Gastrointestinal manifestations of AIDS

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GIT manifestations

Gastrointestinal and hepatobiliary disorders are among the most frequent complaints in patients with HIV disease.

Effective ART and chemoprophylaxis (PCP, MAC, and CMV) has significantly reduced the occurrence of GIT opportunistic infections.
GIT and AIDS defining diseases
Clinical Category C

*Candidiasis*: esophageal
*Cryptosporidiosis*: chronic intestinal (>1 month)
*CMV*: other than liver, spleen, nodes
*Histoplasmosis*: disseminated, extrapulmonary
*Isosporiasis*: chronic (>1 month)
*Kaposi sarcoma*
*Lymphoma*: Burkitt, immunoblastic
*M. avium* or *M. kansasii*: extrapulmonary
*M. tuberculosis*
*Salmonella*: bacteremia, reccurent
*Wasting syndrome*
GIT & HIV - Clinical Category B

Candidiasis: oropharyngeal

Constitutional: diarrhea >1 month
Oral manifestations

Candida:

Thrush is presented by white painless plaques on oral mucosa that can easily be scrapped off.
Oral manifestations

Oral hairy leukoplakia (EBV) is a raised, white lesion of the oral mucosa, usually seen on the lateral margin of the tongue that can not be scraped off and that not respond to antifungal therapy.
Oral manifestations

The cause of *aphthous ulcers* is unknown
In dd HSV, CMV and drug-induced ulcers should be considered
Oral manifestations

Anaerobic bacteria cause gingivitis:
from linear gingival erythema, necrotizing gingivitis, necrotizing periodontitis to necrotizing stomatitis
Oral manifestations

Other oral lesions:

Kaposi sarcoma (purple-red lesions)
non-Hodgkin lymphoma (either swelling or ulcers)
oral warts
salivary glands may be enlarged by infiltration with CD8+ cells
Kaposi’s Sarcoma in Oral Cavity
Oral manifestations

Other oral lesions:

- Kaposi sarcoma (purple-red lesions)
- non-Hodgkin lymphoma (either swelling or ulcers)
- oral warts
- salivary glands may be enlarged by infiltration with CD8+ cells
Oral manifestations

Other oral lesions:

Kaposi sarcoma (purple-red lesions)
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oral warts
salivary glands may be enlarged by infiltration with CD8+ cells
Esophageal disease causing dysphagia and/or odynophagia

Candida:
most common cause of esophageal symptoms
infrequently associated with fever
empiric dg (trush, odynophagia, CD4 <100)

CMV:
usually focal pain associated with fever
dg: biopsy of erithema, erosions or ulcers
Esophageal disease causing dysphagia and/or odynophagia

HSV:
- often associated with oral manifestations
- usually focal pain with infrequent fever
- dg: brush, biopsy or culture of erithema, erosions or ulcers

Aphtous ulcers:
- usually focal pain, infrequently associated with fever
- dg: negativ tests for Candida, CMV, HSV and other infections
Diarrhea

Diarrhea is the most common GIT symptom in patients with HIV, occurs in up to 80% of patients with AIDS.

Bacterial, viral, protozoal and fungal organisms may cause diarrhea in patients with AIDS.

An infectious cause can be identified in 60-80% of cases.

Pathogen-negative diarrhea: motility disorders, bacterial overgrowth, HIV-enteropathy.
Diarrhea

Bacterial Infections

- *Mycobacterium avium complex*
- *Salmonella*
- *Shigella*
- *Campylobacter sp.*
- *Clostridium difficile*
- *Small-bowel overgrowth*
- *Vibrio parahaemolyticus*
Diarrhea

Viral Infections
- Cytomegalovirus
- Herpes simplex
- Adenovirus
- Picornavirus
- HIV
Diarrhea

Protozoal/Helminth Infections
- Cryptosporidium
- Microsporidium
- Isospora belli
- Leishmania donovani
- Giardia
- Cyclospora
- Entamoeba histolytica
- Strongyloides stercoralis
Diarrhea

Fungal Infections
- Candida albicans
- Histoplasma capsulatum

Neoplasms
- Lymphoma, Kaposi's sarcoma

Idiopathic
- "HIV-enteropathy"
Diarrhea

Medications: a common cause ("early" HIV disease), especially PIs. Often self-limited, lasting for 2-4 weeks from initiation of medication.

Small bowel overgrowth: may cause diarrhea and malabsorption of fat, vitamin B12, and carbohydrates. The prevalence of small bowel bacterial overgrowth with HIV-associated diarrhea is 38%.
Cholangiopathy

- relatively rare diseases, seen primarily in late stage AIDS
- most common identified microbial cause: *Cryptosporidium, Microsporidia, CMV* and *Cyclospora*
Endoscopic retrograde cholangiopancreatogram, demonstrating diffuse intrahepatic strictures of both the intrahepatic and extrahepatic bile ducts
Pancreatitis

- NRTIs: ddI or ddI + d4T (mitochondrial toxicity)
- PIs (hypertriglyceridemia)
- opportunistic infections (CMV, non-tuberculous and tuberculous mycobacteriosis, cryptosporidiosis)
- conditions that cause pancreatitis in general population (especially alcoholism; less common gallstones and hypertriglyceridemia)
Hepatic abnormalities

- quite common
- viral hepatitis
- HIV-related opportunistic infections
- medication toxicity (all ART)
- alcohol, nonalcoholic fatty liver disease
- malignancy (Kaposi sarcoma, non-Hodgkin lymphoma, hepatocellular carcinoma)
HCV and HIV

- higher HCV RNA loads
- more rapid progression of HCV-related liver disease
- major cause of hospital admissions and deaths
- effective HCV treatment strategies are needed
- pegINFα + ribavirin: may be effective
- early monitoring of HCV RNA response at weeks 4 and 12 → identify persons with virologic nonresponse → preventing unnecessary exposure toxicity
- liver transplantation
HBV and HIV

- HIV infection can accelerate progression of HBV
- treatment for all HBV/HIV-coinfected patients is recommended
- tenofovir + emtricitabine or lamivudine
- HBV vaccination
Abdominal pain

**right upper quadrant pain:** thickening or dilatation of the bile duct (AIDS related sclerosing cholangitis)

**epigastric pain:** peptic ulcer, Kaposi sarcoma, lymphoma, CMV infection of the distal oesophagus

**lower abdominal pain:** sever constipation (opiate use)

**difusse abdominal pain:** bacterial or CMV causes of diarrhea

**loin pain:** indinavir (4% of patients taking this drug have renal stones)
GIT bleeding

upper GIT bleeding: more common (~50% are attributed to HIV-related conditions: esophagitis, ulcers, Kaposi sa, lymphoma)

lower GIT bleeding: less common (~70% are attributed to HIV-related conditions: CMV colitis, idiopathic colon ulcers, Kaposi sa, lymphoma, MAC)
Bowel perforation

in AIDS patients, the most common cause of life-threatening abdominal pain is peritonitis from small bowel or colon perforation (CMV enteritis, Kaposi sa, lymphoma, MAC)
Wasting syndrome

involuntary loss of at least 10% of original body weight accompanied by:

- persistent diarrhea (at least to bowel movements daily for more than 30 days)

or

- extreme fatigue and/or fever without apparent infectious etiology
“May HIV flow from our blood into history books?”

~ Bill Clinton, 2005 ~