

# Acute coronary syndrome in a patient with a single coronary artery arising from the right coronary sinus

75

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## Type of submitter

Fellow in Training

## Abstract

Introduction:

Coronary artery anomalies are typically discovered as coincidental findings during coronary angiography or post-mortem evaluation. A single coronary artery (SCA) is a rare anomaly of the coronaries. We describe a case of a 78-year-old male who presented with chest pain for several days. Cardiac catheterization showed the entire coronary system originating from the right coronary sinus and dividing into a right coronary artery (RCA) and left main coronary artery (LMCA). The left anterior descending (LAD) and left circumflex (LCx) took separate and unusual courses. A SCA poses diagnostic and therapeutic challenges especially in the setting of acute coronary syndrome (ACS). We present an interesting case of ACS in a patient with one of the rarest forms of a SCA which was successfully treated with angioplasty.

Case presentation:

A 78-year-old male with a history of hypertension, hyperlipidemia presented to the emergency department with the chief complaint of substernal chest pain for several days accompanied by dyspnea. Troponin was initially 0.112 ng/mL and trended up to 7.04 ng/mL. Electrocardiogram demonstrated normal sinus rhythm with non-specific ST-T changes. Cardiac catheterization demonstrated the absence of a left coronary system with the entire coronary system originating from the right sinus of Valsalva as a short common trunk dividing into a RCA and LMCA. The LMCA gave off a hypoplastic LAD coursing posterior to the pulmonary artery and a LCx which coursed anterior to the pulmonary artery. There were lesions identified in the RCA which were the cause of the patient's presentation. Due to an unacceptably high surgical risk he underwent rotational atherectomy of the RCA followed by the placement of two drug eluting stents with an excellent angiographic and clinical result.

Discussion:

Coronary artery anomalies are rarely seen during routine coronary angiography with an incidence of 0.2-1.3% and 0.3% during autopsy. A SCA is an extremely rare anomaly of the coronaries, occurring in approximately 0.019 to 0.024% of the population. Patients can present with arrhythmias, syncope, ACS

or sudden death. In this case, the SCA originates from the right coronary sinus of Valsalva and gives rise to an RCA and a LMCA. The LMCA gave off an LAD which coursed between the pulmonary trunk and aorta in what is referred to as a malignant variant. The left circumflex coursed anteriorly to the pulmonary artery. The course of the anomalous arteries can have significant clinical and prognostic implications. An intervention in the setting of a SCA is technically difficult and potential complications can be catastrophic. In this case, the culprit vessel was the RCA which was successfully treated with rotational atherectomy and placement of two drug eluting stents.

Conclusion:

Single coronary arteries are extremely rare and pose significant diagnostic and therapeutic challenges to an operator. Treatment of ACS in such patients should be approached cautiously and surgery should be considered especially if the anomalous vessels take an interarterial course. Angioplasty can be considered if the surgical risk is considered to be high.

### **Categories**

2nd year Fellow: Case

### **Program/Institution Name**

Kettering Health Network

## Kissing into third degree heart block

67

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### Type of submitter

Fellow in Training

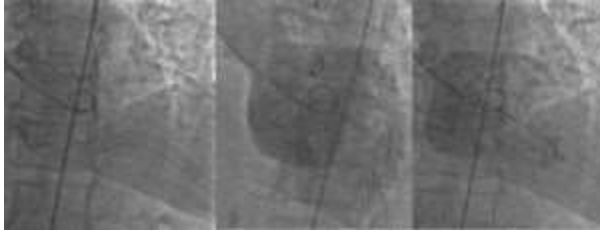
### Abstract

#### Introduction

Chagas disease is the third most common parasitic disease encountered world-wide. Chagas cardiomyopathy is one of the leading causes of cardiovascular morbidity and mortality in Latin America. However, in the United States, Chagas cardiomyopathy is an exceptionally rare cause of heart failure and remains a challenging diagnosis. Clinical suspicion and a meticulous travel history is critical in making this diagnosis.

#### Case presentation

A 75-year-old Haitian woman with hypertension and epilepsy presented to the emergency department complaining of “feeling unwell”. She reported a two week history of non-productive cough and exertional dyspnea associated with lightheadedness. The remainder of her review of systems was non-contributory. Her only medication was over the counter guaifenesin as needed for cough. Her exam was unrevealing except for bradycardia. Electrocardiography revealed a complete heart block. Chest radiograph had no acute cardiopulmonary findings. Her cardiac biomarkers, thyroid function studies and electrolytes were within normal limits. She was admitted to Coronary Care Unit for intensive monitoring. Transthoracic echocardiography revealed akinesis and aneurysm of the basal inferoseptal and basal inferior walls, with no evidence of intracardiac thrombus. Coronary angiography revealed non-obstructive coronary artery disease. Left heart catheterization with ventriculography revealed a calcified, aneurysmal inferior wall. This with the patient’s country of origin, travel history, and left ventricular aneurysm in absence of coronary artery disease prompted a suspicion of Chagas disease. A thorough workup included titers for Chagas disease through the Center for Disease Control. IgG antibody for *Trypanosoma cruzi* was positive, suggesting Chagas cardiomyopathy. A permanent pacemaker was implanted. She remained hemodynamically stable throughout the remainder of her hospitalization and was discharged home with outpatient follow up.



## Discussion

Chagas disease is caused by the protozoan *Trypanosoma cruzi*. Without treatment, Chagas disease can lead to long term complications, including Chagas cardiomyopathy. In Central and South America, Chagas cardiomyopathy is the leading cause of non-ischemic cardiomyopathy. Complications include heart failure, arrhythmias and sudden cardiac death. Though rarely seen in the United States, the prevalence is increasing and should be considered in patients with relevant risk factors. Chagas disease is growing in prevalence in non-endemic areas and now affects greater than 300,000 patients in the United States alone.

## Conclusion

Recognition of Chagas cardiomyopathy remains challenging for practitioners in the United States due to its relatively low prevalence. However, the global burden of disease is high, particularly in the Central and South America. Additional research and treatment guidelines are critical for the early recognition and treatment of this devastating cardiovascular disease.

## Categories

2nd year Fellow: Case

## Program/Institution Name

University of Cincinnati

# Three For One Deal: Uterine Embolization, Pulmonary Embolism with Cor Pulmonale and Ischemic Stroke

69

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University of Cincinnati

## Type of submitter

Fellow in Training

## Abstract

### Introduction

Uterine fibroid embolization (UFE) is considered a safe treatment option for patients with symptomatic leiomyomas. Here, we present a rare case of pulmonary embolism with cor pulmonale and ischemic stroke shortly after a successful uterine artery embolization.

### Case Presentation

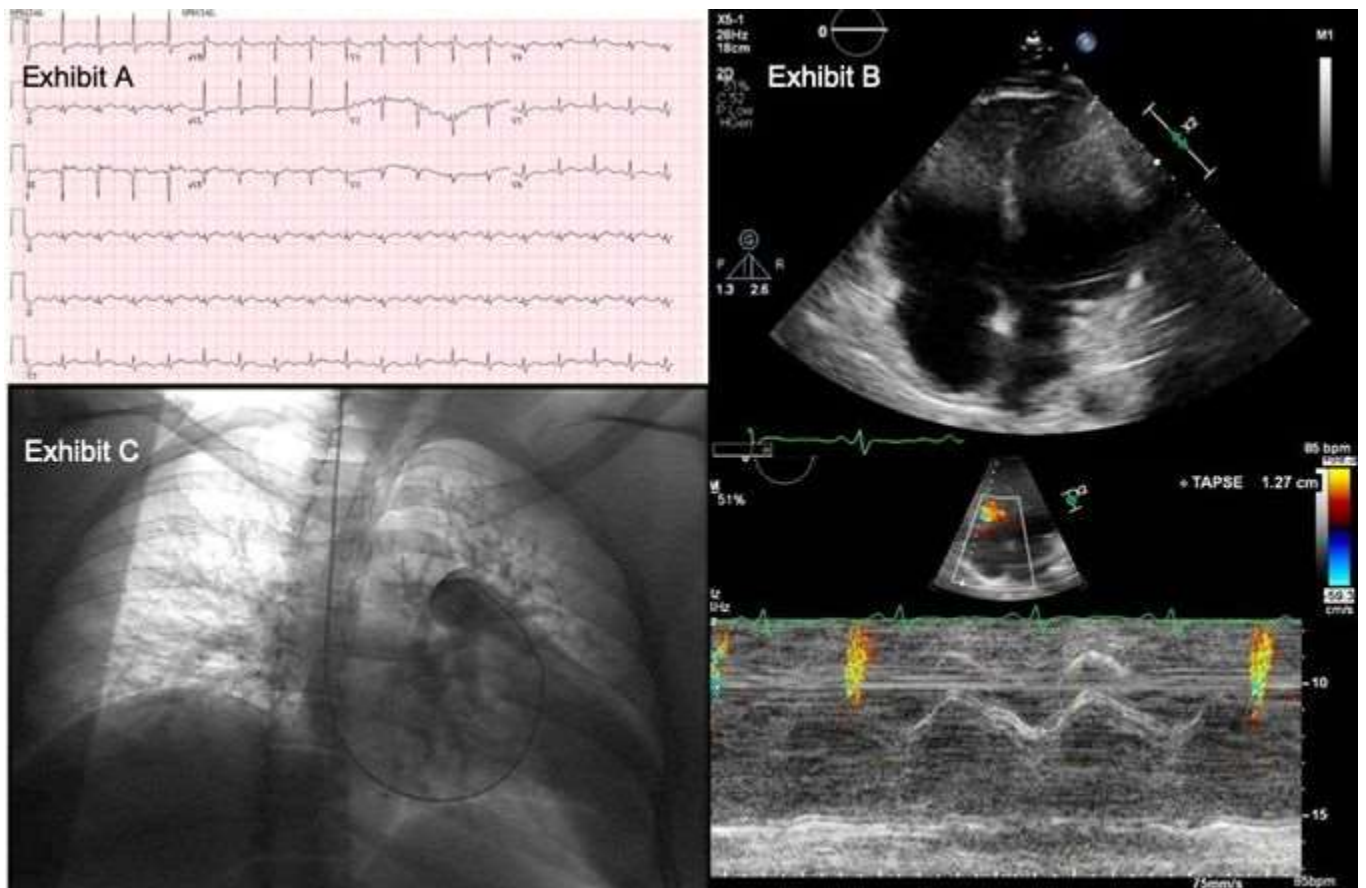
A 48-year-old female with a past medical history of asthma, hypertension and severe symptomatic leiomyomas presented to the outpatient surgical center for elective uterine fibroid embolization. Her procedure was successful with no immediate complications. While in the post-anesthesia care unit, she became acutely tachycardic, dyspneic, and hypoxic requiring a non-rebreather to maintain adequate oxygenation. She was subsequently admitted to the surgical intensive care unit. Computer tomography with contrast of the thorax was limited by motion artifact, but showed evidence of right heart strain. Electrocardiography showed sinus tachycardia with an incomplete right bundle branch block (Exhibit A). Transthoracic echocardiogram was significant for moderate pulmonary hypertension with moderate right ventricular enlargement and systolic dysfunction. She also had a positive bubble study at rest and with Valsalva (Exhibit B). Ventilation-perfusion imaging of the lungs showed numerous subsegmental perfusion defects bilaterally. Pulmonary angiography showed a filling defect in the right superior pulmonary lobar arteries (Exhibit C). Lower extremity doppler ultrasounds showed no evidence of a superficial or deep venous thrombus. She was initiated on a continuous heparin infusion. Two days after her presentation, she developed severe headache, left sided weakness and vision changes. Computed tomography of her head showed a large right parietal infarct with hemorrhagic conversion. Anticoagulation was discontinued and serial head imaging showed stability of her intracranial hemorrhage. Follow up ventilation-perfusion imaging showed resolution of her perfusion defects. Transthoracic echocardiography showed resolution of her right ventricular function and dilation.

### Discussion

Thromboembolism is a rare complication from uterine fibroid embolization. There are only a few reported cases in the literature, and only one reported case of an ischemic stroke following uterine embolization. Two pathophysiologic mechanisms have been proposed. The first proposed mechanism is an acquired hypercoagulable state following UFE due to the induction of procoagulants from tissue injury. The second proposed mechanism described is from shunting of the embolization substrate across uterine arteriovenous malformations. In patients with intracardiac shunts, systemic embolization is possible. Post-mortem studies of patients who have suffered from thromboembolic event following UFE would be helpful to further characterize the nature of this phenomenon.

## Conclusion

Ischemic stroke and pulmonary emboli with cor pulmonale are rare complications of uterine fibroid embolization. The mechanism and best treatment of thromboembolic events is not well understood. Further research is needed to better counsel our patient is needed. Additionally, preoperative risk stratification may be helpful to prevent this rare but devastating phenomenon.



## Categories

2nd year Fellow: Case

Program/Institution Name

University of Cincinnati

# Suck it out! Successful Removal of Infected Thrombus from the Superior Vena Cava Using the Percutaneous AngioVac System:

37

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## Type of submitter

Fellow in Training

## Abstract

Background:

AngioVac (AngioDynamics Inc., Latham, NY, USA) is a vacuum-assisted thrombectomy device, which was approved in 2014 by FDA for removal of large thrombi and inappropriate material from body and its successful use for debulking large right-sided vegetations has been reported. We present a case of persistent bacteremia in a severely ill patient from infected thrombus, who underwent thrombus extraction with the use of AngioVac system.

Case:

A 77-year-old male patient, with recent history of necrotizing fasciitis of the right foot, complicated with acute renal failure required temporary hemodialysis with a tunneled catheter that was placed in the right internal jugular vein. He presented with fever and was found to be septic with methicillin-resistant staphylococcus aureus bacteremia. There was erythema and discharge noted from the skin surrounding the dialysis catheter, so the catheter was removed and was started on broad-spectrum antibiotics with Vancomycin and Piperacillin-Tazobactam. Extensive work up including CT chest/abdomen, Echocardiogram (TTE) and MRI spine and lower extremity were negative for potential source of bacteremia. He continued to be septic with positive blood cultures despite of appropriate antibiotics. Transesophageal echocardiogram (TEE) revealed a, 1.0 x 1.3 cm echo dense filling defect in the SVC suspicious for infected thrombus. Patient was deemed to be a high risk for surgical intervention, so he underwent extraction of the thrombus using AngioVac. Resolution of bacteremia was noted on follow up blood cultures and pathology report confirmed infected thrombus. The patient recovered well with intravenous antibiotics.

Discussion:

AngioVac is vacuum based device, which was approved for removal large thrombi and inappropriate material from body. There have been many case reports showing successful extraction of right-sided vegetations especially of infected thrombus associated with cardiac implantable devices using AngioVac device. Surgical extraction of septic emboli used to be the mainstay of therapy for persistent

bacteremia, but patients tend to be high risk given acuity and other co-morbidities. With the use of AngioVac suction device system, the patient had successful eradication of the source of infection and a good clinical outcome.

Conclusion:

This case highlights a promising role of the AngioVac system for successful aspiration of infected thrombus as an alternative to surgical intervention, especially in high risk, critically ill patients.

### **Categories**

2nd year Fellow: Case

### **Program/Institution Name**

Kettering Health Network

# Correlation of exercise right heart catheterization hemodynamics in a patient with an implantable hemodynamic monitor.

16

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## Type of submitter

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## Abstract

### Introduction

In patients with chronic heart failure (HF), the use of the implantable pulmonary artery (PA) sensors, such as the CardioMEMS, are associated with a reduction in HF hospitalizations<sup>[i]</sup>. Previous studies have demonstrated excellent correlation between resting PA pressure sensors and right heart catheterization (RHC) pressures<sup>[ii]</sup>. However, it is not known whether implantable hemodynamic monitors correlate with RHC during exercise. We report a pilot case of an exercise RHC with simultaneous readings from a PA sensor.

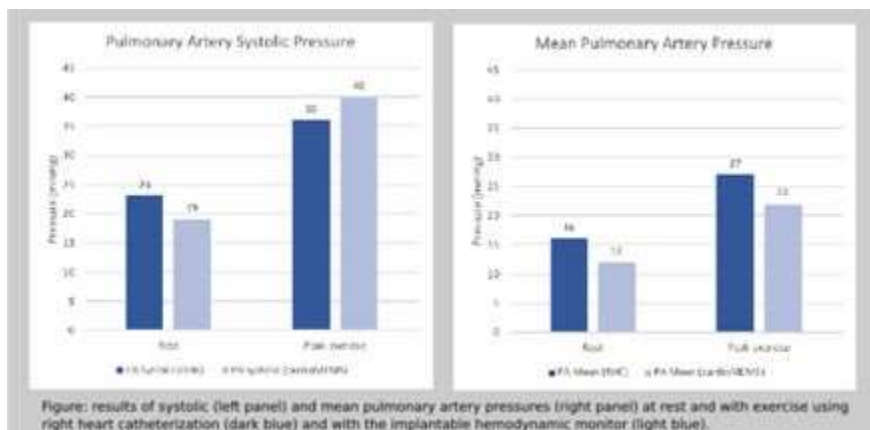
### Case Presentation

A 56 year old female with a history of hypertension, chronic obstructive pulmonary disease (COPD), tobacco use, and diastolic heart failure with previous PA monitor implant was evaluated for several months of worsening exertional dyspnea and exercise intolerance. Sensor-derived PA pressures readings demonstrated normal pressures at rest. Given her profound symptoms and concomitant respiratory and cardiac disease, an exercise RHC was performed using supine ergometer to assess for exercise induced diastolic dysfunction. Pressures from her PA sensor were obtained simultaneously with invasive RHC measurements both at rest and at peak exercise.

At rest, pulmonary artery pressure by RHC and cardioMEMS 23/10 mmHg (mean 16 mmHg) and 19/10 mmHg (mean 12 mmHg) respectively (Figure). At 20 Watts (55 RPM), the patient experienced exercise-limiting dyspnea. At peak exercise, pressures recorded by RHC and cardioMEMS were 36/10 mmHg (mean 27 mmHg) and 40/6 mmHg (mean 22 mmHg) respectively. [\[SE1\]](#) Based on her low filling pressures with exercise, exercise induced diastolic dysfunction was ruled out. Ultimately, COPD was thought to be responsible for her dyspnea and she was referred back to her pulmonologist to escalate her therapy.

### Conclusion

In our patient, PA sensor measurements obtained during exercise appeared to be similar to those obtained by invasive RHC values. Further evaluation with an expanded patient cohort is needed to validate this observation. If true, the use of implantable PA pressures sensors could offer a non-invasive means of assessing exercise hemodynamics in patients with a device. This could also potentially be expanded to treadmill exercise testing, which is more physiologic than cycling ergometer and currently not possible with RHC. With emerging therapies for patients with exercise induced diastolic dysfunction and pulmonary hypertension, this information could potentially be used to target future therapeutics as well.



[i] Givertz, Michael M *et al.* "Pulmonary Artery Pressure-Guided Management of Patients With Heart Failure and Reduced Ejection Fraction." *Journal of the American College of Cardiology* 70, no. 15 (October 10, 2017): 1875–86.

[ii] Abraham, William T. *et al.* "Safety and Accuracy of a Wireless Pulmonary Artery Pressure Monitoring System in Patients with Heart Failure." *American Heart Journal* 161, no. 3 (March 2011): 558–66.

## Categories

2nd year Fellow: Case

## Program/Institution Name

Ohio State University Hospital

## **A Marginal STEMi**

**65**

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### **Type of submitter**

Fellow in Training

### **Abstract**

#### **Introduction**

The ECG remains one of the best bedside predictors of clinically significant coronary artery disease(CAD). ST elevation(STe) in V1-V5 usually indicates anteroseptal infarction caused by acute/subacute occlusion of the left anterior descending(LAD) or one of its branches. We describe a case of STe in the precordial leads in a patient with no involvement of the LAD or its branches.

#### **Case presentation**

A 67 year old male with history of LAD and diagonal drug eluting stents (DES) presented for staged right coronary artery(RCA) intervention. He was treated with 2 over lapping DES (24 and 38 mm). The second stent resulted in jailing of right marginal branch. Few hours later the patient had a ventricular fibrillation arrest. The patient achieved return of spontaneous circulation after 3 minutes of advanced cardiac life support.

#### **Clinical decision making:**

EKG post arrest showed STe in the precordial leads. Immediate angiography showed patent stents in LAD and RCA. Ostial Left main & LAD were also evaluated with IVUS without any significant disease. Balloon pump was inserted and the patient was admitted to the ICU . His EKG changes resolved and he was later discharged home in stable condition.

**conclusion:**

Isolated RV branch occlusion following angioplasty may be accompanied by STe in the precordial leads. These changes were replicated experimentally with balloon occlusion of the RV branch. Prominent anterior forces of RV infarction are postulated to be responsible for the STe in the precordial leads without the typical changes in the inferior leads. It is important that physicians recognize this entity and protect patients from unnecessary interventions.

**Categories**

2nd year Fellow: Case

**Program/Institution Name**

University of Cincinnati

# Never Too Late: Stroke and Aortic Thrombosis Post Remote Splenectomy

23

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## Type of submitter

Fellow in Training

## Abstract

Background:

Arterial thrombosis post splenectomy is underappreciated. Arterial events may present as an acute MI, stroke, pulmonary or peripheral artery embolism and can be devastating.

Case Presentation:

A 50-year old asplenic woman smoker with sleep apnea, Hodgkin lymphoma (in remission), stage 1B invasive ductal carcinoma of the left breast status post lumpectomy with adjuvant radiation and anti-estrogen therapy recently presented with headache, confusion and expressive aphasia. Multifocal left hemispheric strokes were found on brain MRI. A TEE showed a large protruding thrombus with mobile pieces in the distal aortic arch and descending aorta. An MRA and CTA confirmed this finding. Her symptoms resolved within four days. Hypercoagulability work up was negative. She was discharged on anticoagulation that was discontinued after a repeat TEE showed marked reduction of thrombus size at forty-five days post hospitalization. She was maintained on aspirin and clopidogrel thereafter. A repeat MRA was performed two months after. It showed no signs of inflammation, scar or fibrosis and almost complete resolution of the thrombus in the descending aorta.

Discussion:

Hypercoagulability in malignancy is certainly a differential. However, work up was unrevealing of any specific disorder other than persistent reactive thrombocytosis. Radiation injury to the aorta was ruled out after a thorough review of her recent adjuvant therapy dosimetry plan. She was on anastrozole even before her hospitalization, ruling out estrogen excess as cause. Her platelets have consistently been elevated since her remote splenectomy. Review of literature, albeit inconsistent, showed that there is a significant, long-lasting, increased risk of arterial thromboembolic events after splenectomy done for any indication. Risk is especially high for patients with an underlying hematologic disorder. Her continued heavy smoking likely contributed to her overall risk.

Conclusion:

Unexplained stroke-like symptoms in an asplenic patient should raise concern for arterial thromboembolism and other undiagnosed hematologic disorders. There is evidence that post splenectomy patients maintain a relative hypercoagulable state indefinitely due to multiple mechanisms. Although reactive thrombocytosis should not cause thrombosis by itself, empiric antiplatelet therapy in post-splenectomy patients with multiple risk factors must be considered.

**Categories**

2nd year Fellow: Case

**Program/Institution Name**

Summa Health System/NEOMED

# Endocarditis: Classic presentation of a Classic Condition with a very Unclassical Etiology

78

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Summa

## Type of submitter

Fellow in Training

## Abstract

Introduction:

Intravenous drug abuse has unfortunately become a national crisis. Infective endocarditis incidence parallels the growth of this epidemic. Cases now present in a wide variety of ways, including with rare organisms that are more aggressive and damaging to the valves. Although there are many known classical physical exam findings associated with endocarditis, they are not commonly seen. This case presents a patient who presented with multiple classical physical exam findings of endocarditis, however, whose sonographic images and bacterial etiology are extremely uncommon.

Case:

A 28-year-old woman intravenous drug abuser with hepatitis C presented with a three-week history of fevers, fatigue, palpitations, arthralgias and a change in personality. On presentation she was found to be in septic shock and was confused. She had classic physical exam findings of infective endocarditis and a swollen right knee and ankle. She was anemic, thrombocytopenia and had an elevated INR. An echocardiogram showed a 2.4 cm x 1.7 cm mobile vegetation on the posterior leaflet of the mitral valve with moderate regurgitation. Her blood culture and urine culture grew *Serratia Marcescens* and was then started on appropriate antibiotics. A MRI was ordered due to her personality changes and showed bilateral infarcts in the parietal and the right thalamus and frontal lobe. A right knee arthrotomy was done which also grew *Serratia* and an MRI of the right ankle showed evidence of osteomyelitis. She developed acute respiratory failure due to worsening mitral valve regurgitation prompting urgent valve replacement. She was eventually discharged to a facility for rehab and long term antibiotics.

Discussion:

Infective endocarditis typically involves the tricuspid valve and is most commonly caused by *Staphylococcus Aureus*. *Serratia Marcescens* is an aerobic gram negative bacillus and was first reported to cause endocarditis in 1951. Since 1951 there has only been several additional cases of *Serratia* induced endocarditis reported. The International Collaboration on Endocarditis prospective cohort, which consisted of almost 2800 patients over a 5 year period showed that *Serratia* to be the cause of

endocarditis in only 0.14% of that cohort. *Serratia* has a propensity to infect the mitral valve compared to the right sided valves and has been shown to cause a larger sized vegetation, resulting in greater valve destruction and more frequent embolization than other bacteria. Thus, a higher morbidity and mortality is associated with this bacteria necessitating a more prompt intervention and aggressive treatment.

Conclusion:

This case demonstrates a classic infective endocarditis presentation with a rare organism and its more aggressive progression. If *Serratia marcescens* is cultured, one should consider an earlier surgical treatment and forego conservative measures.

### **Categories**

2nd year Fellow: Case

### **Program/Institution Name**

Summa Health System/NEOMED

# ORAL PRESENTATION ABSTRACTS

# Ventricular Arrhythmia Prevalence and Characteristics for HIV+ Persons and Matched Uninfected Controls

7

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## Type of submitter

Fellow in Training

## Abstract

Introduction:

Sudden cardiac death and myocardial fibrosis are common in HIV. No studies to our knowledge have examined the prevalence and morphology of ventricular ectopy or arrhythmia (VEA) for HIV+ versus uninfected persons.

Methods:

We screened 5,041 HIV+ persons and 10,121 uninfected controls (matched 1:2 on demographics and location) at an urban medical center between 2000 and 2016 for VEA using administrative codes. We then reviewed electrocardiographic data to determine (1) whether VEA were present, and (2) VEA morphology (left or right bundle and inferior or superior axis). Prevalence and morphology of VEA were compared by HIV status and markers of HIV severity.

Results:

Of 5041 HIV+ persons, 139 (2.8%) had VEA vs. 165 out of 10121 (1.6%) for controls ( $p < 0.001$ ). This association persisted after adjustment for demographics (Odds Ratio [OR] 1.53, 95% Confidence Interval [CI] 1.21-1.94) but was attenuated to non-significance after adjustment for diabetes and hypertension. Compared with HIV+ persons with nadir  $CD4 \geq 200$  cells/mm<sup>3</sup>, those with nadir  $CD4 < 200$  cells/mm<sup>3</sup> had significantly elevated odds of VEA after adjustment for demographics, diabetes, and hypertension (OR 1.65, 95% CI 1.12-2.31). Likewise, each log<sub>10</sub> higher peak HIV viral load was associated with a significantly elevated odds of VEA (OR 1.24, 95% CI = 1.07-1.44) after adjustment for demographics, hypertension, and diabetes. Right bundle, superior axis morphology was somewhat more common among HIV+ versus uninfected persons, but this did not reach statistical significance ( $p = 0.092$ ).

Conclusions:

VEA is more common among HIV+ persons but this was attenuated after adjustment for CVD risk factors. Greater HIV viremia and immunosuppression are associated with greater odds of VEA. Compared with uninfected persons, HIV+ persons may more commonly have VEA originating from the left ventricular myocardium, suggesting abnormal myocardial substrate rather than idiopathic outflow tract arrhythmia.

**Categories**

1st year Fellow: Research

**Program/Institution Name**

Ohio State University Hospital

# Virtual Visits in Cardiac Electrophysiology: Patient and Physician Preference

55

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## Type of submitter

Fellow in Training

## Abstract

**Background:** Cardiologists have long utilized devices to follow patients with arrhythmias in order to guide management. Virtual visits have been adopted as one modality to follow-up established patients with arrhythmias. Factors contributing to patient and physician preferences with virtual visits are unknown. To our knowledge, there are no prior studies that have collected objective feedback from patients and physicians after virtual visits.

**Objectives:** To determine patient and physician experience with virtual visits in Cardiac

Electrophysiology.

**Methods:** We performed a prospective survey of patients and physicians who participated in a virtual visit in the Department of Cardiac Electrophysiology at the Cleveland Clinic from December, 2018 and July, 2019. All established patients in the Department of Cardiac Electrophysiology at the Cleveland Clinic who had a virtual visit were invited to partake in our survey. A constructed, standardized phone script and patient survey questionnaire of 15 questions was implemented for each patient. In addition, for each virtual visit encounter the cardiac electrophysiologist who performed the virtual visit was also invited to participate in a separate physician survey.

**Results:** 100 patient and physician virtual visit encounters were included. The average age of patients who participated in a virtual visit was 65 years old. 70% were male and 30% were female. The average distance patients participated in their virtual visit was 656 miles. Of the 100 patients who participated in a virtual visit, 64 elected to complete a survey, 10 patients declined, 17 patients were unable to be reached on follow-up, and 9 patients were not included due to technical difficulties. Of those who responded, 51 patients participated in their first virtual visit, 4 participated in their second virtual visit, and 8 participated in their third or more virtual visit. 38/64 (59.4%) of patients preferred a virtual visit for their next visit, 12/64 (18.8%) preferred an in office visit, 13/64 (20.3%) responded that their decision for a virtual or office visit depended on their specific needs, 1/64 (1.6%) did not have a preference. A total of 14 cardiac electrophysiologists participated in 100 virtual visits. 9/100 visits were not included due to technical error and inability to complete the virtual visit. Of the 91 virtual visits by physicians, 62/91(68.1%) preferred a virtual visit for their next visit, 7/91 (7.7%) preferred an in office visit, 10/91 (11.0%) responded that their decision for a virtual or office visit depended on the indication

for follow-up, 6/91 (6.6%) did not have a preference, and 6/91 (6.6%) did not indicate their preference for their next visit.

Conclusions: Both patients and physicians showed favorable responses to virtual visits, with a majority of patients and physicians preferring a virtual visit over an in-office visit for their next encounter. Factors such as convenience, cost, feasibility, and reason for follow-up were important determinants that affected both patient and physician preference.

### **Categories**

3rd year Fellow: Research

### **Program/Institution Name**

Cleveland Clinic Foundation