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Case Report

CASE REPORT

Stricturing CMV enteritis in an adult liver transplant recipient

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Abstract

Cytomegalovirus (CMV) is a common posttransplant infection, most commonly seen in settings of excessive immunosuppression. Before the advent of CMV specific antiviral therapies, the standard treatment approaches for CMV disease were immunosuppression reductions to let the transplant recipient mount an immunologic response against CMV. Additionally, CMV is rarely identified as causing stricturing enteritis and has not previously been reported as causing stricturing enteritis in an adult transplant recipient. All identified reports of stricturing CMV enteritis have been reported in either pediatric patient populations or those with severe immunosuppression from human immunodeficiency virus and acquired immune deficiency syndrome. Our report presents the unusual case of an adult liver transplant recipient many years after transplant and on minimal immunosuppression with mycophenolate alone who developed stricturing CMV enteritis.

INTRODUCTION

Invasive cytomegalovirus (CMV) disease is a well-recognized complication following solid organ transplant; however CMV is infrequently reported to cause significant small bowel pathology. Most commonly CMV manifests as a viral syndrome with fever and neutropenia, with common gastrointestinal manifestations including esophagitis, gastritis, colitis, or hepatitis [1]. Further, the reported cases and series of CMV causing gastrointestinal stricturing are often reported in pediatric patient groups, generally with birth prematurity [2, 3]. Adult cases of CMV-associated stricture are unusual and have heretofore been reported only in those with acquired immune deficiency syndrome and severe immunodeficiency, but these reports highlight esophageal strictures due to CMV [4, 5]. To our knowledge, there are no reported instances of CMV-associated small intestinal stricture in a relatively immunocompetent adult.

CASE REPORT

Our patient is a 69-year-old gentleman who underwent orthotopic liver transplant in April of 2010 for cryptogenic cirrhosis. His maintenance therapy consisted of rapamune due to chronic kidney disease but was transitioned to mycophenolate mofetil (MMF) monotherapy in 2014 and continued to have normal allograft function. In the spring of 2018, he developed CMV viremia; immunosuppression was held, and CMV therapy was initiated with valganciclovir. Within a month he had cleared the CMV viremia and was restarted on MMF for immunosuppression; however he proceeded to be readmitted to the hospital service approximately six times over the following 2 months for intolerance of solid foods. He was ultimately taken to surgery for lysis of adhesions, where a strictured segment of the ileum was identified 20 cm from the ileocecal value. Six centimeters of the small intestine were resected, and primary bowel

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anastomosis was performed. The mucosal surface was remarkable for a centrally located area of stricture with 60% luminal narrowing. Pathology of the resected segment showed no ischemic changes but ulcerations of the mucosa causing the stricture, with immunostaining positive for invasive CMV disease. The patient has subsequently had no recurrence of or readmittance for small bowel obstruction or food intolerance.

DISCUSSION

CMV disease is a well-reported posttransplant infection, most frequently causing allograft hepatitis and infrequently causing biliary strictures [6, 7]. Stricturing manifestations of intestinal CMV disease more commonly present in term or preterm neonates [2]. Series reporting episodes of CMV enteritis demonstrate about a 40% incidence of small intestinal disease, with the esophagus and colon compromising an equal percent of cases [8]. To our knowledge, there is one report of CMV enteritis an adolescent liver transplant recipient, who presented with duodenal bleeding requiring pancreas preserving duodenectomy but no stricture [9]. The reports of intestinal CMV infections in children emphasize that all patients had significant causes for immunodeficiency, such as HIV, prematurity, or age less than 6 months. There appears to be no other report in the literature of *adult* posttransplant patients suffering from CMV stricturing small bowel enteritis.

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