**Title: TCT 24 - EVOLVED: Early Intervention in Patients with Asymptomatic Severe Aortic Stenosis and Left Ventricular Decompensation**

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**What is the reasoning behind the trial?**

Probably the biggest question in the field of aortic stenosis over the last 50 years is when we should replace the aortic valve in patients with aortic stenosis. And so far our strategy has been based on small retrospective studies. And so we wanted to do a randomised controlled trial to see whether intervening early in asymptomatic patients with aortic stenosis improves outcomes.

**What was the study design and patient population for EVOLVED?**

We wanted to look at patients with asymptomatic severe aortic stenosis. But the important thing about EVOLVED is that we also had an enrichment protocol. So we wanted to pick out high-risk patients that are most likely to get a benefit from early intervention.

So to do that we went through a couple of stages. First, we screened people and excluded low-risk patients who had a normal ECG and a normal high sensitivity troponin. And then in the second stage, we did an MRI scan and only included patients who had the high-risk feature of mid-wall scarring in their ventricle. So in those patients, we then randomised them to either early intervention or to the routine care waiting for symptom development.

**What were the key findings and take-home messages?**

Yeah, so essentially we randomised 224 patients, and we found no difference in the primary endpoint of death or aortic stenosis related hospitalisation. But if you broke those two things down into their separate components, while we saw no difference in deaths, we did see a reduction in hospitalisations in the patients treated early in the early intervention arm with a hazard ratio of 0.37. In combination with that, we also saw that those patients treated early had less symptoms at one year than the people who had delays to their treatment.

So I think if you put that together, and in particular, because similar results were also reported in the early TAVR trial, it suggests that there is a benefit to intervening early in patients with aortic stenosis. We don't have to wait for symptoms, but the rationale for doing that is not because we're going to make people live longer, but because we're going to make them live better. They get less likely to be in hospital, they're less likely to have symptoms. And so I think it may well result in a change in the guidelines, a change in how we treat patients.

And I think we should at least be offering this as an option for patients. And I think it's going to be interesting because I know some patients who aren't going to be interested in having a procedure where they feel well, and that's fine. But equally, I've also got patients who I think will be really interested in being proactive and having an intervention up front and early to keep them feeling healthy, to keep them feeling well, to keep them out of hospital. So I think it's exciting. And finally, we have some, you know, we've now got four randomised controlled trials telling us, you know, kind of what the benefits of early intervention are.

**What further research is needed, and what are the next steps?**

So I think the next steps is, well, I think we need discussion and I think the community need to decide how they interpret these trials altogether. The ESC guidelines are coming out next year. It'll be really interesting to see whether this leads to a change in the guidelines. I suspect it may do.

In terms of future trials, there are two ongoing trials, the DANCAVAS trial and the EASY-AS trial, which are larger trials. They will give us more information in this area and I think will help address any lingering issues. For example, would we see a mortality benefit if we had intervened earlier and early in EVOLVED? Would they have seen a mortality benefit in EARLY TAVR if so many patients hadn't crossed over so early? So there are still some important questions. They're going to be answered by these trials that are ongoing, but I think we probably have enough information already to think carefully about changing the guidelines.