the viability of cells are given in the section of methods (pg 6 line 17-19)." in their response letter. However, I am unable to identify this data in the manuscript text.

Additional suggestions for corrections:
When looking at figure 2, it seems that most of the difference in phagocytic activity between cord blood and adult neutrophils is accounted by the preterm group. Such finding is interesting: as the authors point out in their introduction preterm infants are much more susceptible to infections. What is the statistical significance of the difference in phagocytic activity between preterm cord blood and adult? Can the authors comment if indicated?

I am disturbed by the last paragraph of the discussion and suggest considerable shortening of it. The other two reviewers pointed out that the clinical relevance of the authors' findings appears clear based on observations that neonates are at greater risk for systemic infections than adults. However, the clinical SIGNIFICANCE of the findings deserves further study before the statement that: "Our results overall indicate that impairment of bacteria intake by phagocytes has not a clinical significance for E.Coli infection of neonates and probably other bacterial infections." can be made. This study does not address the clinical significance of the defect in newborn neutrophil phagocytic functions as relationships with clinical outcomes (e.g. infection) have not been investigated. One could argue that even a transient perturbation in phagocytic ability may considerably increase the risk of infection during the first 72h of life.

Typos and other minor errors:
Abstract, "The (susceptibility) of neonates (gender, (size for) gestational age, mode of delivery)..."; "we (have shown) with neonates to bacterial infections"

Page 7 (results), "... term and preterm
Fisher’s exact test (Table 1)."
Page 11, "defects of innate and (adaptive) immunity".

**Level of interest:** An article whose findings are important to those with closely related research interests

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

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.