**Antiviral Treatment for Colonic Cytomegalovirus Infection in Ulcerative Colitis Patients Significantly Improved Their Surgery Free Survival**

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**Abstract**

**Background:** The frequency of cytomegalovirus colitis in steroid-refractory inflammatory bowel disease has been reported to range from 15.8 to 34.0%. Infected patients are more likely to become hospitalized, have longer lengths of stay, and higher mortality rates. Current data are limited to small scale studies and showed conflicting result regarding the role of antiviral therapy.

**Aims**: (1) To investigate the role of antiviral treatment in ulcerative colitis patients with cytomegalovirus infection, (2) To investigate the role of viremia in the outcomes of these patients.

**Methods:** The Cleveland Clinic pathology database identified 1478 patients who had colon biopsy and were tested for cytomegalovirus during 1990-2013. After inclusion and exclusion, 41 ulcerative colitis patients were selected. Among them, 24 (58.5%) received treatment, 17 (41.5%) did not. A total of 14 demographic data and 4 clinical outcomes (surgery free survival, hospitalization, re-hospitalization and mortality) were compared between treated and non-treated patients. The same outcomes were also compared in patients who received treatment based on their viremia status.

**Results:** All demographic variables are similar between those treated and non-treated groups. Antiviral therapy significantly improved the surgery free survival within 30 days, and lasted 70 months (P<0.01). On the other hand, hospitalization, re-hospitalization, and mortality were comparable (P>0.05). No significant difference was observed in any of the clinical outcomes based on viremia status.

**Conclusions:** Our small scale study demonstrates that antiviral treatment for colonic cytomegalovirus infection significantly improves the surgery free survival short term and long term in patients with ulcerative colitis.