- So my name is Emilie Frimodt-Moller. I'm a medical student from University of Copenhagen in Denmark, and is currently holding a position as a junior research specialist at University of California, San Francisco. I'm here to present or talk about this study, 'Effect of Intensive versus Standard Blood Pressure Treatment on Incident Left-Ventricular Conduction Disease'.

Aim, study design and endpoints

Yeah, so, a little background of the study is that we know that cardiac conduction disease can lead to poor outcome, including heart failure and eventually death, but the prevention of cardiac conduction disease is still not part of cardiac care. And I think the reason for that is that we actually don't know how to prevent it or even if we can prevent it. So right now, the way we think about conduction disease is that it's not a modifiable outcome but more like it's just bad luck for the patients. So previous studies, which have all been observational, they have found a common predictor of conduction disease, which is hypertension. And this is especially associated with left-ventricular conduction disease. So that is fascicular and left bundle branch block. So we thought that if hypertension can increase the risk of left-ventricular conduction disease, then maybe we can prevent the development of left-ventricular conduction disease by a more aggressive blood pressure control. So the aim of this study was to test that hypothesis, and then we were very lucky to be able to use data from the SPRINT trial, which was a two multi-center randomised clinical trial that randomised hypertensive individuals to receive either a standard blood pressure treatment for a systolic blood pressure target below 140 millimetre mercury or an intensive treatment for a systolic target below 120 millimetre mercury.

Main findings

So our endpoint was left-ventricular conduction disease which is fascicular bundle branch block and left bundle branch block. Yes, so our main findings was that the participants randomised to an intensive blood pressure control had a 26% lower risk of developing left-ventricular conduction disease. And this was very consistent across all of our analysis and also when we considered all-cause death as a competing risk. Another quite interesting finding was that the risk of right bundle branch block did not differ between the treatment groups. So that was kind of a negative control to our main findings.

Patient eligibility

Of course, we cannot generalise these findings to all patient populations. We do have some limitations with that. We didn't look at patients who already had left-ventricular conduction disease. All of our patients, they were free of left-ventricular conduction disease at baseline but I don't see any reasons for not to think of this patient group as being able to benefit from a more aggressive blood pressure control.

Take-home messages

I think our take-home message is that the way we see conduction disease, first of all, a take-home message is that we saw a high reduction in left-ventricular conduction disease by more aggressive blood pressure treatments, and the way we see conduction disease should not be that it's just bad luck for the patient but that it actually is a modifiable outcome that is susceptible to prevention strategies.

Next Steps

I think there are a couple of next steps but what's very important is to continue looking into modifiable risk factors of conduction disease, since hypertension is likely only one among other risk factors that we can actually modify and therefore try to prevent conduction disease. But it would also be very important to identify the individuals who is at highest risk of developing left-ventricular conduction disease so that we can identify the individuals who would benefit the most from a prevention strategy with least harm.