

Management of Patients with Inflammatory Bowel Disease during the Prevention of COVID-19

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Abstract

Objective: To explore the disease management methods and effects for patients with inflammatory bowel disease (IBD) in the special period of pandemic. **Methods:** Medical staffs carried out the management of patients with IBD on the inflammatory disease service platform of this center from February to May of 2020 in addition to routine clinical works. **Results:** None of the nearly 3000 IBD patients who are being followed up at our center were infected with COVID-19. During this period, no patients experienced drug-related serious side effects or disease recurrence that could not be treated in time due to failure to reach the medical staffs. **Conclusion:** The disease management methods based on IBD platform allow the patients to be properly managed during this special period.

Keywords

COVID-19, Inflammatory Bowel Disease, Chronic Disease Management, Nursing Care

1. Introduction

In December 2019, SARS-CoV-2 outbreaked in the world. The whole population is generally susceptible to this highly contagious virus. It can cause COVID-19, fever and respiratory symptoms, and possibly gastrointestinal symptoms [1]. Inflammatory bowel disease (IBD) is a chronic non-specific intestinal inflammatory disorder. Currently, there is no cure for this lifelong disease. In addition to repeated attacks, complications, such as intestinal obstruction and fistula, are common. In the meantime, the compromised body's resistance increased susceptibility to concomitant opportunistic infections. Accordingly, it needs to be

managed as a chronic disease. The patients need to strengthen their disease knowledge and medication compliance. Otherwise, it may lead to problems such as failure to detect and treat side effects of drugs in time, recurrence of the disease, and high readmission rate.

Currently, COVID-19 has become a global pandemic. Studies have shown that the elderly and people with underlying diseases have higher susceptibility. Although there is no clear evidence demonstrating susceptibility of IBD population to SARS-CoV-2, IBD is a disease due to immunomodulatory imbalance, and the intrinsic factors cause malnutrition and impairment of intestinal epithelial barrier. In addition, the application of immunosuppressive agents (glucocorticoids, immunosuppressants or biologics) further compromises the immunity of IBD patients [2]. Besides cross-infection risks as a result of frequent hospital visits or hospitalization, IBD patients also face higher risks of catching COVID-19 due to disease or treatment factors. In this special period, standardized management of chronic diseases is particularly important. During this special period, it is necessary to further strengthen effective disease management and monitoring, guide patients to learn related disease knowledge, and improve medication compliance. These efforts can not only maintain stable disease, but also reduce operation rate, disease recurrence rate, opportunistic infection rate and related risks [3]. We reviewed our center's management measures for IBD patients during this pandemic from February to May of 2020 and shared the experience.

2. Subjects and Method

2.1. Subjects

Inclusion criteria: 1) Mainly included IBD patients or family members who have been treated at our sites across China, and joined our WeChat group, there were a total of 5 WeChat groups and 1 QQ group, 500 members in each group, a total of nearly 3000 people. Exclusion criteria: 1) Complicated with other mental illnesses. 2) Patients with poor compliance.

2.2. Method

From February to May of 2020, the IBD patients were managed through our site's IBD Service Platform. Especially in the current pandemic area or high-incidence stage, it was recommended to minimize outdoor activities, make the best use of modern media to educate patients, and instruct patients to live a home life [4]. Initially established in 2013, the IBD Service Platform of our center was a doctor-patient interactive specialized disease service platform built for IBD patients. It aimed to provide IBD patients with continuing health education and full-services, including a dedicated hotline, WeChat group, QQ group, official account, Tik Tok live broadcast account, and other Internet communication APPs [5]. During the pandemic, we established a small MDT team composed of medical staffs in each WeChat group, including medical and nursing staffs from the Department of Gastroenterology, surgeons, nutritionists, enterostomal therapists to resolve various disease-related problems for everyone. For patients with compli-

cated conditions, if the attending doctor in the WeChat group believed that it was necessary to arrange professors for further consultation, and determine the treatment plan after the initial inquiry, our IBD nursing specialists would organize patient's information and arrange the professors for video consultation. Other forms included video education of patients, posting popular science articles, and WeChat Q&A. The specific contents included the followings.

2.2.1. Drug Management for IBD Patients during the Pandemic

Patients with IBD needed long-term medication to maintain disease remission state. During the pandemic, education on patient's medication compliance needed to be strengthened.

Patients may receive immunosuppressants such as azathioprine, methotrexate, and cyclosporine. If the patients were unable or unsuitable to visit the hospitals to monitor blood routine and plasma drug concentration, the risks of adverse drug reactions increased. At the same time, the use of immunosuppressive agents in patients with IBD can increase the risk of opportunistic infections, especially viral infections. In order to reduce the risks, it was not recommended to add immunosuppressants or increase the dosage for patients with IBD during the COVID-19 pandemic. If nearby hospitals provided blood tests, the results were posted in the group so that the medical staffs could help evaluate the blood test results.

Patients on biologics were encouraged to receive injections in nearby hospitals, while patients who were unable to visit medical facilities could consider switching to subcutaneous self-injection of biologics, in order to reduce the generation of immunogenicity and to avoid product expiration [6]. Because salicylic acid preparations and thalidomide had weak immunosuppressive effects, patients could continue to use these types of drugs.

However, inconvenience in purchasing drugs was common during the pandemic. Patients were encouraged to purchase drugs through standardized online pharmacies. For drugs unavailable on the Internet, doctors could issue prescriptions after video or WeChat consultation. In collaboration with the Department of Hospital Medical Social Work-Volunteer Services, our center helped patients obtain drugs in the hospital and mail to them. National Healthcare Security Administration timely issued "Circular of the Office of National Healthcare Security Administration on Optimizing Healthcare Security Handling Services and Promoting the Prevention and Control of COVID-19 Pandemic". It relaxed the prescription dosage to 3 months in order to ensure the long-term medication needs of insured patients and to reduce the frequency of traveling back and forth to hospitals for prescriptions. Studies have shown that long-term hospital prescriptions improved patient's compliance [7].

2.2.2. Guiding the Life Management of IBD Patients

It was recommended that the patients observed changes of disease conditions and maintained proper records. Since IBD is prone to recurrence, keeping good daily records could help monitor the changes of disease conditions and initiate

early intervention. For examples, monitoring daily changes of body temperature and weight at fixed time points; recording daily defecation frequency, and property changes such as the presence of mucus, pus and blood, abdominal pain and related symptoms. In terms of diet, China's dietary guidelines recommend eating more than 12 kinds of food every day, including cereals, potatoes, vegetables, fruits, fish, eggs, meat, beans, and milk (depending on tolerance) [8]. Given the significant individual variations in the diets of IBD patients, however, it was recommended that the patients keep diet diary, choose tolerable foods rationally, select low-residue, low-fat and high-protein diets, choose balanced diet combination, and avoid overeating [9]. In the case of apparent symptoms of abdominal pain and diarrhea, semi-liquid or liquid diet was preferred to reduce intestinal burden. It should also select digestible foods as far as possible, avoid or limit the intake of insoluble fibers, and eat more frequent smaller meals. In the case of severe symptoms and loss of appetite, orally total enteral nutrition therapy could be given at home as a transition.

Moderate exercise was desirable. The patients could choose appropriate exercise methods according to their physical conditions. Patients at remission stage could do moderately intense exercises step by step. During this pandemic period, the patients should not go out for exercises or participate in group events. Accordingly, exercise at home was encouraged. For patients with active diseases, moderate or higher intensity of exercises was not recommended. Patients should maintain a relaxed mood, pay attention to the pandemic, and carry out some pleasant entertaining activities. Because stress is one of the important factors inducing diseases, unnecessary panic should be avoided to prevent disease recurrence or accidental injuries.

2.2.3. Precautions on Hospital Visits for IBD Patients

If IBD patients manifested fever, diarrhea or symptoms or other changes in disease conditions during the epidemic, the patients should contact specialists for consultation through various channels on IBD Service Platform of our center to avoid delaying the best window for treatment. When visiting a hospital became unavoidable, it was recommended that the patients choose private transportation as much as possible, make appointments in advance, and pay attention to personal protective measures. The patients should also prepare personal medical information, especially the discharge summary, so that doctors could obtain effective information within a short time to guide treatment, in order to reduce outdoor time and cross-infection risk. Inside the hospital, a safe distance between doctors and patients, and between patients themselves should be maintained; in principle, 1 consultation room was reserved for 1 person, meanwhile, it was also important to open the windows for ventilation timely, and wash and disinfect the hands frequently. For necessary endoscopy, protective measures should be taken, in addition, nucleic acid testing and chest CT should be done in advance to rule out SARS-CoV-2 infection.

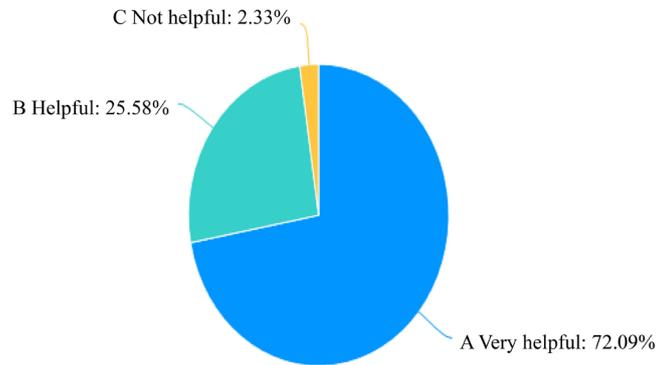


Figure 1. Benefits of video consultation for IBD patients.

3. Results

From February to May of 2020, none of the nearly 3000 IBD patients followed up at our center caught COVID-19. Medical staffs broadcast diet education and self-management of IBD patients during the pandemic period live on Tik Tok, the online viewers reached up to 3000. The number of video consultations was 43 person times. The questionnaire follow-up showed that 72.09% of these patients considered video consultation to be very helpful, and 25.58% of them considered it to be helpful. See **Figure 1**. The bloody stool of a patient with ulcerative colitis exacerbated in 3 days after the second dose of remicade. The contacted IBD nursing specialist arranged a video consultation with a professor on the next day. After a consultation, the professor suggested hospitalization. We contacted this patient and provided guidance for treatment in the hospital during this epidemic. Because this patient discharged a large amount of bloody stool on the second night after admission, an emergency surgery was arranged for total colectomy + single-lumen ostomy of the distal ileum. Subsequently, the patient's were discharged after the disease conditions were stabilized.

4. Discussion

As of May 2020, there were totally 4.96 million confirmed cases of COVID-19 in the world, and totally 82,967 cumulatively confirmed cases in China [10]. The situation of pandemic prevention and control is highly challenging. Through the management of chronic diseases of IBD patients in the WeChat group, our medical staffs carried out various diagnoses and treatments, and patient's education activities, strengthened the popularization of disease-related knowledge and answering of questions. The purposes were to improve patient's self-management ability of the diseases, and provided IBD specialists with more appropriate treatment models. In addition, strengthening doctor-patient communication created greater win-win value [11]. The treatment of IBD is a long-term or even lifetime process. During the special period of pandemic, this type of online disease consultation and management can not only meet the medical needs of IBD patients but also help them go through the control period safely and steadily.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- [1] Huang, C., Wang, Y., Li, X., et al. (2020) Clinical Features of Patients Infected with 2019 Novel Coronavirus in Wuhan, China. *Lancet*, **395**, 497-506.
- [2] Inflammatory Bowel Disease Group, Chinese Society of Gastroenterology of the Chinese Medical Association. (2017) Expert Consensus on Inflammatory Bowel Disease with Opportunistic Infections. *Chinese Journal of Digestion*, **37**, 217-226.
- [3] Bernstein, C.N., et al. (2016) World Gastroenterology Organisation Global Guidelines Inflammatory Bowel Disease: Update August 2015. *Journal of Clinical Gastroenterology*, **50**, 803-818. <https://doi.org/10.1097/MCG.0000000000000660>
- [4] Zhu, Y. and Wang, J.Q. (2010) Research Progress in Self-Management of Patients with Inflammatory Bowel Disease. *Nursing Research*, **24**, 1223-1225.
- [5] Ding, N. (2015) Construction and Application of Inflammatory Bowel Disease Service Platform. *Chinese General Practice Nursing*, **24**, 2392-2394.
- [6] Inflammatory Bowel Disease Group, Chinese Society of Gastroenterology of the Chinese Medical Association. (2020) Management of Patients with Inflammatory Bowel Disease during COVID-19 Pandemic. *Chinese Journal of Digestion*, **40**, E001.
- [7] Li, T., Lin, Q.Y., Huang, T., et al. (2017) Short-Term Effect of Chronic Disease Patients with Long-Term Prescription Policy on the Healthcare Quality of Contracted Patients and Policy Recommendations. *Chinese General Practice*, **20**, 3084-3087.
- [8] Chinese Nutrition Society (2016) Chinese Dietary Guidelines.
- [9] Kakodkar, S., et al. (2017) Diet as a Therapeutic Option for Adult Inflammatory Bowel Disease. *Gastroenterology Clinics of North America*, **46**, 745-767. <https://doi.org/10.1016/j.gtc.2017.08.016>
- [10] State Council Information Office (2020) Fighting COVID-19: China in Action. June 7.
- [11] Chen, C., Dai, X.J., Li, J., Xing, J., Shi, Q. and Xu, S.S. (2016) Effect of Management Led by the Management Team of Special Disease on Patients with Inflammatory Bowel Disease. *Chinese General Practice*, **19**, 4397-4402.