What are the Risks of Infections with IBD Therapies?

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Risk vs. Benefit

Risks

Benefits

SPEED LIMIT
30
Case

- 34 year-old man diagnosed with Crohn’s at age 18
- Required one surgery to remove part of his intestine & multiple surgeries for perianal fistulae
- Infliximab (Remicade) was started in Fall 2008, but discontinued in Dec 2008 due to recurrent skin infections
- Adalimumumab (Humira) was started in March 2009
June 2009—Left hand abscess that ultimately required surgery
Case

- Adalimumab (Humira) was stopped for two months while the hand healed.
- Due to worsening of his Crohn’s, adalimumab (Humira) was restarted and hand infections returned prompting us to stop adalimumab permanently.
- He has not had any skin infections since then.
- However, his Crohn’s disease has become very severe.
Crohn’s disease and UC are due in part to an over-active immune response in the intestine.

Most of the effective medications used to treat Crohn’s disease and UC suppress the immune response not only in the intestine, but throughout the body, resulting in an increased risk for infections.
Solution

Risks

• Potential side effects
• Worsening of other medical conditions
• Infections
• Malignancy

Benefits

• Prevention of complications related to IBD
• Improved quality of life
All Infections are Not Created Equal

Infections in the normal population

• Usually resolve on their own and are not life-threatening
• Common cold, minor skin infections, minor gastrointestinal illnesses, flu

Infections in the immunosuppressed population

• Some are known as opportunistic infections
• Common infections that overpower the body
Infections in IBD

Non-therapy related
Abscess
Urinary tract infection

Therapy related (Opportunistic)
Viruses
HSV, VZV, CMV, EBV, HPV
Bacteria
C. difficile, TB
Fungus
Candida, Histoplasmosis
Other
P. jiroveci
Non-Therapy-Related Infections in IBD

Non-therapy related

Abscess

Urinary tract infection

Crohn's Disease
Opportunistic Infections in IBD

Therapy related

Viruses
- HSV, VZV, CMV, EBV, HPV

Bacteria
- C. difficile, TB

Fungus
- Candida, Histoplasmosis

Other
- P. jiroveci
What Medications are Associated with an Increased Risk of Infection?

Corticosteroids
- Prednisone
- Methylprednisolone (Solumedrol)

Immunomodulators
- 6-MP
- Azathioprine (Imuran)
- Methotrexate

Anti-TNF Agents
- Infliximab (Remicade)
- Adalimumab (Humira)
- Certolizumab (Cimzia)

Other
- Cyclosporine
- Natalizumab (Tysabri)
What is the Risk of Any Infection if I take these Medications?

• Hard to say exactly
• Each study has limitations and results may not apply to all IBD patients
• Definitions of “infectious complications” varied
• Most controlled clinical trials of immunosuppressants in IBD found that the risk of developing an infection is minimally increased
• Broad range of estimates (0.5-30%)
What is the Risk of Serious Infections if I take these Medications?

Lichtenstein et al, Clin Gastroenterol Hepatol, 2006
What is the Risk of Death if I take these Medications?

Lichtenstein et al, Clin Gastroenterol Hepatol, 2006
What is the Risk of Opportunistic Infections if I take these Medications?

![Bar chart showing the percent of Shingles, Candida, HSV, CMV, EBV, Histoplasma, and Other infections.]

![Column chart showing the odds ratio for different numbers of immunosuppressing medications: None, 1, and 2 or 3.]

Toruner et al, Gastroenterology, 2008
What can I do?

- Be reassured that therapy-related infectious complications are quite rare
- Discuss the risk/benefit balance with your doctor
- Notify your doctor if you develop unusual or prolonged symptoms (e.g. unexplained fevers, chronic cough, weight loss, odd skin rashes, non-healing mouth ulcers)
- Prevention
An Ounce of Prevention

• Adequate nutritional intake
• Wash hands, avoid close contact with sick individuals
• Obtain recommended vaccines (preferably before starting immunosuppressive therapy)
  • Annual influenza & H1N1 vaccines
  • Pneumococcal vaccine every 5 years
  • Hepatitis B vaccine series
  • Varicella Virus vaccine series
  • Human Papilloma Virus vaccine
Summary

- Certain infections can be a complication of Crohn’s disease regardless of therapy
- Therapy-related (opportunistic) infections are relatively rare and can occur in Crohn’s or UC
- Increased numbers of immunosuppressive medications correlate with increased risk of opportunistic infections
- If immunosuppressive medications are needed, prevention of infections is key
"We've considered every potential risk except the risks of avoiding all risks."