**American Journal of Therapeutics**

Golimumab may induce exacerbation of inflammatory bowel disease when it is used for the treatment of ankylosing spondylitis: A case report with a review of literature.

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</table>
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| Abstract:                  | Golimumab is a human IgG monoclonal antibody specific for human tumor necrosis factor alpha (TNF-α). Golimumab has been approved for use in rheumatological conditions; however, its use in inflammatory bowel disease (IBD) is still in clinical trials. We report a case of an exacerbation of ulcerative proctitis after starting on golimumab for ankylosing spondylitis (AS). |
Dear Dr. Somberg,

We would like to submit a case report titled “Golimumab may induce exacerbation of inflammatory bowel disease when it is used for the treatment of ankylosing spondylitis: A case report with a review of literature.” to be considered for publication in The American Journal of Therapeutics.

According to the literature search this is the fourth case reported suggesting exacerbation of inflammatory bowel disease while being on golimumab.

This manuscript is not under consideration elsewhere and has never been published in the past. This case has not been funded by any organization.

We look forward to your review.

Sincerely,
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Abstract

Golimumab is a human IgG monoclonal antibody specific for human tumor necrosis factor alpha (TNF-α). Golimumab has been approved for use in rheumatological conditions; however, its use in inflammatory bowel disease (IBD) is still in clinical trials. We report a case of an exacerbation of ulcerative proctitis after starting on golimumab for ankylosing spondylitis (AS).

Key word: 

Golimumab; Inflammatory Bowel Disease
Introduction:

Golimumab is a human IgG monoclonal antibody specific for human tumor necrosis factor alpha (TNF-α). Golimumab has been approved for use in rheumatological conditions; however, its use in inflammatory bowel disease (IBD) is still in clinical trials. We report a case of an exacerbation of ulcerative proctitis after starting on golimumab for ankylosing spondylitis (AS).

Case:

A 25-year-old male with ulcerative proctitis was treated with topical mesalamine with symptoms resolution for 14 months. In January 2011, the patient started complaining of right hip and lower back pain. An X-ray revealed joint space narrowing and right sacroiliitis. Blood test for HLA B27 was positive. The patient was referred to rheumatologist for further management. He was started on golimumab for the treatment of AS in March 2011.

One month later his joint and back pain improved markedly with golimumab treatment. Three months after being on golimumab, he presented with hematochezia associated with watery diarrhea and weight loss. Physical examination was unremarkable except for left lower
quadrant tenderness. Colonoscopy revealed active ulcerative proctitis confirmed by biopsy. The dose of topical meselamine was increased to twice a day. The patient’s symptoms partially improved after one month, however, some symptoms persisted. Golimumab therapy was stopped and adalimumab was started as treatment for intestinal and extra-intestinal manifestations of IBD. His symptoms improved markedly within a few weeks of golimumab cessation and initiation of adalimumab. Follow up flexible sigmoidoscopy revealed resolution of proctitis. His proctitis is currently in remission, however he still has minimal joint discomfort.

**Discussion:**

TNF-α, originally known as cachexin, was described in 1975 and recognized for its ability to lyse tumors in a variety of in vitro models (hence the name “tumor necrosis factor”). [1] Golimumab, human monoclonal antibody that binds to human tumor necrosis factor alpha (TNF-α). Although TNF-α inhibitors share same mode of action, they show some therapeutic differences in their effects on extra-articular organ manifestation. [2-4]

We present a case of golimumab-induced flare up of ulcerative proctitis with a review of literature. Our patient had been in remission for almost 14 months and had acute flare up of ulcerative proctitis (confirmed with
colonoscopy and biopsy) after being introduced on Golimumab therapy and his symptoms remarkably improved within few weeks of switching the therapy to adalimumab. In the English literature search there have been total of 4 cases (including our patient) [Table 1] who had paradoxical acute flare up of Inflammatory bowel disease after being started on golimumab. This type of paradoxical effect of TNF-α inhibitor has been reported for extraarticular manifestations, [5,6] however, the mechanism of action is still unclear, although an imbalance of cytokines and interferon α in genetically predisposed individuals has been suggested. [7,8]

**Conclusion:**

To our knowledge this is the fourth reported case in the English literature suggesting worsening of inflammatory bowel disease on golimumab. In conclusion, the use of golimumab for treating ankylosing spondylitis in patients with inflammatory bowel disease may exacerbate their intestinal disease.
References:


<table>
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<tr>
<th>Case</th>
<th>Age</th>
<th>Sex</th>
<th>Type of IBD</th>
<th>Site of Dz</th>
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<th><strong>Duration</strong></th>
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<tr>
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<td>Female</td>
<td>CD</td>
<td>TI</td>
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<tr>
<td>*4</td>
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<td>UC</td>
<td>Rectum</td>
<td>AS</td>
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</tr>
</tbody>
</table>

UP (CD vs UC)

**Key:** IBD: Inflammatory bowel disease, CD: Chrons disease, UC: Ulcerative coliti, UP: Ulcerative proctitis, Dz: disease, TI: Terminal Illeum, AS: Ankylosing spondylitis

* is the patient seen in our clinic

** Time span in months from starting the Golimumab and exacerbation of IBD