Inflammatory bowel disease superimposed on HIV infection: a mirror image of the Remission hypothesis?

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BACKGROUND

- The intestinal epithelium is the interface between a sterile internal environment and a contaminated external environment.
- The conflicting needs for intimate contact to facilitate solute and water absorption while protecting against microbial invasion requires a complex defense to distinguish pathogen from non-pathogen and limit the scope and intensity of the inflammatory response.
- Untreated HIV infection and IBD exist at opposite ends of a spectrum, immune deficiency vs immune hyperactivity, but may coexist.
- In the past, IBD typically preceded HIV infection and immune depletion often was accompanied by remission of the GI disease, which led to the "Remission hypothesis".
- In the current era, HIV infection often precedes the development of IBD. It is unclear if the sequence in which the two diseases develop affects their clinical course.

AIM

- To determine the possible relationship between IBD and HIV

METHODS

- Chart review of patients with coexisting HIV infection and IBD was performed
- Clinical and laboratory findings of 7 patients with IBD superimposed on HIV infection were reviewed.

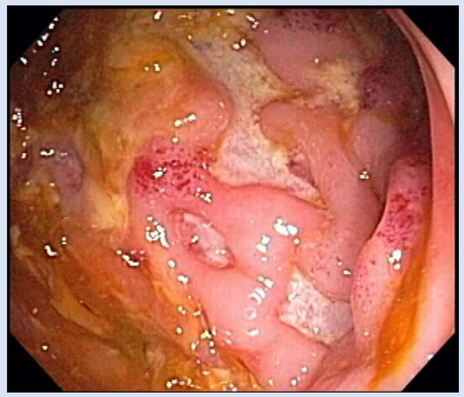
HIV complicating poorly controlled IBD

- Seen in pre-HAART* era
- Progressive immune deficiency
- Detectable plasma HIV RNA
- Decreased activity/remission of IBD as immune function wanes

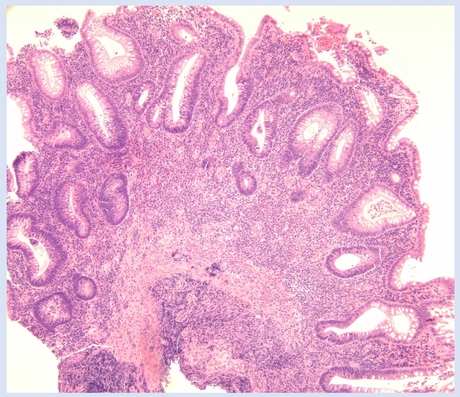
IBD complicating well controlled HIV

- Seen in HAART* era
- Stable immune function
- Undetectable plasma HIV RNA
- Signs and symptoms consistent with symptomatic IBD

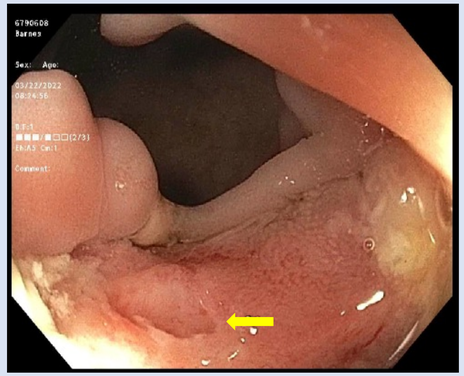
IMAGES



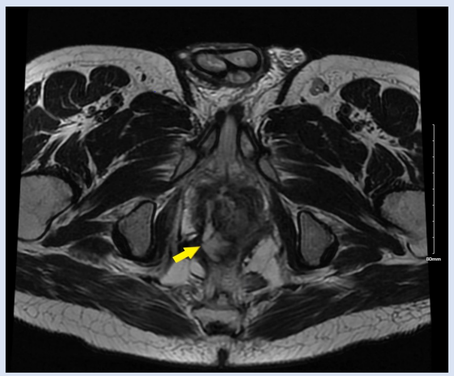
Punctate and serpiginous ulcers



Acute and chronic inflammation, crypt distortion and basal lymphoid aggregates



One of 2 fistula openings in an anal ulcer



Perirectal abscess seen by MRI

SUMMARY

- Five patients were African American, one was Caucasian, and one was of mixed race; five were men and two were women.
- All patients had colonic involvement and one also had small intestinal disease.
- Endoscopic and histologic features were more typical of Crohn's disease than of ulcerative colitis.
- Five patients presented with severe, complex perianal fistulous disease.
- One patient had a history of hidradenitis suppurativa and three had aseptic necrosis of the femoral heads on or prior to presentation.
- All seven subjects had stable HIV infection, with undetectable plasma HIV RNA and CD4 counts great than 400 cells/mm^3 at diagnosis. No one had ever had a serious opportunistic infection.
- Four patients responded well to biologic agents, one responded to corticosteroids, and two have recently been initiated on therapy.

DISCUSSION

- These data suggest that the sequence of developing HIV infection and IBD may influence the clinical course.
- While progressive immune depletion in HIV infection may diminish the clinical severity of established IBD, its *de novo* development in an HIV-infected patient may lead to serious disease with significant disease-related morbidity.
- We hypothesize that the development of IBD in an HIV-infected patient is a mirror image of the remission hypothesis; prospective studies are needed for confirmation.