L04-Immunosuppressive agents
Abstact No: 5PSQ-072

HUMANITAS
RESEARCH HOSPITAL

Acute promyelocytic leukaemia after infliximab therapy in a Crohn's disease patient: a case report and a review of the literature

L. Camuffo, M. V. Lucatelli, G. Pieri, C. Bacci, G. Inzalaco, R. Puzziferri, C. Di Carlo, M. Fazio
Humanitas Research Hospital

Background

In the post-marketing setting, only cases of leukaemia have been reported in patients treated with infliximab. There is also an increased background risk for lymphoma and leukaemia in patients with long-standing, highly active, inflammatory disease, which complicates risk estimation.

Purpose

We want to report a case of acute promyelocytic leukaemia (APL) in a patient with Crohn's disease (CD) after infliximab therapy. We also reviewed the available literature.

Materials and Methods

In June 2018 patient's datas were collected from the electronic medical records (Whospital) in our hospital; the literature was reviewed using PubMed database.

Results

A 50 years-old man, with perianal CD since 2000, was diagnosed with APL in March 2018 after bone marrow biopsy for grade 3/4 neutropenia during an episode of pulmonary embolism and deep vein thrombosis. Infliximab therapy began in 2003 and was intermittent, with discontinuation in 2004 and 2006 because of good therapy response. He was unresponsive to these prior therapies: steroids, azathioprine and adalimumab. In 2015 he was enrolled for few months, without good response, in a clinical trial with ustekinumab. After APL diagnosis, infliximab was discontinued and induction therapy for APL with arsenic trioxide and tretinoin (ATO + ATRA) was started. Remission began in April 2018; maintenance ATO + ATRA therapy was started, and was still continuing in June 2018. The review of the literature found 5 reports of leukaemia cases after infliximab therapy in patients with CD (3), rheumatoid arthritis (1) and ankylosing spondylitis (1); three were men and 2 were women; the mean age of the patients was 46. The review also showed a higher risk of malignancies occurrence in patients on immunosuppressive therapy and/or with autoimmune/inflammatory disorders.

Conclusion

Our patient presented APL after a long exposure to infliximab; this raises the concern that infliximab may be involved in leukaemia development. The presence of an autoimmune disease, such as CD, and prior immunosuppressive therapies, such as azathioprine and TNF-alfa inhibitors, may also have caused leukaemia development. Risk estimation is difficult. However, we suggest prompt evaluation for patients who develop hematological abnormalities when treated with infliximab.

References
- Mohammad F, et al. Acute promyelocytic leukaemia (APL) in a patient with Crohn's disease and exposure to infliximab: a rare clinical presentation and review of the literature. BMJ Case Rep 2014
- Byun JM, et al. Thyroid Cancer and T Lymphoblastic Leukemia in Crohn Disease: A Case Report and Literature Review. Lab Med Spring 2015;46:140-145
- Kemta Lekpa F, et al. Acute myeloid leukemia after infliximab: a case report. Clin Experim Rheum 2009; 27: 999-1000
- F Broussais, et al. Chronic myeloid leukaemia and tuberculosis in a patient with rheumatoid arthritis treated with infliximab. Ann Rheum Dis 2005;64:509–510
- Alcaín G, et al. Acute Leukemia After Infliximab Therapy. AJG Letters to the Editor 2577, November 2003
- Bongartz T, et al. Anti-TNF Antibody Therapy in Rheumatoid Arthritis and the Risk of Serious Infections and Malignancies Systematic Review and Meta-analysis of Rare Harmful Effects in Randomized Controlled Trials. JAMA. 2006;295:2275-2285
- So J, et al. Cancer Risk in 2621 Chinese Patients with Inflammatory Bowel Disease: A Population-based Cohort Study. Inflamm Bowel Dis 2017;23:2061–2068

http://www.ehp.eu/24-5PSQ-072