Inflammatory bowel disease (IBD), including Crohn’s disease (CD) and ulcerative colitis (UC), affects millions of Americans annually. Severe complications of IBD include bowel ulceration, fistula, obstruction, peritoneal abscesses and perforation. These complications can be triggered by infection, inflammation, and/or medication use. Cardiac arrhythmias (CA), including atrial fibrillation, atrial flutter, and long QT syndrome, have long been associated with gastrointestinal bleeds (GIB). However, the role of these arrhythmias in IBD is still unclear.

Methods

The National Inpatient Sample 2001-2013 was queried for patients with CD or UC using International Classification of Diseases, Ninth Revision codes. All CA and IBD complications were identified with their respective codes. A binary logistic regression analysis was used to examine the odds ratios of different CA with each complication of IBD, with a significance level of p < 0.001.

In patients with IBD and CA, there is an increased risk for severe GI morbidity. Specifically, CA was associated with an increased risk of perforation and peritoneal abscesses. This may be associated with transient hypoperfusion in CA patients leading to aberrant wound healing. Likewise, IBD may lead to electrolyte imbalances causing destabilization of the cardiac membrane attenuating CA. Further investigation is needed to better understand the causality of this relationship.

Introduction

Association of Cardiac Arrhythmia in Patient with Inflammatory Bowel Disease and Rates of Severe Gastrointestinal Complication

Afif Hossain, MD1, Anmol Mittal, MD1, Sarah Hossain, BA2, Julius Gardin, MD, MBA1

1Department of Medicine, Rutgers, New Jersey Medical School; 2American University of Antigua

Discussion

In patients with IBD and CA, there is an increased risk for severe GI morbidity. Specifically, CA was associated with an increased risk of perforation and peritoneal abscesses. This may be associated with transient hypoperfusion in CA patients leading to aberrant wound healing. Likewise, IBD may lead to electrolyte imbalances causing destabilization of the cardiac membrane attenuating CA. Further investigation is needed to better understand the causality of this relationship.

References: