



SHORT REPORT

Infliximab therapy for HIV positive Crohn's disease: A case report

Syed F. Habib, Muhammad Z. Hasan, I. Salam *

West Wales General Hospital, Carmarthen SA31 2EE, United Kingdom

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KEYWORDS

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Abstract

Anti-TNF-alpha is now established as a major player in the treatment of Crohn's disease, however the use of anti-TNF-alpha therapy in patients concomitantly having HIV infection and Crohn's disease is a relatively unexplored subject. There is generally some apprehension and anxiety to use infliximab in patients with HIV. One case has been reported in literature of usage of anti-TNF-alpha in HIV positive patient with Crohn's disease who was on anti-retroviral therapy. We report for the first time the successful usage of infliximab in treating Crohn's disease in an HIV positive patient who is not on any anti-retroviral treatment.

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1. Case report

A 28-year old homosexual man presented to Gastroenterology clinic with 9 months history of diarrhea and increased frequency of bowel motion. Colonoscopy showed severe colonic inflammation along with terminal ileal disease. Histology was consistent with Crohn's disease. Patient was started on steroids with partial response. He refused azathioprine therapy as he was concerned about the side effects but accepted and was treated with infliximab. His symptoms completely subsided after the initial 3 doses of infliximab. At this stage the patient's HIV status was not

known as he was never tested for HIV. He did not attend further follow up consultations.

He presented 3 years later with diarrhea, abdominal pain and vomiting. Repeat stool examination was negative for bacterial and parasitic organisms. Colonoscopy was consistent with acute exacerbation of Crohn's disease. A small bowel enema showed typical cobblestone pattern consistent with Crohn's but no evidence of stricturing or significant narrowing. Patient was initially managed with intravenous steroids with partial response. He was offered azathioprine but declined. Patient requested an HIV test which was positive with low viral load and CD4 count was 290 millions/l. His chest X-ray was normal and Mantoux was negative. Treatment with infliximab was initiated at a dose of 5 mg/kg. He was given 3 doses at 0, 2 and 6 weeks. Patient's disease responded well to biological therapy with complete clinical and endoscopic response. CD4 counts and viral load were measured before initiation of treatment and before every successive dose. His CD4 count showed an increase in number after the first and second dose

* Corresponding author.

E-mail addresses: faisal446@yahoo.com (S.F. Habib), zakihasan@doctors.org.uk (M.Z. Hasan), imroz27salam@googlemail.com (I. Salam).

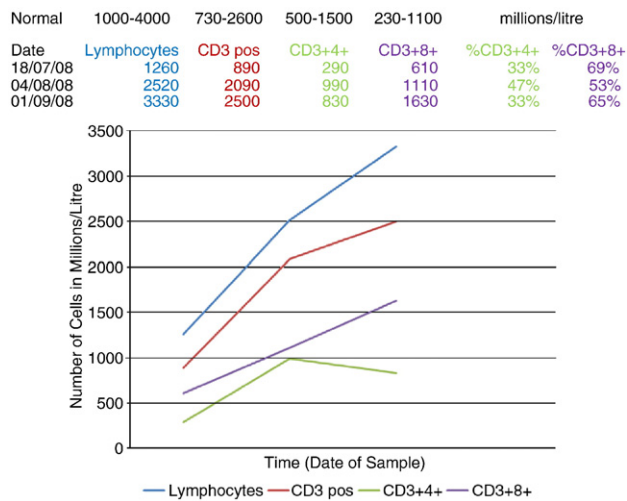


Figure 1. Serial increase in CD4 count observed with anti-TNF-alpha therapy.

with 990 and 830 millions/l respectively (Fig. 1). The patient was lost to follow up as he migrated to Netherlands without providing his future contact.

2. Discussion

Increased concentrations of tumor necrosis factor (TNF), a potent pro-inflammatory cytokine, can be shown in the mucosa of patients with active Crohn's disease.¹ Neutralization of TNF has been shown to decrease recruitment and survival of inflammatory cells and granuloma formation. Raised plasma and tissue levels of TNF-alpha have also been observed in patients infected with HIV/AIDS, these levels being closely correlated with the severity of the disease.²⁻⁴ TNF-alpha promotes replication of HIV type 1 virus.^{5,6} Suppression of HIV-1 production has been demonstrated with anti-TNF-alpha in both chronically infected promonocytic and T-lymphoid cell lines.⁷ It has been postulated that using a TNF-alpha antagonist may produce favorable outcomes in these patients in terms of improving CD4 count and reducing viral load. However no consistent changes in CD4 cell counts or plasma HIV RNA levels were observed.⁷ None of the studies showed progression or worsening of HIV infection in patients by use of TNF-alpha antagonists.

Infliximab is a mouse-human chimeric antibody to human tumor necrosis factor alpha (TNF- α). It was initially used in the treatment of rheumatoid arthritis,⁸ and was the first biological agent used in the treatment of IBD. It is also used in the treatment of psoriasis and ankylosing spondylitis.^{9,10} Infliximab is an efficient and relatively safe therapeutic option for inducing and maintaining remission in Crohn's disease.¹¹

Use of TNF-alpha antagonist in HIV positive patients is limited due to concerns of further immune modulation in an already compromised immune system. TNF-alpha antagonists have been used successfully in patients with rheumatologic conditions with concomitant HIV. A retrospective series of eight patients suggests that treatment with anti-TNF-alpha therapy is a viable alternative in HIV patients without advanced disease with associated rheumatic diseases refrac-

tory to standard therapy.¹² This case report reveals that treatment with anti-TNF-alpha improved patient's symptoms related to Crohn's disease as expected, interestingly we also found that treatment with anti-TNF-alpha did not negatively alter the HIV status. In fact our observation suggests that CD4 count increased. There is one published case report of concomitant HIV and Crohn's disease in a patient where infliximab was used.¹³ In that report the patient was on anti-retroviral treatment. We report a case of infliximab usage in HIV positive patient without anti-retroviral treatment. Infliximab seems to be safe and an effective therapy in patients with concomitant HIV infection and Crohn's disease. Potential long-term effects of TNF-alpha antagonist in HIV positive patients such as opportunistic infections, malignancies, and worsening of HIV related illnesses need further evaluation.

Competing interests

The authors declare that they have no competing interests.

Authors' contributions

MZ Hasan and I Salam were involved in the patient care; SF Habib and I Salam were involved in drafting the manuscript and its revision.

All authors read and approved the final manuscript.

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