Abstract 22

TRENDS IN IMAGING MODALITIES TO EVALUATE OBESE PATIENTS ADMITTED FOR ABDOMINAL PAIN

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BACKGROUND
Abdominal pain is a common complaint in patients presenting to the ED. Of patients with abdominal pain, studies demonstrate that obese patients suffer from more structural and functional Gastrointestinal disorders. Conventional radiology has become routine imaging modalities in the diagnostic workup for abdominal pain. This study aimed to analyze the trends in the use of diagnostic imaging, specifically esophagogastroduodenoscopy and computer tomography, for abdominal pain in obese patients.

METHODS
The Nationwide Inpatient Sample (NIS) 2001-2013 database was queried for patients with abdominal pain and a concurrent diagnosis of obesity using International Classification of Diseases, Ninth Revision (ICD-9) codes. EGD and CT abdomen were queried using ICD-9 procedure codes. A one-way analysis of variance (ANOVA) test with linear trend analysis was used to compare the means for patients who received an EGD, CT scan of the abdomen, or had neither performed.

RESULTS
An ANOVA was used to determine significance for the trends. The mean (M) EGD rate was 16.95%, the standard deviation (SD) was 37.52%, and the sample size (n) was 157,889. EGD procedures increased from 11.97% to 19.69% ($p<0.001$). For CT abdomen M=3.86%, SD=19.26%, n=157,889. The average total CT scans decreased from 4.58% to 3.44% (<0.001) from 2001 to 2013. Finally, not performing an EGD or CT scan was found to have a M=79.73%, SD = 40.20%, n=157,889. The trend decreased from 83.88% to 77.39% ($p<0.001$) from 2001 to 2013.

CONCLUSION
The use of diagnostic imaging in the evaluation of abdominal pain has increased over the years, particularly amongst obese patients. The use of EGDs in the evaluation of abdominal pain has increased, while the use of CT scans has decreased. Additional studies are needed to understand symptoms and clinical presentation of GI disorders in obese patients to allow for appropriate diagnostic imaging and therefore, diagnostic accuracy.