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Extended Abstract

An interesting cause of pancolitis in an immunosuppressed patient

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Abstract

An 80-year-old lady with CML on dosatinib with no history of recent antibiotic history, travelling and no family history of autoimmune disease was admitted due to watery diarrhea for two weeks sometimes mixed with blood and associated with generalized abdominal pain. On admission, she was septic with raised CRP. Stool culture was negative for C. difficile, Campylobacter, Giardia, Salmonella and Shigella and E.coli O157. CT (abdominal and pelvis) reported severe active pancolitis. Hematologists stopped dosatinib on the basis of possible infectious or drug-related colitis. Sigmoidoscopy revealed widespread pseudomembranes in the sigmoid colon, later confirmed by histology. Although stool samples did not show C. difficile toxins, oral vancomycin and IV metronidazole was started as per micro advice and gentamicin was also added as there was E. coli growth in blood culture. Dramatic clinical and biochemical response was seen within a few days. Pseudomembranous colitis is a necrotizing inflammatory bowel condition, mainly caused by toxins of Clostridium difficile, a normal habitant of GI tract, which tends to overgrow in people treated with antibiotics and people with immunosuppression such as cancer or chemotherapy. As routine stool test for C. difficile toxin A and B has sensitivity of about75% only and most patients with pseudomembranous colitis have C. difficile infection, empiric treatment for C. difficile should be started if the patient is seriously ill. Less common causes should also be considered if not responded to treatment. The gastrointestinal tract is a major component of the human immune system with a total lymphoid mass which is comparable with bone marrow.The Peyer's patches are the principal sites of interaction among luminal antigens and lymphocytes, while the scattered lymphocytes in the lamina propria and epithelium are the effector cells that mediate immune response. The gut is also a site of synthesis and release of a specialised form of immunoglobulin A (secretory IgA) which is resistant to digestion. These immunological mechanisms are important because the gut has a huge surface area which interacts with the numerous potentially noxious agents including micro-organisms and dietary antigens. The intestinal tract is also one of the most metabolically active tissues in the body, with mucosal renewal taking place every three to five days, it is not surprising therefore that the gut is often the target organ for pathological processes in the immunosuppressed patients. The deleterious effects of immunosuppression on the integral functioning of the gut are assuming greater importance now that the use of potent

long term immunosuppression has become widespread, for example in autoimmune diseases and organ transplantation. The effects of immunosuppression on the gastrointestinal tract are multiple and include loss of gastric acidity, impaired immune response, reduced mucosal integrity, and compromised mucosal regeneration.

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