TNF Inhibitor-Induced Liver Injury: Clinical Presentations and Outcomes

Authors: Patrick J. Tempera[1], Julian Remouns[2], Cassidy Alexandre[3]

1 Department of Internal Medicine, Albany Medical Center, Albany, NY 2 Division of Gastroenterology, Lankenau Medical Center, Wynnewood, PA 3 Division of Gastroenterology, St. Peter's Hospital, Albany, NY

INTRODUCTION

Inflammatory bowel disease (IBD) is commonly treated with a sub-set of medications that inhibit tumor necrosis factor (TNF), an integral component during the pro-inflammatory phase. However, like all medications, TNF inhibitors are not without adverse side effects, one of them being drug induced liver injury (DILI). Although commonly described in literature, clinical presentation is often not encountered or recognized. We describe the cases of two individuals with IBD and the development of DILI secondary to TNF inhibition.

CASE REPORT

Case 1

Our first case describes a 40-year-old female with ulcerative colitis who was started on adalimumab. Within 8 months of starting, aminotransferases were found to be elevated. Abdominal ultrasound showed hepatic steatosis, Fibroscan CAP 100, E Score 12kPa, and liver biopsy was consistent with autoimmune pattern liver injury with focal periportal fibrosis. Her only symptom was constipation. Adalimumab was discontinued and a short course of prednisone was started with improvement in aminotransferase elevations.

Case 2

Our second case is a 25-year-old female with Crohn's Disease who was started on infliximab. Within 6 months, aminotransferases were found to be elevated. Liver biopsy showed portal-based chronic hepatitis with mild activity suspicious for DILI. Autoimmune hepatitis workup including ANA (640), A-SMA (negative), AMA (negative), Anti-dsDNA (60-borderline), IgG (1713) was not convincing but autoimmune hepatitis due to anti-TNF activity could not be excluded. At this time, infliximab was discontinued, and the patient began to have an improvement in clinical presentation.

DISCUSSION

All the TNF inhibitors currently marketed have been associated with DILI. However, the optimal management of liver injury related to TNF inhibitors is still a matter of debate. Some practitioners recommend the discontinuation of treatment in the case of elevated aminotransferase levels or the occurrence of jaundice. Others have recommended the continuation TNF inhibitor in the setting of similar clinical and laboratory findings with hopeful resolution of liver injury. Too often, the clinical signs or evidence of DILI is occult and can go unnoticed. Further research into best practice outcomes when IBD patients are taking such medications is needed. Additionally, better guidelines for the use and management of TNF inhibitors in IBD patients is imperative to minimize the risk of unchecked drug induced liver injury.