

Racial Differences in the Performance of Endoscopic Retrograde Cholangiopancreatography (ERCP) in Acute Cholangitis: A Nationwide Trend Analysis

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Introduction

Blacks were shown to have high mortality from acute cholangitis (AC) previously (1998-2009) and to undergo less endoscopic retrograde cholangiopancreatography (ERCP) (2009-2012). We conducted a longitudinal racial breakdown of ERCP performed in AC in the USA over 11 years (2008-2018).

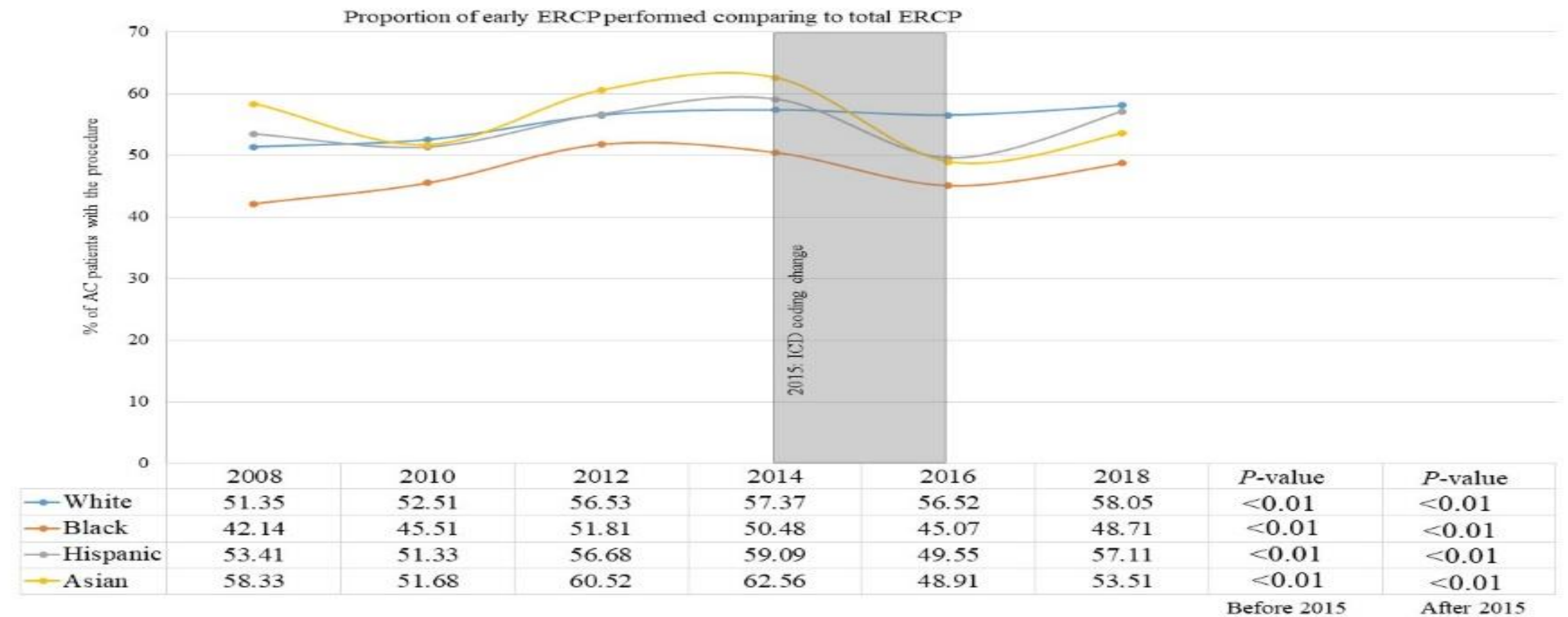
Methods

This is a retrospective longitudinal trend analysis using National Inpatient Sample. Multivariate linear or logistic regression was performed when appropriate to control for confounders. Stata (v.14.2) was used to perform analyses considering two-sided p -value <0.05 as statistically significant.

Results

A total of 312,849 patients with AC were included in the analysis. Before 2015, the longitudinal trend for the overall total and early ERCPs performed in Whites and Hispanics was increasing ($P<0.01$) (Table.1). The trend was stable in Asians but in Blacks, even though the trend for early ERCP was increasing ($P<0.01$) but the overall ERCPs performed for AC remained the same ($P=0.07$). After 2015, the trends for both early and total ERCPs remained stable for all races ($P>0.05$). However, upon examining the proportion of early ERCPs among total ERCPs performed, Blacks represented the racial category with the lowest numbers (Figure.1). Even though the trend of proportions for all racial categories was increasing ($P<0.01$) however, the rate of increase was lowest for Blacks (per year increase for Whites was 1.37%, Blacks 1.18%, Hispanics 1.47%, and 1.37 for Asians). Racial mortality comparison showed that compared to Whites, Blacks had the highest odds of mortality (for Blacks, adjusted odds ratio (aOR) 1.86, $P<0.01$, Hispanics aOR 1.29, $P<0.01$, Asians aOR 1.30, $P=0.01$).

Table. 1



Conclusion

The modification in International Classification of Diseases (ICD) coding in 2015 resulted in an apparent sharp change in the proportion of ERCPs performed due to coding change. Even though the trend for the performance of early ERCP for AC is on the rise in all races, there still exists a racial disparity in the use of early ERCP. The black population was at risk of receiving lower rates of early ERCP (calculated as a fraction of total ERCP), which may impart higher mortality.

References

1. Patel N, Hashemipour R, Ahlawat S. Racial Disparities in Rates of Therapeutic Intervention During Hospitalizations for Acute Cholangitis: A National Survey, American Journal of Gastroenterology: October 2018 - Volume 113 - Issue - p S430-S431 05-0548-z
2. 1. Salek J, Livote E, Sideridis K, Bank S. Analysis of risk factors predictive of early mortality and urgent ERCP in acute cholangitis. J Clin Gastroenterol. 2009;43(2):171-175. doi:10.1097/MCG.0b013e318157c62c



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