Scoring system improves screening for 'dual' heart disease

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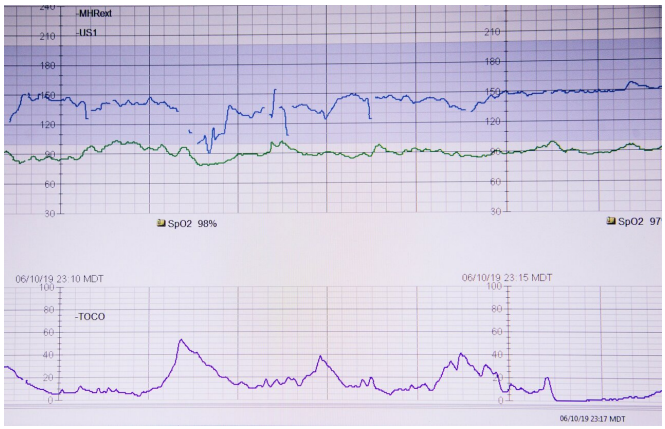

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Aortic stenosis is one of the most common heart valve defects. Its prevalence increases with age and it often requires treatment. As well as conventional valve replacement involving open-heart surgery, a less invasive procedure has now been available for some time in the form of transcatheter aortic valve replacement (TAVR). In this procedure, the new valve is implanted during a cardiac catheter examination. This minimally invasive procedure is an important treatment option, especially for older patients.

Up until now, it was not clear whether patients with an additional condition, cardiac amyloidosis, would also benefit from a valve replacement. In this heart condition, amyloid protein deposits cause the heart muscle to thicken and harden. As a result, the heart is no longer able to contract and expand evenly, so that the blood supply to the body is compromised.

The recent study looked at the coincidence of both diseases in aortic stenosis patients referred for a TAVR procedure, as well as any prognostic implication. Overall, cardiac amyloidosis was detected in one in eight of the 407 aortic stenosis patients examined. Since it is not economically or logistically feasible to carry out a DPD bone scintigraphy scan (a sensitive test to identify cardiac amyloidosis) on all TAVR patients, the study team developed a scoring system based on simple clinical parameters to screen for dual heart disease.

"The scoring system enables us to use simple clinical parameters such as ECG changes, above-average cardiac hypertrophy or existing or operated carpal tunnel syndrome, to predict the probability of concomitant cardiac amyloidosis in aortic stenosis patients, so that they require further investigation using DPD bone scintigraphy," says lead investigator Christian Nitsche from the Division of Cardiology, Department of Medicine II of MedUni Vienna and Vienna General Hospital.

The study published in the *Journal of the American College of Cardiology* also found that both aortic stenosis patients with concomitant cardiac amyloidosis and those without this additional heart disease benefit from TAVR. "The results show that the minimally invasive TAVR technique is suitable for both groups. We therefore conclude that TAVR should not be withheld from aortic stenosis patients who also suffer from cardiac amyloidosis," says Nitsche.

Further studies are required to determine whether the drugs used to treat cardiac amyloidosis improve survival in dual heart disease on top of aortic valve replacement.

More information: Christian Nitsche et al. Prevalence and Outcomes of Concomitant Aortic Stenosis and Cardiac Amyloidosis, *Journal of the American College of Cardiology* (2020). DOI: 10.1016/j.jacc.2020.11.006

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