Rates of Hospitalization with Helicobacter pylori and Gastric Cancer in American Indian and Alaska Native Persons and in the United States Population

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Background

H. pylori infects approximately 50% of the global population, and increases the risk for gastric cancer. Alaska Native populations have H. pylori antibody seroprevalence up to 75%, and high gastric cancer mortality. We estimated the rate of hospitalization associated with H. pylori infection and gastric cancer diagnosis in American Indians/Alaska Natives (AI/ANs), and in the general US population.

Methods

We analyzed two hospital discharge datasets for H. pylori or gastric cancer diagnoses during 2006 through 2011: the Indian Health Service (IHS) Direct and Contract Care Inpatient for AI/ANs, and the Nationwide Inpatient Sample for the general US population. Average annual age-specific and age-adjusted hospitalization rates were calculated, for 2006–2008 and 2009–2011, for AI/ANs and for the general US population.

Results

From 2006–2008 to 2009–2011, average annual age-adjusted hospitalization rates /100 000 declined in the IHS AI/AN population for H. pylori by 35.0% (33.4 to 21.7), and for gastric cancer by 32.5% (12.6 to 8.5); respective rates for the Alaska region declined by 29.8% (44.7 to 31.4) and 14.8% (29.0 to 24.7). In the general US population, rates were estimated to decline by 22.1% for H. pylori from 18.1 (95% confidence interval [CI] 17.8–18.5) to 14.1 (CI 13.8–14.4); and remain stable for gastric cancer: 14.3 (CI 13.8–14.7) compared with 14.0 (CI 13.6–14.5). In 2009–2011, for both outcomes, rates were highest in AI/AN men aged ≥65 years residing in Alaska.

Discussion

The hospitalization rates for H. pylori and for gastric cancer declined from 2006–2008 to 2009–2011 in AI/ANs, while rates for H. pylori declined and gastric cancer appeared to have plateaued in the general US population. In 2009–2011 both H. pylori and gastric cancer hospitalization rates in the Alaska region were higher than in the other IHS regions and in the general US population, especially among older males.

References

