Good Drug
Bad Bug

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Case Presentation

- 24 yr old female
- UC proctitis
- Pregnancy
Treatment Attempts

- Cortifoam 10%
- Prednisone 40 mg
- IV Hydrocort 300mg
Steroid-Refractory Disease

- 8-10 Bloody BM
- Slightly tender, soft abdomen
- WBC 20,000
Steroid-Refractory Disease
What’s Next?

- Antibiotics
- Cyclosporin A
- Infliximab
After 2\textsuperscript{nd} IFX

- 1-2 BM
  - No blood
  - No urgency

- Flu-like symptoms

- 38.2°C
Ob/Gyn Reevaluation

- Intrauterine fetal death
- Listeria bacteremia
Listeria monocytogenes

Lactobacillus
Tahini product recalled after tests revealed listeria

The bacteria is regarded as being highly dangerous by Israel’s Ministry of Health.
“Listeria hysteria”

- Colorado → 28 states
- August to October 2011
- Contaminated cantaloupes
- 146 cases confirmed
- 30 patients died
Listeria monocytogenes

- Listeria & Pregnancy
- Listeria & Anti-TNF
Listeria monocytogenes
Listeria Chorioamnionitis
Listeriosis Incidence

• General population 0.7 / 100,000

• Pregnancy 12 / 100,000

Center for Disease Control and Prevention, 2008
<table>
<thead>
<tr>
<th>Symptom</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever</td>
<td>65</td>
</tr>
<tr>
<td>Flu-like</td>
<td>32</td>
</tr>
<tr>
<td>Abdominal pain</td>
<td>22</td>
</tr>
<tr>
<td>Headache</td>
<td>11</td>
</tr>
<tr>
<td>Myalgia</td>
<td>4</td>
</tr>
<tr>
<td>Sore throat</td>
<td>4</td>
</tr>
<tr>
<td>None</td>
<td>29</td>
</tr>
</tbody>
</table>

Janakiraman, Rev Obstet Gynecol 2008
Israeli Nationwide Survey

- 1995 – 1999
- 161 cases
- Annual incidence 0.6 / 100,000

- Pregnancy 43% (70 pts)
  - Fetal mortality rate 45%

Siegman, Emerging Infectious Diseases, 2002
Listeria & Anti-TNF

Cases / 100,000

Listeria 15.5

Tb 145

N = 233,000

Wallis, Clin Infect Dis 2004
FDA Drug Safety Communication: Drug labels for the Tumor Necrosis Factor-alpha (TNF) blockers now include warnings about infection with *Legionella* and *Listeria* bacteria.

**Safety Announcement**

The U.S. Food and Drug Administration (FDA) is informing healthcare professionals that the Boxed Warning for the entire class of Tumor Necrosis Factor-alpha (TNF) blockers has been updated to include the risk of infection from two bacterial pathogens, *Legionella* and *Listeria*. In addition, the Boxed Warning and Warnings and Precautions sections of the labels for all of the TNF blockers have been revised so that they contain consistent information about the risk for serious infections and the associated disease-causing pathogens.

Serious, including fatal, infections are a known risk of TNF blockers. These infections can involve various organ systems and sites due to bacterial, mycobacterial (e.g., tuberculosis), fungal (e.g., histoplasmosis, aspergillosis, candidiasis, coccidioidomycosis, blastomycosis, pneumocystosis), viral (e.g., hepatitis B), and other opportunistic pathogens (organisms that usually do not cause disease in healthy people, but can cause serious illness when a person's immune system (resistance) has weakened).

Recently, FDA reviewed cases of infection in patients treated with TNF blockers (see Data Summary below). The addition of *Legionella* and *Listeria* to the drug labels of the TNF blockers will provide healthcare professionals with more information about opportunistic pathogens that can cause serious infections in patients treated with TNF blockers.

It is important for healthcare professionals to be aware of the new labeling changes.

**Facts about TNFα blockers**

- The class of TNFα blockers are biologic products that include Remicade (infliximab), Enbrel (etanercept), Humira (adalimumab), Cimzia (certolizumab pegol), and Simponi (golimumab).
- TNFα blockers are used to treat Crohn's disease, ulcerative colitis, rheumatoid arthritis, ankylosing spondylitis, psoriatic arthritis, plaque psoriasis, and/or juvenile idiopathic arthritis.
- Since TNFα blockers are immunosuppressants, patients who take these biologic products are at increased risk of serious infections.


Listeria Meningitis After Infliximab in Ulcerative Colitis: Does the Risk of Treatment Outweigh the Benefit

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Authors’ contributions

This work was carried out in collaboration between all authors. Author AE wrote the first draft of the manuscript. Author IAI adjusted and wrote the final manuscript and edited the English language. Both authors read and approved the final manuscript.

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ABSTRACT

Biologic agents have become important treatment options for the management of inflammatory bowel disease (IBD). With more than 10 years of experience behind us these agents have changed the natural history of the disease and have established themselves as a valid choice in the repertoire used in treating not only advanced patients but also newly diagnosed ones. We report two cases of ulcerative colitis who developed listeria meningitis after a single dose of infliximab therapy. We also examined the significance of the infection and the known details and morbidity about it. We assessed the close link between the use of biologics and the risk of serious infections in patients with IBD, as well as the published cases in the literature so far. Therefore, despite the excitement and hype surrounding their use we should not forget that these are agents that carry a substantial toll of side effects and this should be kept in mind when the choice of therapy is made.

Keywords: Listeria monocytogenes; meningitis; ulcerative colitis; infliximab; biologic agents.
Conclusions

• Patients should be warned to avoid:
  – Non-pasteurized dairy products
  – Soft cheeses
  – Undercooked meats

• Physicians should be aware of the possibility of Listeria infection in such individuals

Tweezer-Zacks, IMAJ 2003
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