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Obesity is associated with colitis in women but not necessarily causal relationship

Shen W *et al.* Obesity is associated with colitis

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Abstract

The relationship between obesity and female risk of microscopic colitis remains to be discussed.

Key Words: Chronic diarrhea; Obesity; Microscopic colitis; Oral contraceptives

Shen W, He LP, Zhou LL. Obesity is associated with colitis in women but not necessarily causal relationship. *World J Clin Cases* 2022; In press

Core Tip: Diarrhea can be caused by many reasons, such as taking drugs, postoperative diarrhea, intestinal diseases, food intolerance, *etc.*, which is not necessarily caused by microscopic colitis, so it has a certain influence on the conclusion, and more clinical diagnosis and auxiliary examinations should be needed to eliminate the interference of diarrhea.

TO THE EDITOR

We are glad to have the privilege of reading interesting articles created by Robert S Sandler and its team^[1]. After reading this article carefully, we find that this article mainly expresses that the authors want to explore the relationship between microscopic colitis

and obesity in men or women after colonoscopy through a case-control study, and the results show that obesity is related to the significant reduction of the risk of microscopic colitis in female patients. However, even if this research is clear and distinct, we think that some parts of this article are more worthy of far-reaching discussion, such as whether there are other factors influencing the conclusion of this study and whether oral contraceptives can reduce the risk of microscopic colitis by affecting intestinal permeability or intestinal microflora.

As we all know, the small intestine is the main part of food digestion and absorption in the human body. Only when the food is decomposed into small molecules can it be absorbed by digestion in the small intestine. The mucous membrane of the small intestine can form many circular folds, and there are many microvilli on the folds, which can increase the absorption area of the small intestine, and the capillaries in the folds can be beneficial to the absorption of the small intestine. The mucosa of the large intestine has a strong ability to absorb water and electrolytes and can also form, store and excrete feces. The large intestine also helps the small intestine absorb water. However, when too much liquid enters the large intestine or the absorption capacity of the large intestine decreases, diarrhea can be caused because water cannot be absorbed normally. The large intestine can also secrete mucus, which can adhere to the intestinal wall to prevent bacterial infection and promote fecal excretion. The samples of this article are men and women who have undergone selective outpatient colonoscopy due to chronic diarrhea. Chronic diarrhea can be caused by many reasons, such as taking drugs, intestinal diseases, colon diseases, postoperative diarrhea^[2]. Excessive growth of small intestinal bacteria, malabsorption of bile acids and food intolerance are also the specific causes of diarrhea^[3]. Diarrhea will disrupt the absorption function of the small intestine and large intestine, cause dehydration and poor nutrition, and thus lead to weight loss. Therefore, we should distinguish clearly whether the conclusion that "obesity is related to the significantly reduced risk of microscopic colitis in women" is caused by colitis itself or diarrhea.

In the third paragraph of the materials and methods section of the article, the author mentioned that the information of all participants in this study was collected by

telephone interviews for 30 to 40 min and self-completed questionnaires. In fact, the methods of telephone follow-up and self-completed questionnaires have limitations and cannot guarantee the authenticity of the data, so the quality of this study cannot be effectively guaranteed. All case information should be diagnosed or screened clinically to ensure the reliability of the conclusion.

The article also mentioned that the use of oral contraceptives was negatively correlated with microscopic colitis, but its mechanism was unknown. It has been reported that oral contraceptives can improve intestinal permeability, and as exogenous sex hormones, oral contraceptives can influence the level of endogenous hormones and enhance the development of Tn1 and Tn2-mediated inflammatory diseases^[4]. One study also indicated that oral contraceptives may increase the risk of colitis^[5]. However, an observational study shows that short-term use of oral contraceptives has no significant effect on intestinal microflora^[6]. Therefore, the relationship and mechanism between colitis and oral contraceptives needs further study.

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