Immune Checkpoint Inhibitor Therapy in Patients With Preexisting Inflammatory Bowel Disease

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INTRODUCTION: We characterized gastrointestinal adverse events in patients with underlying inflammatory bowel disease (IBD) who received immune checkpoint inhibitors.

METHODS: We performed a fourteen-center, retrospective study of patients with documented IBD who received immune checkpoint inhibitor therapy between January 2010 and February 2019. Backward selection and multivariate logistic regression were conducted to assess risk of gastrointestinal adverse events.

RESULTS: Of the 102 included patients, 17 received therapy targeting cytotoxic T-lymphocyte antigen-4 and 85 received monotherapy targeting programmed death-1 or its ligand. The median time from last active IBD episode to immunotherapy initiation was 5 years (interquartile range, 3-12). Forty-three patients were not receiving treatment for IBD (Table 1). Gastrointestinal adverse events occurred in 42 patients (41%) after a median of 62 days (interquartile range, 33-113), a rate higher than that among similar patients without underlying IBD who were treated at centers participating in the study (11%; P < 0.001). Gastrointestinal events among patients with IBD included grade 3 or 4 diarrhea in 21 patients. Four patients experienced colonic perforation, 2 of whom required surgery. No gastrointestinal adverse event-related deaths were recorded (Table 2). Anti-cytotoxic T-lymphocyte antigen-4 therapy was associated with increased risk of gastrointestinal adverse events on univariate but not multivariate analysis (respectively, odds ratio, 3.19; 95% confidence interval, 0.95-10.63; P = 0.058).

CONCLUSION: Preexisting IBD increases the risk of severe gastrointestinal adverse events in patients treated with immune checkpoint inhibitors.

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