Heart University: knowledge-sharing through a web-based learning management system

6

Theresa Faulkner, Justin Tretter, Michelle Hudgens

Cincinnati Children's Hospital Medical Center

Type of submitter

CV Team Member (RN, NP, PA, PharmD, etc.)

Abstract

INTRODUCTION: Advances in pediatric and adult cardiology testing and management related to congenital heart disease (CHD) has led to an increase in survival and quality of life for the CHD population in some areas of the world. Both children and adults with complex CHD bring unique challenges and needs to the cardiology community. Unlike acquired heart disease, the relative increased heterogeneity of CHD is not as straightforward in description or treatment. There are over 11,000 Pediatric Cardiac Care Consortium (PCCC) codes, CHD diagnoses that define the unique anatomy and surgical interventions related to CHD. Focused CHD training and education are key elements to improved patient survival and quality of life. The global imbalance in quality training for CHD providers creates a unique opportunity for knowledge-sharing within the CHD community through a web-based learning center.

129-Advances in pediatric and adult cardiology testing and management of congenital heart disease (CHD) has led to an increase in survival and quality of life for the CHD population in many areas of the world. Children and adults with complex CHD bring unique challenges to the cardiology community. Unlike acquired heart disease, the relative increased heterogeneity of CHD is not as straightforward in description or treatment. There are over 11,000 Pediatric Cardiac Care Consortium (PCCC) codes, CHD diagnoses that define the unique anatomy and surgical interventions related to CHD. Focused CHD training and education are key elements to improved patient survival and quality of life. Global imbalance in quality training for CHD providers creates a unique opportunity for knowledge-sharing within the CHD community through a web-based learning center.

OBJECTIVE: To create a global CHD web-based learning center that will be utilized for CHD training and education. The focus of this site will be to make accessible a comprehensive online library of high

quality, evidence-based educational material created and edited by global experts in all subspecialties related to CHD testing, surgery and management.

METHOD: Develop an internationally endorsed Learning Management System (LMS) that will be a portal to access a comprehensive collection of high quality evidence-based educational material on all aspects of CHD. A pediatric and adult CHD editorial board of experts has been established in all the subspecialty areas to collect, create and review materials to be used on the site. This material may include identified high-quality existing material linked to the site, content created by experts specifically for the site, or recordings from global symposia in CHD. The curriculum geared towards fellow training will be guided by current board certification guidelines.

RESULTS: Quality of site and content will be collected monthly through site utilization reports, user content value rating system and discussion boards. Editorial boards will review user recommendations and needs requests quarterly, to update and improve learning material hosted on the website.

CONCLUSION: Creating an international educational website for both pediatric and adult CHD trainees and providers will decrease the imbalance in education and improve the current quality of care which is globally disproportionate.

Categories

CV Team Case

Program/Institution Name

Cincinnati Children's Hospital Medical Center

Device related thrombus following left atrial appendage closure with WATCHMAN®

45

Andrea Robinson, Arash Arshi, Sreedhar Billakanty, James Kleman, Carlos Sanchez, Steven Yakubov, Anish Amin

OhioHealth

Type of submitter

CV Team Member (RN, NP, PA, PharmD, etc.)

Abstract

Introduction

In patients with non-valvular atrial fibrillation (NVAF) who are deemed to be at increased risk for bleeding events, left atrial appendage closure (LAAC) has been proven to be a feasible alternative to long term oral anticoagulation therapy (OAC). Device-related thrombus (DRT) is an under recognized sequelae of implant. We present a case of DRT following LAAC with a WATCHMAN® closure device.

Case Report

An 85 year old female with paroxysmal atrial fibrillation, CHADS2VASC 6 and extensive cardiovascular history notable for a recovered mixed cardiomyopathy was referred for LAAC secondary to serial episodes of gastrointestinal bleeding related to duodenal angiodysplasias while taking either warfarin or apixaban. LAAC with WATCHMAN was recommended. The patient was instructed to start OAC for 3 weeks prior to implant per our institutional protocol. In this case we initiated apixaban 5 mg twice daily. Pre procedural CT imaging was performed after the patient had been on anticoagulation for 17 days. The left atrial appendage (LAA) was 27 mm in length with an ostial dimension of 23 x 22 mm, with possible distal thrombus. Using conscious sedation, 23 days after initiating anticoagulation, intracardiac echocardiography (ICE), verified the absence of LAA thrombus. The maximum LAA ostial dimension was measured to be 22 mm by ICE evaluation and a 27mm WATCHMAN® device was implanted without a peri-device leak. The device was positioned at the ostium of the appendage meeting PASS criteria. The patient was discharged home with recommendations to continue apixaban 5 mg twice daily and aspirin 81 mg daily for 45 days.

At 45 day follow up, the patient admitted to discontinuing the apixaban one week following the procedure due to concerns for bleeding. Transesophageal echocardiography demonstrated a large mobile DRT adhered to the anchor pin of the WATCHMAN device, measured at 1.4 cm in height. Weight based enoxaparin was initiated and the patient was transitioned to apixaban 5 mg bid after 7 days. She

returned 4 weeks later for repeat imaging and TEE demonstrated complete resolution of the DRT. She was then transitioned to dual antiplatelet therapy for 6 months, and then aspirin (81 mg) alone. In follow-up there have been no bleeding or thromboembolic complications since

Discussion

The incidence of DRT following LAAC has been reported to occur in 3-7% of patients[1-5] with the incidence of stroke or thromboembolism reported as four times that of those patients without DRT[2]. Several risk factors have been identified and include elevated CHADs2VASC score, large LAA diameter, permanent atrial fibrillation, vascular disease, prior stroke or TIA, and reduced left ventricular systolic function. Despite the increased risk of stroke, the majority of patients with DRT do not incur thromboembolic sequelae[2]. Nonetheless, prompt initiation of anticoagulation should be considered and in the majority of cases extended anticoagulation can resolve the DRT.

Conclusion

DRT may be an under-recognized complication of LAAC. Optimal screening and management recommendations for this population are lacking. This case highlights the potential of early DRT in the setting of patient non-compliance with anticoagulation, although DRT can occur any time following LAAC.

Categories

CV Team Case

Program/Institution Name

Other

Program/Institution Name If NOT listed in the prior question.

OhioHealth Riverside Methodist Hospital