

Review1#

This article represents a prospective follow-up of patients with IBD and 28% had opportunistic infections, the most frequent being *Clostridium difficile* and RSV. The immunosuppressants or their combination with other drugs increased the risk of infection. Severity of the disease or high calprotectin were risk factors for infection. The article is well written and well conducted, completing data largely debated before.

Answering Review1#

Thank you very much for your review of the study. We will continue our efforts.

Review2#

this study focused on the factors that might influence opportunistic infections in a group of patients with IBD SPECIFIC COMMENTS 1. The stated AIM in the ABSTRACT is to assess rates of infection in CHINA. However, we later discover that this is just one centre. While this may establish the patterns in Chinese patients, it doesn't tell us what happens throughout China 2. The word unicentral would be best replaced with a standard term: single centre 3. The methods of the ABSTRACT contains results - the numbers of subjects are results and need to be moved accordingly 4. The patient number is listed as 309, 301 and 249. This needs to be corrected 5. Some infections (e.g. RSV) can be more commonly seen in infants and preschool children. The presence of children at home should be considered a potential factor also 6. In the INTRODUCTION, by saying recurrence of IBD, do the authors mean relapse or return of symptoms. IBD as an incurable disease can not recur - it is always present 7. The INTRODUCTION could be shortened a little and more focused. 8. As above, the METHODS section also contains results: these must be moved as above 9. Bacterial names must be listed in standard format 10. In the second sentence on page 5 the authors do not need to say "no statistically significant", as they already provide a p value of >0.05 11. The Results section on pages 6 and 7 treats severity and FC levels separately. Are these not related? Further

FC of >200 is not that high. Did the authors do a dose-relationship with FC? 12. Further, is a high CRP or ESR greater than the normal range? was there ANY LINEAR RELATIONSHIP? 13. The DISCUSSION covers good material. Some of the paragraphs are too long and the text could be shortened and focused more. There are many errors of English language usage or word usage/grammar that need to be all corrected.

Answering Review2#

First of all, thank you very much for your comments on this study. Your comments are very important to our study. I have modified the manuscript according to your comments.

- 1、 There is little epidemiological data on the rate of opportunistic infection in IBD patients in China. Although this study is a single-center study, which cannot evaluate the opportunistic infection rate of IBD in China, it still has important reference value for this problem. In addition, I modified the AIM. I changed " To determine the incidence of opportunistic infections related to IBD in China " to " To predict the incidence of opportunistic infections related to IBD in China ".
- 2、 The word unicentral has been replaced with a standard term: single centre
- 3、 The methods of the ABSTRACT has been modified
- 4、 The number of patients has been corrected.
- 5、 Fewer infants and preschoolers were enrolled in our study with IBD. Whether children's home conditions are a potential risk factor for opportunistic infections could be the next stage of research.
- 6、 According to the meaning of the author of references, the recurrence of IBD meant return of symptoms.
- 7、 The introduction has been shortened.
- 8、 The methods of the ABSTRACT has been modified.
- 9、 Bacterial names have been listed in standard format.
- 10、 In the second sentence on page 5, a p value of >0.05 has been deleted.

- 11、 FC does not diagnose IBD, but is sensitive to the degree of disease activity, the degree of mucosal lesions, and the evaluation of disease treatment effect. Furthermore, FC values can be used to assess response to treatment, screen asymptomatic patients, and predict recurrence of IBD. In addition, FC detection is a useful screening method to identify patients with suspected IBD who require endoscopic examination. Therefore, there is some connection between the FC and severity, but they cannot be replaced by each other. High FC(>200μg/g) is higher than the upper limit of normal. I divided fecal calprotectin into the normal group (0-200μg/g) and the upper limit group (> 200μg/g). We found higher than normal levels of fecal calprotectin(>200μg/g) was associated with an increased rate of opportunistic infections.
- 12、 High CRP and ESR is higher than the upper limit of normal
- 13、 Some text has been streamlined. The errors of English language usage or word usage/grammar have been corrected.

Review3#

The title/subject is interesting and topical, the manuscript is well structured and well written. However, I am very confused regarding the design of the study and the data analyzed. In Patients and methods section (study design and patient population) authors explained that in the prospective study 301 IBD patients with various opportunistic infections were included. However, they did not explain how opportunistic infections were diagnosed, when and what analyzes were performed to confirm particular infection – authors mentioned only that »at every clinic visit, subjects were given a questionnnaire regarding infections.« What does this mean? Do authors have any data from laboratory test? Was control goup of patients tested on opportunistic infection or were selected based on a questionnnaire? In Results section authors explained that severe disease activity in IBD was associated with an increased rate of opportunistic infections (point 2). However, authors did not provide any

information about how severe disease activity was measured, which criteria were used and most importantly, when severe disease activity was evaluated. Similarly, in Results section point 3 authors state that fecal calprotectin was associated with increased rate of opportunistic infections and again, they did not provide any data about when, why and how fecal calprotectin was measured. All above mentioned information are key information – without them scientific value of this study can not be evaluated.

Answering Review3#

Thank you very much for your comments which have supplemented the deficiencies in our paper.

The diagnosis of opportunistic infection must be based on experimental data, which I did not express clearly in the process of writing. Patients were screened for opportunistic infection before enrollment to exclude those currently infected. Infection was based on laboratory results, in which viral IgM positive and DNA copy were diagnosed as viral infection. The diagnosis of tuberculosis was based on the detection of tuberculosis bacillus. *Clostridium difficile* was detected by PCR. Positive fecal cultures of mold and candida were diagnosed as fungal infections. Clinical visits were conducted once a month. Clinical follow-up and laboratory examinations (including blood routine examination, C-reactive protein (CRP), hepatic and renal function, fecal calprotectin (FC), infection indicators, etc.) were conducted once a month. In addition, disease activity was assessed at each follow-up. Truelove and Witts disease severity classification criteria and Crohn's disease activity index (CDAI) were used to evaluate the disease activity of patients with UC and CD, respectively. These diagnoses and disease activity index were approved by the attending physician. The above content has been supplemented in the text.