

HCA Healthcare

Scholarly Commons

Gastroenterology

Research & Publications

10-28-2019

A Hiatal Hernia Causing Atrial Fibrillation through Direct Mechanical Irritation

Kirolus Sourial

HCA Healthcare, Kirolus.Sourial@hcahealthcare.com

Zaid Yaqoob

HCA Healthcare, Zaid.Yaqoob@hcahealthcare.com

Anthony Chahin

HCA Healthcare, anthony.chahin@hcahealthcare.com

Saif Borgan

HCA Healthcare, Saif.Borgan@hcahealthcare.com

Ernesto S. Robalino Gonzaga

HCA Healthcare, Ernesto.RobalinoGonzaga@hcahealthcare.com

See next page for additional authors

Follow this and additional works at: <https://scholarlycommons.hcahealthcare.com/gastroenterology>



Part of the [Digestive System Diseases Commons](#), [Gastroenterology Commons](#), [Internal Medicine Commons](#), and the [Pathological Conditions, Signs and Symptoms Commons](#)

Recommended Citation

Sourial K, et al. P1775 - A Hiatal Hernia Causing Atrial Fibrillation Through Direct Mechanical Irritation. Poster presented at: American College of Gastroenterology Annual Scientific Meeting; October 25-30, 2019; San Antonio, TX.

This Poster is brought to you for free and open access by the Research & Publications at Scholarly Commons. It has been accepted for inclusion in Gastroenterology by an authorized administrator of Scholarly Commons.

Authors

Kirolus Sourial, Zaid Yaqoob, Anthony Chahin, Saif Borgan, Ernesto S. Robalino Gonzaga, Aamir Javaid, and Olga Karasik

A Hiatal Hernia Causing Atrial Fibrillation through Direct Mechanical Irritation

Kirolus Sourial, MD,^{1,2} Zaid Yaqoob, MD,^{1,2} Anthony Chahin, MD,^{1,2} Saif Borgan, MD,^{1,2} Ernesto S. Robalino Gonzaga, MD,^{1,2} Aamir Javaid, MD,^{1,2}.
 1 Department of Internal Medicine, University of Central Florida College of Medicine, Orlando, FL 2 Osceola Regional Medical Center, Kissimmee, FL

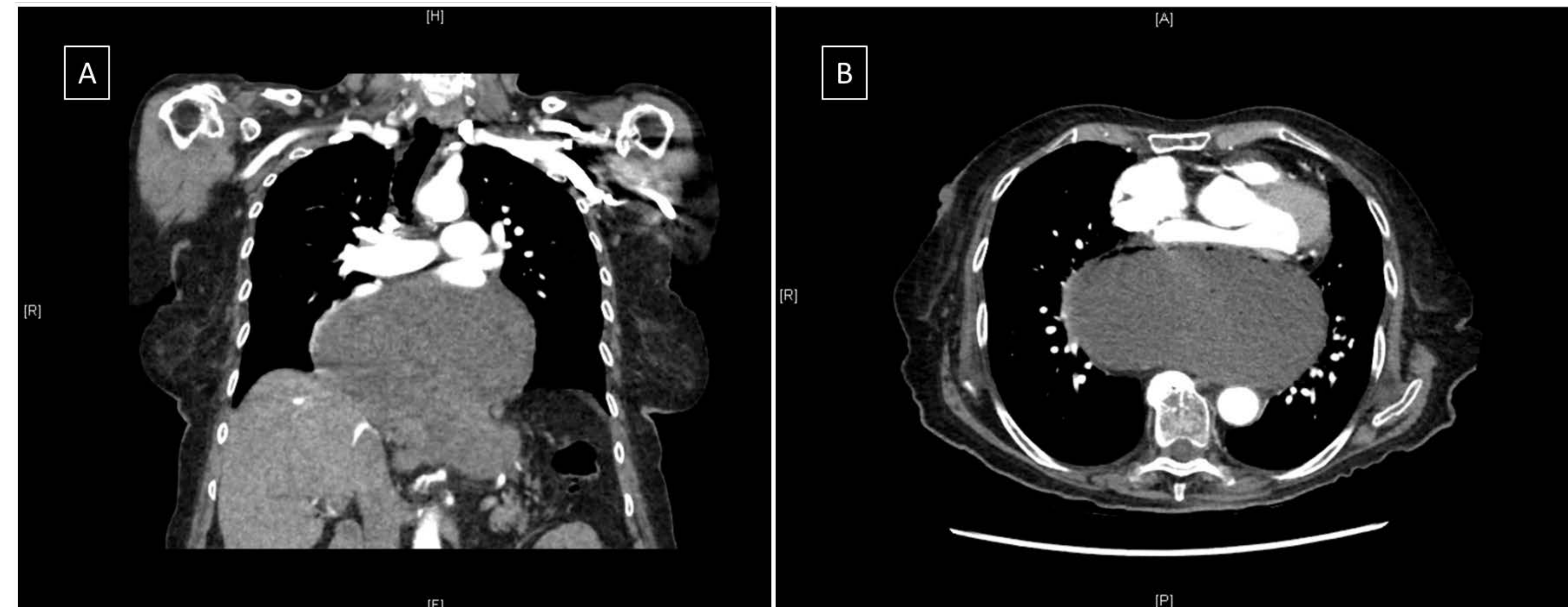
Introduction

- Hiatal hernias (HH) are anatomically classified into four types according to herniated structures.
- Giant HH refers to a herniation of > 50% of the stomach.
- Atrial fibrillation (AF) is the most common arrhythmia, frequently associated with cardiovascular diseases
- We report a case of AF caused by a case of giant HH compressing the left atrium.

Case Presentation

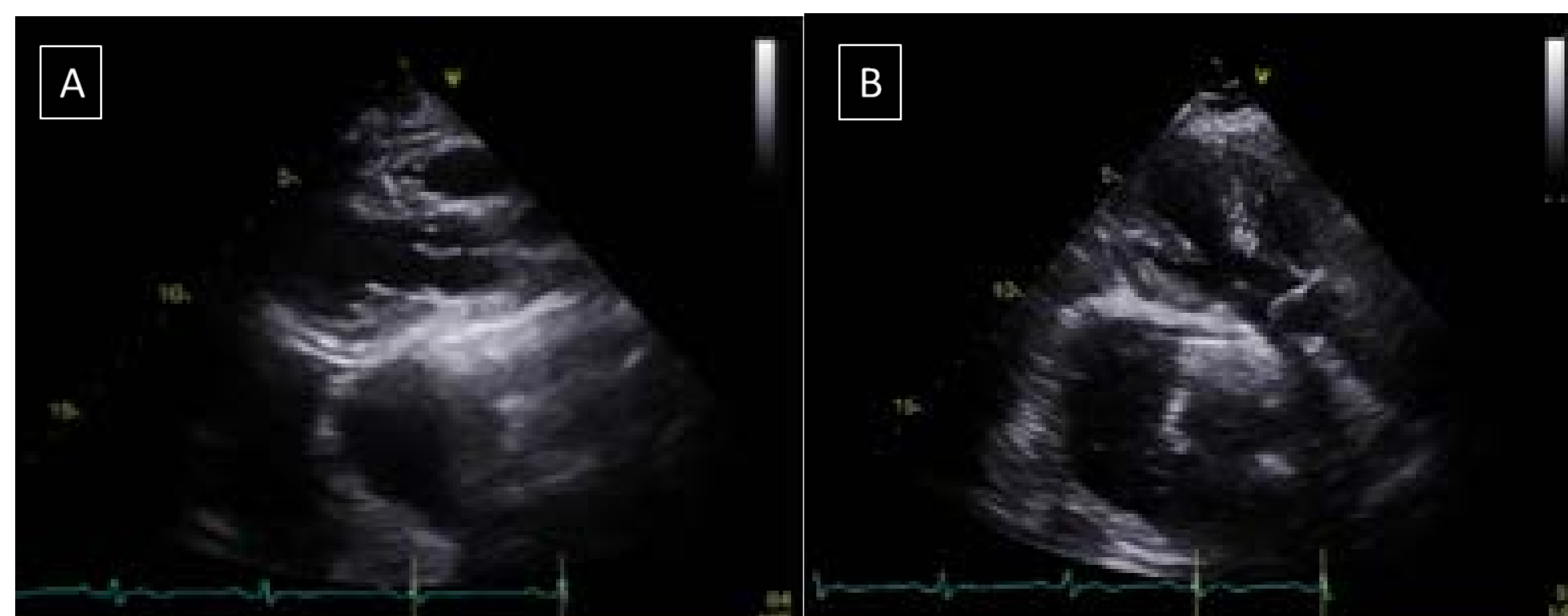
- A 90 year-old female with a medical history of GERD, was surgically evaluated for symptomatic HH.
- During hospital stay the patient developed symptomatic AF with RVR.
- EKG showed new onset AF with non-specific ST-T wave changes. Sinus rhythm conversion was achieved by amiodarone drip.
- Common metabolic and endocrine etiologies of AF were ruled out by specific tests. Additionally, underlying cardiac ischemia was ruled out by normal myocardial perfusion study.
- Chest CTA (Figure 1A and 1B) was only remarkable for persistent giant HH.
- Echo (Figure 2A and 2B) showed external material compressing against the left atrium.
- Due to the high surgical risk decision was made to treat the patient with conservative management. Patient was discharged home in NSR on oral anticoagulant and BB.

Figure 1



(Figure 1A & 1B) CTA of the chest showing giant HH with the majority of the stomach projecting superior to the diaphragm and compressing the posterior wall of the heart.

Figure 2



(Figure 2A & 2B) Echocardiogram showing external material compressing against the heart and causing the left atrium to be not well visualized.

Discussion

- AF, gastrointestinal reflux disorder (GERD) and HH are often seen in association. AF in GERD cases is likely due to local cytokine release from esophageal injury or vagal overstimulation.
- Such association is supported by reduced AF recurrences by reflux suppression. However, the underlying mechanism of AF in HH patients has not been fully understood.
- In our case, left atrial compression and impingement were seen, which indicates direct left atrial irritation causing atrial arrhythmia.
- A similar case scenario was previously reported, in which AF was suppressed after laparoscopic surgical repair of a giant paraesophageal hernia.
- More cases need to be studied to confirm the hypothesized etiology of AF in patients with giant HH.

References

- 1) Cristian DA, Constantin AS, Barbu M, Spătaru D, Burcoş T, Grama FA. Paroxysmal postprandial atrial fibrillation suppressed by laparoscopic repair of a giant paraesophageal hernia compressing the left atrium. J Gastrointest Liver Dis. 2015 Mar;24(1).
- 2) Ranjini R Roy, Sandeep Sagar, T. Jared Bunch, Wahaj Aman, Daniel J Crusan, Komandoor Srivathsan, Samuel J Asirvatham, et al. Hiatal Hernia Is Associated With an Increased Prevalence of Atrial Fibrillation in Young Patients. J Atr Fibrillation. 2013 Aug-Sep; 6(2): 894. Published online 2013 Aug 31.
- 3) Good E, Wells D, Cronin P, Morady F, Oral H. Images in cardiovascular medicine. Massive hiatal hernia and thoracic stomach illustrated by barium swallow during left atrial catheter ablation for atrial fibrillation. Circulation. 2008 Nov 4;118(19):2011-2.
- 4) Roman C, Bruley des Varannes S, Muresan L, Picos A, Dumitrascu DL. Atrial fibrillation in patients with gastroesophageal reflux disease: a comprehensive review. World J Gastroenterol. 2014 Jul 28;20(28):9592-9.