Infections in right-sided heart valves often leave doctors with no right answer

A normal human heart has four chambers and four valves. When these valves are working well, they stop blood from flowing backwards and are essential to good heart function. Two valves are in the right side of the heart, the tricuspid and pulmonic valves, and two of the valves are in the left side of the heart, the mitral and aortic valves.

A 3-dimensional reconstruction of a heart ultrasound. The arrow points to a large vegetation, which in this case is a mass of bacteria that has affected the pulmonic heart valve.

In rare and serious cases, the heart valves can become infected. This condition is called endocarditis ("*endo"* refers to "inside" and *"carditis"* refers to "heart inflammation"). Endocarditis can affect any of the heart valves. However, they more commonly affect the valves on the left side of the heart. Because of this, there is much less study on right-sided endocarditis and more debate about the best way to manage it.

In this scientific paper, we presented a rare case of right-sided endocarditis affecting the pulmonic valve. The figure shows a 3-dimensional reconstruction from a heart ultrasound that shows the infected valve. Infections on the pulmonic valve are even rarer than infections of the tricuspid valve, which is the other right-sided heart valve. Because it is so rare, we looked every case of pulmonic valve endocarditis that occurred at Brigham and Women's Hospital and Massachusetts General Hospital. In the past 15 years, only 7 patients had been treated at these hospitals for pulmonic valve endocarditis. We found that these cases of pulmonic valve endocarditis are caused by a wide variety of bacteria and often required surgery to take out the diseased heart valve.

Although this manuscript adds to the knowledge about pulmonic valve endocarditis, we need to

continue to study this topic in order to be able to really understand exactly what leads to this condition and how best to treat it.

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