Reviewer's report

Title: The effect of trauma and alcohol on the relationship between level of cytokines and depression among patients entering psychiatric treatment

Version: 0 Date: 15 Dec 2017

Reviewer: Rosa Hernandez-Ribas

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In this study, entitled "The effect of trauma and alcohol on the relationship between level of cytokines and depression among patients entering psychiatric treatment", Toft et al. assess the relation among depression, alcohol use, trauma and cytokines levels in a sample of psychiatric inpatients.

This is an overall interesting manuscript but I have major concerns:

1. The sample recruitment. I disagree about the selection method. The authors include all patients admitted in a psychiatric centre without clarify the specific diagnoses. They classify the patients in three groups: mood disorders, anxiety disorders and eating disorders and they analyse the level of depression using the 21-item Beck Depression Inventory (BDI-II). We don´t know how many of this patients fulfill criteria for major depression according DSM and surprisingly there are more patients classified as severe depression in the anxiety disorder group than in mood disorder group (see table 1).

2. The method.
   a. The patients completed two self-report questionnaires: The 21-item Beck Depression Inventory (BDI-II) to assess the intensity of depressive symptoms and The Alcohol Use Disorder Identification Test (AUDIT) to identify alcohol use.
      i. The BDI-II is a widely used instrument to assess the level of depressive symptoms. In my opinion is a good election
ii. The AUDIT is a good instrument to detect alcohol use but it isn't enough to diagnose the specific pattern of consumption. From my point of view the authors should add the DSM or ICD criteria

b. The authors ask five question regarding trauma history. The presence or absence of trauma and its relationship to the cytokines is the main outcome in this study. In my opinion, they should have used an standardized instrument such as The Childhood Trauma Questionnaire (Bernstein and Fink, 1997) or the Paykel Scale of Stressful Life Events (Paykel et al. 1971) to draw a definitive conclusion

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

No

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

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Please indicate the quality of language in the manuscript:

Acceptable

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