

Transcript Details

This is a transcript of a continuing medical education (CME) activity. Additional media formats for the activity and full activity details (including sponsor and supporter, disclosures, and instructions for claiming credit) are available by visiting:

<https://reachmd.com/programs/cme/summing-up-essential-echo-imaging-structures-and-evaluation-for-ph/15246/>

Time needed to complete: 1h 55m

ReachMD

www.reachmd.com

info@reachmd.com

(866) 423-7849

Summing Up: Essential Echo Imaging, Structures and Evaluation for PH

Announcer:

Welcome to CME on ReachMD. This episode is part of our MinuteCME curriculum.

Prior to beginning the activity, please be sure to review the faculty and commercial support disclosure statements as well as the learning objectives.

Dr. McLaughlin:

Hello, and thank you for joining us for this roundtable. We're going to try to sum up some of the main points of our echo series. I'm Val McLaughlin from the University of Michigan. And I'm delighted today to be joined by Bettia Celestin from Stanford and Ahmed Sadek from Temple. Thanks, you guys, for joining me.

Dr. Sadek:

Thank you.

Dr. Celestin:

Thank you.

Dr. McLaughlin:

So Bettia, we talked a lot about echo. It's really what gets many people into our doors in pulmonary hypertension centers. Can you please describe what are the most essential images from the echo that helps us raise the suspicion of pulmonary hypertension?

Dr. Celestin:

Yeah, thank you. So just to resume, we have to have a good view of the right heart. So in the past in our long axis and parasternal short axis, the short axis is really important to have a good yield RVOT and have a good signal of the Doppler for the signal of the tricuspid regurgitation and the pulmonary tract of flow too. And we have to have good images on the four-chamber centered on your right heart to have the good evaluation of your right heart function. So the functional area changed, the strain and good TAPSE and more. And you can have also the regurgitation flow of the tricuspid valve to further have RVSP. And the last one is a view on the subcostal, and you have to have like good view of the IVC. And if you have like this, all this good view, it's almost a good assessment of your right heart and the right heart feature for pulmonary hypertension.

Dr. McLaughlin:

Yeah, that was a great summary. I'm going to take that one step further. Like you get all of this information, pulmonary artery pressures, all the right heart views, how do you integrate that together to decide what your concern for pulmonary hypertension is?

Dr. Sadek:

Right. I think the main emphasis is that the pressure estimate, the PASP, is not the sole criteria here, that it has its limitations, both from kind of an overestimation standpoint, and probably in a kind of more concerning and dangerous standpoint is underestimating and having a patient not get detected. And so I think the structures, the structural criteria, things like that the short axis view, seeing the interventricular septal flattening, or the RV/LV ratio at the base, kind of harder structural endpoints sometimes are clearer and are harder to miss in some regards. And they actually tell you more information about how well conditioned the right heart is to that level of

pulmonary pressure.

Different patients can have the same level of PASP, but the right heart can look dramatically different. And their risk is very different in that regard. Depending on how we'll condition that right heart, the size, the function, the degree of interventricular septal flattening is to that degree of pulmonary hypertension.

Dr. McLaughlin:

Yeah, so it's putting the TR velocity in context with all of those other signs that kind of pushes you low, intermediate, or high risk in terms of a newly or a patient that's referred to you.

Bettia, what about screening opportunities, like there are some patients that perhaps should get screening echos, and how do you treat that differently or the same?

Dr. Celestin:

For the screening, we have to – all the features that we already mentioned, and can help us to have like the - to evaluate the patient about the severity of the PH. So when we have all these features, we can have like a graduation and try to grade the severity of the patient. And it helps us to manage all the treatment for the patient and to discuss with all the physician, all the team. What about the echo images and what the echo images can bring to try to discuss about treatment?

Dr. McLaughlin:

Yeah, great point. Ahmed, in some certain populations like those with scleroderma or those with portal hypertension, do you think about that any differently? Any other tools in those patient populations?

Dr. Sadek:

Yeah, especially with the scleroderma patients, you know, the index of suspicion has to be really low since it is very common, and when pulmonary hypertension does occur in scleroderma, it's very aggressive. So there's kind of that the DETECT algorithm which is really useful, relies kind of on the DLCO on the PFTs as kind of your initial gate, and then from there, there's kind of lab criteria and so on that you look at, and then you move on there to then assessing the echo. And that echo aspect is really essential. But it's a nice system that really ensures that you don't miss anyone and kind of don't miss a lot of patients while at the same time, not refer every single scleroderma patient over for right heart catheterization. So DETECT is a nice sensitive algorithm that kind of maximizes that.

Dr. McLaughlin:

Yeah, so I think this has been a great conversation. You know, an echo is usually what gets patients in our doors, it often gets ordered in a patient who's short of breath. It's really important for the echo to be of technically high quality to get the images of the right heart and Doppler indices to look at not just the TR velocity, but other supporting signs of pulmonary hypertension that give us an index of suspicion as to whether or not we need to proceed to a right heart catheterization.

So Bettia, Ahmed, thank you so much for joining me today.

Dr. Sadek:

Thank you.

Dr. Celestin:

Thank you.

Announcer:

You have been listening to CME on ReachMD. This activity is jointly provided by Global Learning Collaborative (GLC) and TotalCME, Inc. and is part of our MinuteCME curriculum.

To receive your free CME credit, or to download this activity, go to ReachMD.com/CME. Thank you for listening.