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IMMUNOSUPPRESSANT IMPACT ON COLECTOMY OUTCOMES IN CROHN'S DISEASE PATIENTS: A DOUBLE-EDGED SWORD?

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Purpose/Background: Inflammatory bowel disease (IBD) patients are frequently treated with immunosuppressant (IS) medications including corticosteroids and immunomodulators. The aim of this study was to assess impact of preoperative IS on short-term outcomes of colectomy in patients with Crohn's disease (CD).

Methods/Interventions: The National Surgical Quality Improvement Program(NSQIP) database targeted colectomy files were used to examine the clinical data of CD patients undergoing colectomy from 2012 to 2014. All disseminated cancer cases were excluded. Patients were divided into two groups based on use of IS (IS group and non-IS group). Within 30 days, demographic patient data, preoperative risk factors, and postoperative complications, and failure to rescue (FTR) rate (defined as mortality rate among patients suffering one or more postoperative complications) were reviewed for each of these cohorts.

Results/Outcome(s): 3139 patients were identified who fit our inclusion criteria [1125 (35.8%) patients in non-IS group and 2014 (64.2%) patients in IS group]. The mean age was 39±16 in IS group compared to 44±17 (p<0.001) in non-IS group. The mean length of stay was 8.33±7.56 days in IS group compared to 8.17±7.18 days in non-IS group (P=0.30). Following risk adjustment, patients with IS demonstrated no significant difference in mortality rate compared to patients without IS (0.1% vs. 0.5%, P=0.08). Also, FTR rate was significantly lower in IS group compared to non-IS group (0.4% vs. 2.4%, AOR:0.07, P=0.03). Serious morbidity rate was significantly higher in IS group compared to non-IS group (20.4% vs. 17.2%, AOR:1.29, CI:1.05-1.58, P=0.01). Also, patients in IS group had significantly higher anastomotic leak and unplanned readmissions compared to patients in non-IS group (5.2% vs. 3.5%, and 13.4% vs. 9.9%, respectively, P<0.05). Risks of venous thromboembolism and surgical site infections were significantly higher in IS group compared to non-IS group (AOR: 1.84, 1.35, respectively, P<0.05).

Conclusions/Discussion: The results of this study suggest that IS significantly increases serious morbidity, anastomotic leak and unplanned readmission rates in CD patients following colectomy. Surprisingly, IS appears to decrease short term mortality rate although statistical significance was not reached. Importantly, the IS group had an observed significantly decreased FTR rate. Our study demonstrated that use of IS in CD patients undergoing colectomy has risks(morbidity) but is not related to mortality.