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: John Potokar

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This is a fairly straightforward small study that compares levels of tryptophan metabolites in 10 male IBS patients compared with 26 controls. It is an “investigative” study rather than a clear hypothesis driven research study, but the findings are nonetheless intriguing, and the discussion attempts to integrate and synthesise the results with what is know re IBS together with stress induced 5-HT metabolism.

The methods appear reasonable, but it is not clear why there were only 10 IBS patients and 26 controls. Was the study powered for just 10 patients and what was this sample size based on? The IBS group is much older [48 vs 32] and neither groups are adequately described - this needs to be addressed before publication. Were their any age associated confounders that might be relevant? Were any of either group on serotonergic medication? Were their differences in smoking between the 2 groups (IDO activity is reduced in smokers). Where were the controls recruited from?

The manuscript is well written, with only the odd typo e.g. p9 last sentence remove “there”. The discussion is reasonably clear although on p11 I am not clear how this study clarifies that if the increased tryptophan degradation is IDO dependent, the knock on consequences for serotonergic signalling are greater than if it is TDO-mediated.

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

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