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Time needed to complete: 1h 55m

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Differentiating Group 1 From Group 2 PH Using Echo

Announcer:

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

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Dr. Celestin:

Good morning. I'm Bettia Celestin. I'm a Cardiologist in Stanford. And I'm going to present to you the differentiation between Group 1 and Group 2 PH.

To try to have sign in echocardiography to make a difference between Group 1 and Group 2 PH, we can try to have a little reminder in the ESC recommendation. When we go through the ESC recommendation, we know that Group 1 PH, and Group 2 are really very different because the Group 1 PH is really rare, and the Group 2 is really frequent. So it's not the same prevalence, it's not the same medical history, it's not the same treatment. So that's why it's really important to try to have some sign of differences in the echo.

The etiology is really independent of the mechanism of what happened in the right side, because you have the right ventricular pressure overload and after the right heart dysfunction, so when you do the echo, you have some sign and some accurate signs that give you information on the right side and the left side. And this is the point to have some sign to make differences between Group 1 and Group 2 PH.

So, the sign can be the morphology of your RV and the shape of your RV, the shape of the LV, the RV function, the LV function, you can have some information on your valve. So, if you have some valvular disease, you can find it in the echo and you can estimate some hemodynamic parameter. We know that we have to do the right heart cath to do the diagnosis, but you can have some hemodynamic sign in the echo. And you can detect some sign associated with left heart disease and congenital heart disease.

So, you have different metrics that you can try to detect in the echo. You have the left atrium size, LV dimensions, if you have maybe some dilatation, for example, or if you have the LV function, you can estimate the LV function, and if you have some sign of LV hypertrophy, for example. And in the Doppler, you have some Doppler signs that you can use in the color Doppler if you have some valvular disease for example, in the continuous Doppler, in the pulse wave Doppler if you have some diastolic functional dysfunction, and it's the same for the tissue Doppler, you can diagnose some diastolic dysfunction. And in some cases, we can have some (inaudible) with contrast and TTE.

So, we have a table to try to have - we try to do - to have different sign that maybe he can help you to know if you have sign of Group 1 or more of Group 2.

In Group 1, you have the sign that we already described it, you have the flattening of the interventricular septum, you have the right atrial dilatation, you have the right ventricular dilatation, you have the dysfunction of your RV, you have a notch on your pulse wave Doppler in the RVOT, and you have the dilatation of the IVC.

In the Group 2, you can have the left heart valve disease, you can have left heart dilatation, you can have dysfunction of your LV





function, and you can have dysfunction of your systolic LV function, and you can have hypo or a-kinesis of some role of the LV.

So we have some pictures that can be really relevant to try to have some sign to some difference between your Group 1 and your Group 2 of PH. So as your Group 1, you can see that you have dilatated, you have a dysfunction of your RV, you have you have the right dilatation, you have the septal curvature, you have the reversal of septal curvature, you have a small LV.

And in the opposite side, in the Group 2, you have a right heart with normal size, you have a right heart RV with a normal size. And in some cases, you can have LV hypertrophy and left atrial enlargement. So RV sign can help you to try to have some difference in the diagnosis in Group 1 and Group 2 of PH.

So thank you for listening my presentation. Thank you for participating in this program. And I hope this helps you to learn more about PH.

Announcer:

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