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THE EVOLVING EFFECTIVENESS OF BIOLOGICS IN AVOIDING SURGERY IN CHILDREN WITH ULCERATIVE COLITIS

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Purpose

Pediatric ulcerative colitis (UC) treatment has changed dramatically with the introduction of multiple biologics in recent years. The purpose of this study was to assess effectiveness of biologic agents in achieving remission and incidence of surgery.

Methods

We retrospectively analyzed UC patients that were seen at gastroenterology clinic between January 2012-August 2020. We analyzed demographic characteristics, colonoscopy, clinic and hospital records. Patients were divided into four groups: 1) patients treated medically without biologics or surgery; 2) patients treated with one biologic; 3) patients treated with multiple biologics; and 4) patients that underwent colectomy. Pearson Chi-square test was used to analyze statistically significant factors.

Results

There were 115 patients with UC with a mean follow-up of 5.9±3.7 years(1 mo-15.3 yrs.). On initial colonoscopy, there were 25 patients(21.7%) with mild, 51 patients(44.3%) with moderate and 22 patients(19.1%) with severe colitis. Initial colonoscopy records were not available for the remaining 17 patients. There were 48(41.3%) in group 1 with 54.1% remission, 34(29.6%) in group 2 with 55.8% remission, 24(20.8%) in group 3 with 29.2% remission and only nine(7.8%) in group 4 with 100% remission. Statistically significant factors for avoidance of biologic therapy were mild(p=0.002) or moderate(p=0.024) Pediatric Ulcerative Colitis Activity Index(PUCAI) score at diagnosis, pancolitis(p=0.001) or gross mild disease(p=0.04) on initial colonoscopy. Patients in group 3 were more likely to have left-sided disease(p=0.05) and were less likely to have remission(p=0.04) compared to group 2. Group 2 or 3 patients with severe colitis on initial colonoscopy pathology were statistically less likely to have remission(p=0.003). Patients requiring surgery were statistically more likely to have history of smoking(p=0.03), severe PUCAI(p=0.004) and achieve remission(p=0.003) as compared to patients without surgery.

Conclusions

New biologics are changing the landscape in maintaining remission from ulcerative colitis. The modern need for surgical intervention is much lower than prior published studies.