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Epidemiology of Inflammatory Bowel Disease

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Introduction

Nearly 10% of patients experience symptoms that are difficult to define and are unclear between UC and CD. For this subset of patients, there is no recognized definition; their illness is simply referred to as "indeterminate colitis" until the diagnostic symptoms of UC or CD later become apparent. The wide range of symptoms present in UC and CD points to unique pathogenetic processes. It is hoped that a deeper comprehension of the genetic, immunological, and environmental factors that cause UC and CD would provide accurate IBD treatments.

The incidence of IBD increased between the 1960's and 1980's in areas with a high prevalence of the disease, such as North America, before plateauing at the present time. IBD is thought to affect 1 million people in the US alone, with 30,000 new cases being diagnosed yearly. The incidence of UC and CD is split equally. Although it can happen at any age, the peak age of onset for IBD is between the ages of 15 and 30. 10% of cases involve people under the age of 18. Both UC and CD exhibit a bimodal age distribution, with an additional, smaller peak seen in people between the ages of 50 and 70. In contrast to CD, which is somewhat more common in women, ulcerative colitis is slightly more common in men. Both diseases tend to occur in higher socioeconomic groups.

IBD is more common among Caucasians and Ashkenazi Jews than in people of other races and ethnicities, according to analyses by racial and ethnic subgroups. The distribution of IBD among racial and ethnic groupings is still fluctuating. In the past, it was believed that IBD affected racial or ethnic minorities less frequently than it did among white people. With a rise in incidence among African Americans and second generation south Asian immigrants to affluent nations, this gap has been narrowing.

IBD is currently treated with heavy doses of steroids, immune modulators including azathioprine and 6-mercaptopurine, with acute cases subjected to surgery. With greater understanding of the IBD aetiology, customized therapies to stop the inflammatory cascade are now possible. Emerging therapies focus on controlling the TH_1 or TH_2 cell response pathway *via* inhibition of TH_1 or TH_2-inducing cytokines or downstream cytokines. One possibility is the specific targeting of cytokines using monoclonal antibodies (e.g., the antibody that binds to TNF). Another approach is to block the cell-signalling pathways associated with activation of lymphocytes and macrophages using agents that affect NF-κB.

Leukocyte removal from peripheral blood by apheresis is an interesting strategy that is now being investigated in the United States in an effort to lessen an excessive inflammatory response. Many of the circulating inflammatory cell types that are activated in UC and CD are filtered out by apheresis, a well-known therapy method in Japan and Europe for both UC and CD. Granuloma formation may be reduced by preventing neutrophil and macrophage penetration into the gut mucosa. TREM-1 is expressed by more than 90% of peripheral blood monocytes, making them capable of a significant oxidative burst. The suppression of any additional degranulation of these cells would stop the release of the proteolytic enzymes and reactive oxygen intermediates linked to tissue injury. Consequently, the local levels of chemokines and proinflammatory cytokines that exacerbate the innate immune response and stimulate the adaptive immunological response.

Description

If gut bacteria are the cause of IBD, another treatment strategy is to alter the antigenic environment. The luminal environment may be improved by administering non-pathogenic enteric organisms (probiotics) or genetically modified bacteria to create cytokines that reduce inflammation. Studies on these substances have recently been conducted on both humans and animals. The promise of a wider range of innovative therapeutics with varied efficacy is made possible by understanding the intricate interplay of IBD's genetic, environmental, and immunological components [1].

IBD is becoming more common, yet there are no known causes. Medical IBD therapy has adopted new therapeutic strategies however it is unclear how these developments may affect the prognosis of IBD naturally. The Faroe Islands have the highest incidence of IBD in the world, although the incidence of IBD is twice as high in Western Europe than in Eastern Europe. Early immunosuppressive and biological intervention appears to have decreased the rate of colectomy in ulcerative colitis, although the effect on Crohn's disease is yet unknown. Despite advancements in medical and surgical management, Crohn's disease mortality has remained constant and of great concern.

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The mortality rates due to IBD can be lowered by specialised care at IBD centres, therapies to target and achieve mucosal repair, early intervention at relapse, and preventing clostridium difficile infection. Crohn's disease appears to carry a colorectal cancer risk comparable to that of ulcerative colitis. Small bowel adenocarcinoma risk is higher in people with small bowel crohn's disease. The new objective of attaining gut mucosal healing appears to modify the way IBD develops naturally over time [2].

Extraintestinal symptoms of Inflammatory Bowel Disease (IBD), such as crohn's disease and Ulcerative Colitis (UC), are rather common. The extraintestinal manifestations of IBD include rheumatic, metabolic, dermatologic (mucocutaneous), ophthalmologic, hepatobiliary, hematologic, thromboembolic, urinary tract, pulmonary, and pancreatic. It is indeed challenging to get reliable treatment data and epidemiologic information on the more uncommon extraintestinal symptoms. Updates on the aetiology and treatment plans for each of these illnesses are provided, though.

Extraintestinal symptoms of Inflammatory Bowel Disease are frequent (IBD). Rheumatic (such as axial arthropathies and peripheral arthritis), dermatologic (such as erythema nodosum and pyoderma gangrenosum), ophthalmologic (such as episcleritis, iridocyclitis, and uveitis), and hematologic signs are the most common extraintestinal manifestations (e.g. anaemia and hyper homo cysteinemia). Primary sclerosing cholangitis, pancreatitis, different lung conditions, osteoporosis, and thromboembolic events are some of the less common symptoms.

Conclusion

Due to the potential length and complexity of the diagnostic process, all those signs are burdensome for both patients and their doctors. The current review makes it clear that IBD frequently affects other organs besides the colon. Therefore, when treating patients with IBD, the doctor needs to be aware of the extraintestinal manifestations' symptoms, which are included in this article. Physicians should also be knowledgeable with the most recent treatment protocols, which luckily are accumulating at a rapid rate, in order to reduce the suffering of specific patients [3].

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