Abstract

Background: Data on the clinical course and outcomes of pediatric patients with cytomegalovirus (CMV) infection complicating acute severe ulcerative colitis (ASC) is very limited. The aim of our study was to compare the outcome of CMV-positive and negative pediatric ASC.

Methods: This was a multicenter retrospective case-controlled study, from centers in Europe and Israel. We included CMV-positive pediatric patients hospitalized for acute severe colitis and compared their outcomes (rate of colectomy up to 1 year from hospitalization) to matched CMV-negative controls.

Results: A total of 56 children from 10 centers were included. Fifteen patients were CMV-positive and 41 CMV-negative. Significantly higher proportion of CMV positive patients were resistant to intravenous corticosteroids (p=0.009). After diagnosis of CMV infection, 14/15 patients were started on gancyclovir. During hospitalization, 3 (20%) CMV positive and 3 (7.8%) CMV-negative patients required colectomy (p=0.17). By 12 months of follow-up, 5 (33.3%) and 5 (12.5%) CMV positive and negative patients required colectomy, respectively (p=0.049). Previous anti-TNF exposure and Pediatric Ulcerative Colitis Activity Index score on index date were significantly associated with risk of colectomy during hospitalization and by 12 months on univariate analysis, however none of the factors retained significance on multivariate analysis.

Conclusions: A statistically significant high prevalence of CMV positivity was found in patients who required colectomy. Disease severity and history of anti-TNF treatment were the main factors associated with the risk of colectomy. Further studies are merited to clarify the impact of CMV infection on the outcome of acute severe colitis in pediatric patients.