Abstract IDDF2021-ABS-0192 Figure 4

The Role Cytomegalovirus Detection in Active Inflammatory Bowel Disease

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Background It is known that Cytomegalovirus (CMV) can be detected in the colon during active Inflammatory Bowel Disease (IBD). However, its pathogenic role in causing active inflammation remains unclear as this ubiquitous virus is also regarded as innocent bystander. We aim to examine the utility of CMV testing in the colonic specimen and correlate with clinical outcome.

Methods A retrospective review of IBD patients with active symptomatic disease undergoing colonoscopy in National University Hospital Singapore from 2012-2020 and CMV tissue studies (histology with CMV Immunohistochemistry (IHC), CMV polymerase chain reaction (PCR), and tissue CMV culture) was conducted. The electronic medical record was analysed for clinical outcomes and CMV treatment.

Results Of 492 patients under IBD clinic follow up, 91 patients with active disease (42 Crohn’s Disease, 44 Ulcerative Colitis, 5 Unclassified IBD) underwent colonoscopy and CMV tissue studies. The mean age is 40.13±15.24 years with 54 males and 37 females. CMV tissue studies were positive in 20 (28.8%) patients. A large majority of these patients (14/20; 70%) achieved steroid-free remission without CMV treatment which suggests that CMV is innocent bystander. However, the rest (6 patients) had worsening or protracted active disease and were treated with a course of valganciclovir or ganciclovir which resulted in remission in all 6 patients, suggesting that CMV contributed to active disease activity.

We compared different testing modalities among those 20 patients with positive CMV and correlated with disease course. Refractory disease occurred in 2/3 (66.6%) IHC positive patients and 3/5 (60.0%) patients with positivity of both IHC and CMV PCR, as compared to only 1/11 (9.1%) patients with positive CMV PCR, and none (0/1) in patients with positive CMV culture.

Conclusions Colonic CMV was detected in 28.8% of patients with active IBD, but the large majority does not need CMV treatment. Positive IHC was associated with refractory disease as compared to PCR and CMV cultures.

Abstract IDDF2021-ABS-0206 A New Computer-Assisted Diagnosis Scoring System Based on Deep Learning for Predicting Inflammatory Activity from Patients with Ulcerative Colitis

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Background Endoscopy is increasingly important for the evaluation of patients with ulcerative colitis (UC). However, there were considerable differences in endoscopic assessment because of the endoscopists’ training experience, not only that, existing endoscopy scoring methods cannot reflect the inflammation’s details of the full-length endoscopic video; therefore, we sought to develop an automatic scoring system using deep learning technology for consistent and objective of endoscopic images and videos from patients with UC.