**Title: CRT 23: PCI Vs CABG in Left Main Coronary Artery Disease With or Without Diabetes: A Pooled Analysis**

**Participants: Dr Prakriti Gaba**

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**Dr Prakriti Gaba**

" My name is Prakriti Gaba and I'm a cardiovascular medicine fellow at the TIMI Study Group and Brigham and Women's Hospital in Boston.

Rationale for Pooled Analysis

So, you know, dating back to the 1990s, when the BARI trial data came out, there were questions regarding which approach is the best revascularization approach for patients with coronary disease. Is it PCI, or CABG? And at the time, the thought was that CABG by far was the best approach for those individuals with diabetes. Now, over the last few decades, we've seen improvements in PCI and stent technology, and there have been more trials that have been conducted to understand which revascularization method is better. Now, in patients with left main disease who are especially at high risk, the question is still being explored. And there were several trials that explored this question, including the PRE-COMBAT, SYNTAX, NOBLE and EXCEL trials. And a big meta-analysis was published last year to sort of actually explore this question in all comers. We thought that patients with diabetes were especially at high risk. And so, we wanted to understand whether in patients with or without diabetes, with left main disease, is CABG still better, or does PCI have good outcomes?

Patient population and Study Design

So, we actually included individual-level patient data from the four randomized trials I mentioned earlier, and patients were sort of categorized based on the presence or absence of diabetes and then also by whether or not they underwent PCI or CABG.

Key Findings

So, the key findings are that in all four trials, about a quarter of patients, 25% had diabetes. And overall, we found that patients with diabetes just tended to have higher rates of adverse events. They had worse survival than patients without diabetes. They had more cardiovascular death, more spontaneous myocardial infarction, and higher rates of needing repeat revascularization. The second part of our analysis then focused on the revascularization question. Okay, so now if you look at diabetics and patients that don't have diabetes, is PCI or CABG better? And what we found was revascularization with PCI versus CABG actually led to similar survival regardless of diabetes status. There was, however, some difference in non-fatal events. So there was a lower risk of early stroke within the first year with PCI as opposed to CABG. And then down the road at the five-year mark, we did see a higher rate of spontaneous MI and repeat revascularization in patients undergoing PCI as opposed to CABG. So ultimately, there's no difference in survival. And so we really think that a heart team approach, where you sort of weigh the risks and benefits of the procedure with the patient and cater it on an individual basis is the most important. But for patients that are reasonable candidates for PCI or CABG and sort of fit some of the parameters that we outlined in this pooled analysis, I think you could really go either way.

Impact on Daily Practice and Future Research

Ultimately, this is the question we're trying to address here, because patients with left main disease and those with diabetes are just so high risk. So we want to just make sure we’re giving them all the options that are available. And I think the takeaway is that if a patient is equally suitable for PCI or CABG and has diabetes or doesn't have diabetes, you can consider either approach PCI or CABG in them. So the next steps are I think this question has been addressed pretty well now in several individual trials and now this meta-analysis but we'd like to understand more about whether other characteristics of patients with left main disease influence their outcomes and impact, which revascularization strategy is best for them. So we're continuing to do more analyses within this pooled database, and we’ll keep you posted on other findings.”