

Title: ESC 23: OCTIVUS: OCT Vs IVUS-Guided Percutaneous Coronary Intervention

Participants: Dr Duk-Woo Park and Dr Do-Yoon Kang

Date: 28th August 2023

Dr DW Park

" My name is DW Park from Asan Medical Centre, Seoul, Korea. I'm PI of the OCTIVUS trial.

Dr Do-Yoon Kang

I'm Do-Yoon Kang from the same centre and the first author of the OCTAVIUS trial manuscript.

The Unmet Need for this Study

Dr DW Park

The key unmet need, in real practice we are widely using intracoronary imaging-guided PCI. In the real world, we have two very nice tools, one is IVUS, one is OCT, but until recently there is no comparative effectiveness [indistinct] comparing OCT versus IVUS for PCI guidance. That was a main need. The reason why we do such like OCTIVUS trial.

Dr Do-Yoon Kang

And we enrolled patients, 2000 patients with a diverse coronary artery anatomy. Also including complex lesion subsets and the results showed that the non-inferiority of the OCT compared to the conventional IVUS imaging guidance in all-comer PCI subsets. The event rate was about 3% in both groups and showed non-inferiority.

Patient Population and Study Design

Dr DW Park

Yes, as a patient population, we tried to enrol the diverse anatomical and clinical factors. This is a pragmatic design. We include as much as possible minimal exclusion criteria. Major

exclusion criteria was just the STEMI EJFR less than 30% is [indistinct], the CKD and the Ejection fraction less than 30% and the cardiogenic shock, that was a minimum exclusion criteria was adapted in our OCTIVUS trial.

Key Findings

Dr Do-Yoon Kang

The primary endpoint was the target vessel failure. A composite of cardiac death, target vessel myocardial infarction and target vessel revascularization at one year after index the randomization and the trial results showed that the 2.5% of the target vessel barrier at OCT group and 3.1% in IVUS group they showed significant non-inferiority was approved.

Dr DW Park

If you're going to use the IVUS or if you're going to use the OCT that there is a safety concern in our trial, enrolled 2008 patient, we didn't find any OCT or IVUS procedure-related safety complications overall procedural complications requiring active intervention was slightly lower in the OCT group rather than the IVUS group. Our trial absolutely demonstrated that if you're going to do intracoronary imaging guided PCI using OCT or IVUS and the safety issue.

Dr Do-Yoon Kang

It doesn't matter absolutely and the amount of the contrast used were a little bit higher in OCT group. However, the rate of the contrast-induced nephropathy was not different between groups.

How These Findings Should Impact Clinical Practice

Dr DW Park

That is the most important question how can you apply our trial findings in your daily PCI practice? Absolutely. Many, many trials show if you're going to do intracoronary imaging guided

PCI that it guarantees better outcome compared to angiography-guided PCI. There are two options of intracoronary imaging IVUS or OCT and in your choice, in your preference, in your experience, you can choose anyone that could be shows the comparable efficacy and safety outcomes. That is our key practical message, In the OCTIVUS trial.

Remaining Questions and Next Steps

Dr Do-Yoon Kang

We enrolled all-comer patients and intravascular imaging. The benefit of the intravascular imaging is well-known over the angiographic-guided PCI. However, we still have some questions that the intravascular imaging would be needed for all patients or some complex PCI subsets. So we need more data over that. And also we are preparing the key subgroup analysis of the complex PCI subset patient.

Dr DW Park

Today the highlight session four at the ESC this year. This is absolutely wonderful section. I have never seen before such like interventional imaging-specific trial session. So I think our highlight session is very one of highlighted sessions of the ESC. I think this session has provided a lot of evidence to boost the using of intracoronary imaging-based PCI in your practice. That would be a very critical key point of this meeting in the next future."