Evaluation of new onset ascites in a patient with AIDS
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Initial Presentation
A 44 year old male with newly diagnosed AIDS, HBV and Kaposi’s Sarcoma presented to the ED with week long history of abdominal pain, distention and diarrhea. He was diagnosed with AIDS three weeks prior and HAART with Emtricitabine-Tenofovir and Raltegravir was initiated.

Hospital Course
- Vitals signs on admission were normal.
- Presence of MAC in the stool represents a protein wasting enteropathy +/- phenotypic Kwashiorkor
- Intra-Gastrointestinal Kaposi’s Malignancy
- The MAC Infectious studies were initially negative in blood, peritoneum and stool.
- Paradoxical worsening of pre-existing infections days to weeks after initiating HAART.
- KS in GI tract provides an additional etiology of ascites
- Cytomegalovirus (CMV) was identified in stool cultures.
- Initial non-invasive infectious workup was negative.
- A small bowel lymphoma was suspected.
- Management included treatment of acute reactivation hepatitis B.
- He was started on Ethambutol, Rifabutin and Azithromycin for MAC therapy and is receiving Liposomal Daunorubicin for KS therapy.

Hospitalization
- Ascites, even in AIDS patients, is most commonly caused by portal hypertension secondary to cirrhosis.
- Other, non portal hypertensive causes includes infection and malignancy, as illustrated below (Table 1).
- Onset of symptoms after initiation of HAART raises suspicion for IRIS (Table 2).
- Presence of MAC in the stool represents a pre-existing infection, that was likely unmasked by HAART.
- KS in GI tract provides an additional etiology of ascites, resulting in protein wasting enteropathy causing malabsorption.
- IRIS can also cause worsening of KS, as illustrated in several case reports, thus potentially exacerbating the symptoms.
- In conclusion, this case illustrates in a patient with AIDS, the new onset of ascites could be due to IRIS, unmasking a pre-existing MAC of the GI tract, and Kaposi’s Sarcoma.

Table 1. HIV and Ascites

<table>
<thead>
<tr>
<th>HIV Component</th>
<th>Comments</th>
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<tbody>
<tr>
<td>Presence of MAC</td>
<td>Invasive infection, continuing HAART, and leading pathogens associated with IRIS include mycobacterium, PCP, CMV and Hepatitis B.</td>
</tr>
<tr>
<td>Management</td>
<td>Includes treatment of infection, continuing HAART, and in some cases, corticosteroids.</td>
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Table 2. Immune Reconstitution Inflammatory Syndrome

<table>
<thead>
<tr>
<th>HIV Component</th>
<th>Comments</th>
</tr>
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<tbody>
<tr>
<td>Paradoxical worsening of pre-existing infections after initiation of HAART</td>
<td>Occurs days to months after initiation.</td>
</tr>
<tr>
<td>Leading pathogens associated with IRIS include mycobacterium, PCP, CMV and Hepatitis B</td>
<td>Management includes treatment of infection, continuing HAART, and in some cases, corticosteroids.</td>
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Post-Hospitalization
- Stool cultures demonstrated Mycobacterium avium complex (MAC) and pathology from the polyps revealed Kaposi’s sarcoma (KS).
- He was started on Ethambutol, Rifabutin and Azithromycin for MAC therapy and is receiving Liposomal Daunorubicin for KS therapy.

Discussions
- Early non-portal hypertensive diagnostic considerations included: The Immune Reconstitution Inflammatory Syndrome (IRIS) and Acute re-activation hepatitis B.
- Mycobacterium avium complex (MAC) infection.
- Gastrointestinal Kaposi’s sarcoma (KS).
- A small bowel lymphoma.
- A protein wasting enteropathy +/- phenotypic Kwashiorkor
- Initial evaluation focused on evaluating for infectious, metabolic, and malignant possibilities.
- Infectious studies were initially negative in blood, peritoneum and stool.
- Hepatitis B titers were improved and fecal studies were notable for a negative alpha antitrypsin level and an increase in split fats.
- An EGD was done to evaluate for malignancy or protein wasting enteropathy and several polyps were biopsied (Figures 2 & 3).
- Managed with diuretics, and with some studies pending, he was discharged home with close follow up.

References
- Banyon, BA. Evaluation of adults with ascites. In: UpToDate, Post TW (Ed), UpToDate, Waltham, MA. (Accessed on October 10, 2014.).

Figure 1: CT Abdomen, revealing mesenteric adenopathy and moderate ascites
Figure 2: Polyp in distal esophagus
Figure 3: Polyp in stomach