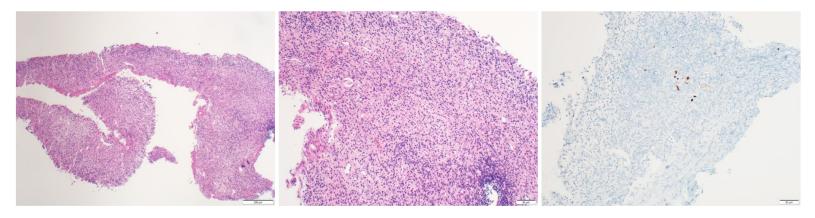
Online Supplemental File

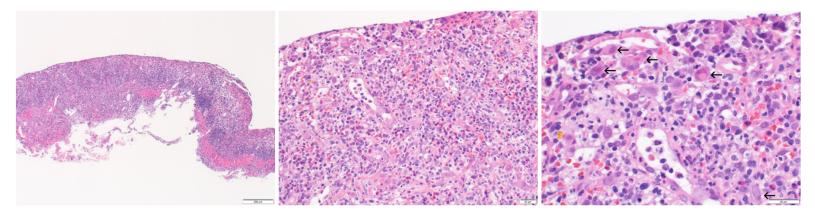
Title: Timeline of Histopathological Findings before and after initiation of treatment of Cytomegalovirus Hemorrhagic Enterocolitis.

A. Day 26



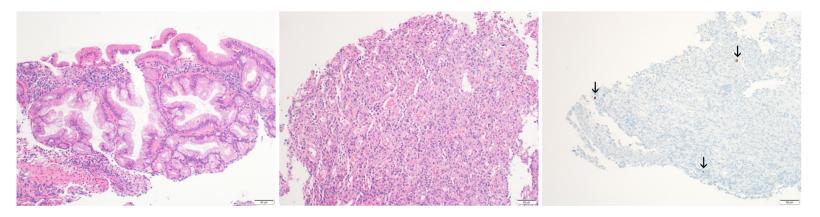
Colonic and ileal biopsies with near complete loss of epithelium. The mucosa was nearly entirely devoid of epithelial cells, and the lamina propria showed mild increase in mixed inflammation with no significant increase in neutrophils. CMV inclusions were not identified on routine hematoxylineosin (H&E) stains, but CMV immunoperoxidase study demonstrated rare positive cells in the terminal ileum, although not in the colon. From left to right: colon H&E stain at 40x magnification, colon H&E stain at 100x, terminal ileum CMV immunoperoxidase stain at 100x. Day zero is the admission day 9 May 2020.

B. Day 41



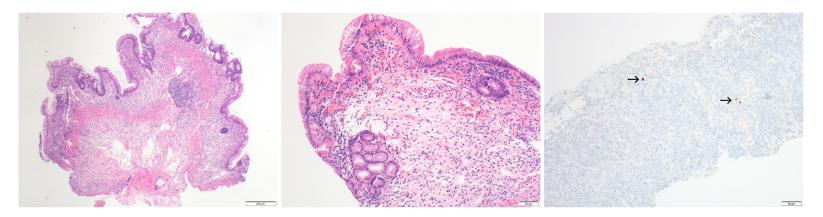
Severely ulcerated mucosa with numerous CMV inclusions in terminal ileum and colonic biopsies. The biopsies show ulceration, complete epithelial loss, granulation tissue and, in comparison to the Day 26 biopsy, more significant neutrophilic inflammation and numerous CMV inclusion bodies (right pane, arrows). Although the specimen is superficial, there is no evidence of microvascular thrombosis as might be seen with COVID-19. From left to right: H&E stains at 40x, 200x and 400x magnification. Day zero is the admission day 9 May 2020.

C. Day 107



Persistent extensive loss of epithelium with granulation tissue and partial re-epithelialization in colonic biopsy. Where present (left pane, approximately 30% of specimen), the epithelium shows extensive regenerative changes, including pseudopyloric gland metaplasia and architectural distortion. The lamina propria contains a mixture of lymphocytes, plasma cells, neutrophils and eosinophils. There continues to be significant epithelial denudation (central pane), but no viral cytopathic change is identified on H&E stains. CMV immunoperoxidase study highlights only rare positive nuclei in the stroma (right pane, arrows), none of which show cytomegalic change. From left to right: H&E stain at 100x magnification, H&E stain at 100x magnification, CMV immunoperoxidase stain at 100x magnification. Day zero is the admission day 9 May 2020.

D. Day 122



Improving regeneration of intestinal epithelium in both ileal and colonic biopsies. Approximately 50% of the biopsy material shows regenerative epithelium (left and central panes), although denuded/ulcerated areas persist (not shown). No viral cytopathic change is identified on routine stain. CMV immunohistochemistry contains rare reactive nuclei in the stroma (right pane, arrows). From left to right: H&E stain at 40x magnification, H&E stain at 100x magnification. Day zero is the admission day 9 May 2020.