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Nebraska ACC

SUPPORTING PHYSICIANS, TRAINEES, AND CARDIOVASCULAR TEAM MEMBERS WITH EDUCATION, ADVOCACY, & NETWORKING OPPORTUNITIES

Chapter News

Welcome back to the quarterly Nebraska ACC Newsletter. The last quarter has been extremely eventful in light of the on-going COVID-19 pandemic. Here's what's going on with the Nebraska ACC:

- The annual **Midwest Women in Cardiology Symposium** will be held virtually on September 12. Details at our [website event page!](#)
- The Nebraska ACC **2020 Annual Meeting** will occur in-person with social distancing measures on **October 28** from 4:30 to 8:30 pm at the Regency Marriott (10220 Regency Circle, Omaha, NE 68144), featuring keynote speaker Dr. John Spertus, a pioneer of the National Cardiovascular Data Registry (NCDR), plus dinner and drinks. [Register now!](#)
- The Annual Meeting will also feature the annual **FIT Poster Competition**. Research and case abstracts will be due on September 15. Instructions available on [our website!](#)
- The Nebraska ACC **Cardiovascular Team Fall Meeting** for nurses, technologists, pharmacists, and other team members will occur on **September 16** from 5:30 to 8:00 pm at Spezia (3125 S. 72nd St., Omaha, NE 68124). E-mail CVT Liaison [Jessica Livingston](#), MSN, RN-BC, AACC to help plan. Registration is available on [our website!](#)
- In lieu of the annual Spring Advocacy Event (cancelled due to COVID-19), we are planning to meet in Omaha with Nebraska State Senator Machaela Cavanaugh, who has championed raising the smoking age and increasing the tobacco tax. Watch your e-mail for details.
- We want to hear from YOU! Contact [Dr. Anu Tunuguntla](#) if you would like to **write for this Newsletter**. The Newsletter features four brief articles quarterly: Chapter News, Cardiology Update (by a cardiologist), FIT Corner (by a fellow in training), and CVT Corner (by a CV team member).
- Please **follow us** on [Twitter](#) and [Facebook!](#)



Andrew M. Goldsweig, MD, FACC, FSCAI, RPVI
Governor, Nebraska ACC



Nebraska
CHAPTER



CARDIOLOGY UPDATE

TRANSCATHERTER MITRAL VALVE REPAIR

Transcatheter mitral valve repair or edge to edge repair of the mitral valve is a percutaneous technique for repairing the mitral valve in patients with severe mitral regurgitation. This technique builds on the principles of Alfieri stitch that was used to perform surgical mitral valve repair. In the edge to edge repair, a MitraClip device (Abbott Vascular) is used to perform percutaneous mitral valve repair. The MitraClip is a cobalt-chromium implant that has two arms with grippers that are controlled by the controlling levers located on the handle of the delivery device. The mitral regurgitation jet and mal-coaptation zone of the mitral leaflets is localized using transesophageal echocardiogram and the MitraClip is positioned at the site of the regurgitation and the anterior and posterior leaflets are grasped between the grippers and the arms and the clip arms are coapted to increase the coaptation of the anterior and posterior mitral leaflets. Depending on the zone of malcoaptation and the severity of mitral regurgitation multiple MitraClips may be used to decrease the severity of the mitral regurgitation. The goal of the procedure is to decrease the severity of the mitral regurgitation by at least 50%.

Indications:

1. Severe degenerative mitral regurgitation with prohibitive surgical risk
2. Mixed (functional and degenerative) with prohibitive surgical risk
3. Functional mitral regurgitation

Contraindications:

1. Moderate to severe mitral stenosis
2. Bioprosthetic mitral valve regurgitation
3. Rheumatic mitral valve regurgitation

Pre-procedural work up:

The pre-procedural work up of these patients includes transesophageal echocardiogram to evaluate the severity of mitral regurgitation and localize the zone and degree of mal-coaptation. Also, mitral valve area and the gradients across the mitral valve are evaluated to rule out significant mitral stenosis. Left heart catheterization is recommended to rule out any significant coronary artery disease and percutaneous coronary intervention may be performed if the patient is not a surgical candidate. Right heart catheterization is also recommended to evaluate filling pressures and pulmonary pressures. Following the work up it is recommended that the patient undergo a multidisciplinary evaluation by the heart surgeon and the interventional cardiologist to determine the patient's surgical risk and if the patient is not a surgical candidate then the patient should proceed to transcatheter mitral valve repair.

Key Procedural steps:

1. General Anesthesia and intraoperative transesophageal echocardiogram.
2. Femoral vein access with 24 French access.
3. Trans-septal left heart catheterization using a posterior and superior location on the fossa ovalis.
4. Positioning of the MitraClip steerable guide in the left atrium
5. Advancement of the MitraClip into the left ventricle underneath the mitral valve leaflets after localization of the regurgitation jet and the malcoaptation zone.
6. Deployment of the clip and verification of the stability of the clip and decrease in the severity of regurgitant jet.
7. Additional clips are deployed if needed.
8. Removal of the delivery system and guide followed by hemostasis.

Post-procedural care and follow-up:

Patients are monitored overnight and depending on their recovery are discharged within 24-48 hours of the procedure. Patients not on oral anticoagulants or antiplatelet agents are given dual antiplatelet therapy for up to 6 months. Patients already taking these agents are continued on those agents for the duration of the primary indication. Patients are subsequently followed up at 1 month and 1 year with transthoracic echocardiogram to confirm reduction in the severity of mitral regurgitation. Qualitative tools to measure functional and symptomatic improvement are also performed during these visits.

Conclusion:

Percutaneous mitral valve repair is a good alternative for the treatment of degenerative mitral regurgitation in patients who are prohibitive risk patients for undergoing surgery and based on the most recent evidence in functional mitral regurgitation patients, this procedure has also been approved for the treatment of patients with severe functional mitral regurgitation.

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FIT CORNER

LIFE OF A FIRST YEAR FELLOW- SURVIVAL TIPS

Exactly a year ago, when I set foot into the first day of my fellowship, I had mixed feelings. Pride, happiness, joy, nervousness, anxiety, and above all, excitement to do the job that I've always wanted to do ever since I started my journey in medicine.

Transitioning from residency to fellowship overnight is not an easy task. One day you're a resident asking for cardiology consultation while the very next day you find yourself on the other side giving your recommendations. I wish there were a magic potion that you could drink and become a cardiologist overnight. Unfortunately, we don't live in Hogwarts! The first few months of fellowship was a steep learning curve for me, and I'm pretty sure it was the same for all my co-fellows. For those of you like me who are taking their Internal Medicine boards in August, you're up for a tougher time.

The one skill I'd highly recommend everyone to learn quickly is POCUS echo. In my humble opinion, that's what differentiates cardiology and non-cardiology folks. Being able to perform and interpret a bedside echo gives you the confidence to answer questions on call.

Learn the different criteria for STEMI. Anyone can identify a classic STEMI. Your role as a cardiologist comes when you have to distinguish STEMI from pericarditis or aortic dissection or a massive PE. Know the different criteria for STEMI, such as posterior STEMI, LBBB, RBBB, identify STEMI in the face of new-onset high-grade AVB or severe MR or cardiogenic shock. Know to recognize SCAI stage D shock and when to call for mechanical circulatory support. Get comfortable with device interrogations and managing temporary pacers.

Never hesitate to call for help when unsure. It's always better to be safe than sorry.

Some useful resources I'd like to share –

The ASE guidelines will help hone your echo skills and interpretation. The ASE videos highlight the salient features of the guidelines. Another valuable resource that I found extremely useful is the weekly lectures and grand rounds series from The Houston Methodist DeBakey Cardiovascular Education that's available for free on YouTube. The Mayo board review gives an excellent overview of bread and butter cardiology.

Explore the research opportunities available in your program. Getting involved with your local or even the national ACC Chapter helps with networking and expanding your research potential. Finding the right mentor is a crucial part of the journey. If you've not chosen your sub-specialty yet, that's fine. You have plenty of time to explore all the available pathways and select your area of interest. Don't be surprised if you change your mind from one specialty to the other. Try to enjoy your time while acquiring new knowledge and skills.

Last but not least, sign up for twitter and be part of #cardiotwitter community. It's a great platform to learn and network from leaders in the field.

I want to welcome all the incoming fellows to the most exciting phase of your medical training. The training phase may be different, given the current COVID crisis, but nevertheless, there are always ample opportunities to learn. Utilize them wisely. Good luck, everyone!

Swethika Sundaravel, M.B.B.S.
General Cardiology Fellow





CVT CORNER

ATTITUDE OF EXCELLENCE: OWN IT!

What is the role of Cath Lab staff? In some Cath Labs, the staff are treated as little more than technicians who are expected to keep quiet and only fetch product, push meds, or press the buttons needed. Is that really what being Cath Lab staff is about?

I would propose that the Cath Lab staff is far more, and that our role is really to learn and know everything needed to make the physician’s job easier and more efficient while keeping the patient safe. The staff must be familiar with the physician’s thought process. In essence, *the staff has to “get inside the doctor’s head”* to figure out how s/he thinks in order to anticipate what the physician will be asking for next or what next step s/he will be expecting from us. The staff must be familiar with cardiovascular anatomy, hemodynamics, rhythms, fluoroscopy, diagnostic and interventional tools, how these devices perform and react in the vasculature, *plus* troubleshooting our equipment.

In reality, we staff are more than technicians. We are specialists. Being a specialist in a Cath Lab requires a certain attitude: ***no matter how good I am, I need to be better.*** Never settle for “good enough” or expect someone else to have the knowledge. *Take ownership of your role in this lab.* Obtain RCIS certification. Learn all there is about this job, so that you will be more fully equipped to jump in and help your teammates, the physician, and ultimately, the patient.

Patrick Roos BA, RCIS, RT(R)

ACC CV TEAM NEWSLETTER

Did you know? The ACC has a monthly newsletter for CV Team Members. Click on the link below to learn more about what is happening on the national stage!

Read the ACC CV Team Newsletter [here!](#)

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