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Ethnic and Demographic Differences in Colectomy Rates and Timing for Ulcerative Colitis: 2007-2014

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Introduction

Ulcerative Colitis (UC) is a chronic inflammatory disease of the bowel, with one third of patients requiring a colectomy for fulminant disease and tissue dysplasia. In 2007, infliximab was approved for induction and maintenance of remission in UC, with some evidence to suggest a potential reduction in colectomies. The aim of this study is to examine relative colectomy rates for UC among different ethnicities from 2007 to 2014 in order to evaluate for development of new trends or disparities.

Methods

The data source was the NIS database, from 2007 to 2014. Patients aged 5 years and older with a primary diagnosis of UC were used. Additional variables included race, age, gender, insurance coverage, region, hospital teaching status, hospital size, elective admission status, and zip code income quartile. Odds ratios for colectomy were calculated via logistic regression. Negative binomial regression modeling was used to observe associations between variables and time to colectomy.

Results

Compared to Whites, the odds ratios of colectomy for Blacks (0.63, 95% C.I. 0.53-0.749, p<0.01), Hispanics (0.729, 95% C.I. 0.630-0.844, p< 0.01), and Asians (0.332, 95% C.I. 0.219-0.504, p< 0.01) were all significantly lower. However, Black (2.024, 95% C.I. 1.614-2.537, p< 0.01), Hispanic (1.295, 95% C.I. 1.078- 1.557, p< 0.01), and Asian ethnicity (4.293, 95% C.I. 2.632-7.002, p< 0.01) were associated with increasing time until receipt of colectomy. Private insurance was associated with higher colectomy rates (1.545, 95% C.I. 1.325-1.802, p< 0.01), as was increasing hospital zip code income quartile (1.085, 95% C.I. 1.048-1.124, p< 0.01).

Discussion

Discrepancies in colectomy rates and timing are seen in our models which mirror closely findings in a prior study from 1999-2003. The consistency between our findings suggests that the availability of infliximab has not altered the relative differences in surgical management of inpatients of different ethnicities with UC flares. Closer study of utilization and response to UC therapy across ethnic and demographic lines is needed to better elucidate whether such practices are based on true phenotypic differences in disease or bias, as it appears white, wealthier patients continue to more readily and rapidly receive colectomies.

Reference