Reviewer’s report

Title: Tryptophan degradation in Irritable Bowel Syndrome: Evidence of indoleamine 2,3-dioxygenase activation in a male cohort.

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Reviewer: Dietmar Fuchs

Reviewer’s report:

This paper describes enhanced degradation of tryptophan in the peripheral blood of patients with inflammatory bowel disease. Authors conclude that inflammation-induced indoleamine 2,3-dioxygenase may represent the biochemical background of this observation. The study is well performed and sound. However, it suffers from the small number of patients (n = 10; kynurenic acid was measured in only 6 of them!), and so the rather lengthy discussion of the data is not really justified. The manuscript can go as a brief and preliminary report instead of a full paper.

Interestingly the significance to distinguish patients and controls is much greater than that for tryptophan or ratio. Authors should comment on that finding. Authors should briefly comment on the rather huge overlap of tryptophan and kynurenine between groups. Neopterin has been described as a potential marker of disease activity in IBD patient, however not cited.

Authors measured tryptophan metabolic abnormalities + neopterin. To substantiate the association between neopterin and tryptophan degradation the correlation should be calculated and shown as a graph.

Discussion, line 8: ... decreased availability of tryptophan… has not been found in patients. So to discuss potential consequences of subnormal tryptophan seems rather obsolete.

Tables 1 and 2 are not really necessary, content can be easily included in the text. All marker concentrations were independent of age, so the details for all individual compounds are not necessary. Group comparisons are given anyhow (text and figures).

Concentrations of tryptophan and catabolites should be given in µmol/L instead of ng/mL.

Minor:
 should read L-kynurenine instead of l-kynurenine throughout

References (instead of referances)

Level of interest: An article of importance in its field
Quality of written English: Acceptable

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'