1. Abstract Title:

Irregular Protrusion is Correlated With Development of Neoatherosclerosis After New Generation Drug-Eluting Stent Implantation: Optical Coherence Tomographic Study

2. Abstract Category (from attached list):

Interventional Cardiology: Intravascular Imaging and Coronary Physiology

3. Keywords (between 1 and 3 from attached list):

Drug eluting stent, Neoatherosclerosis, Optical coherence tomography

4. Abstract Body (maximum 1900 characters, not including spaces):

If you have an image or table to include, your abstract body cannot be more than 1300 characters, not including spaces

Background: We examined the correlation between irregular protrusion area and the 8-month development of the neoatherosclerosis after new generation drug-eluting stent (DES) implantation.

Method and Results: We enrolled 117 consecutive patients (134 lesions) with 2^{nd} and 3^{rd} generation DES who received pre and post-stenting optical coherence tomography (OCT) imaging between December 2015 and August 2018. The lesions were divided into 2 groups: NA group which had the development of neoatherosclerosis in 8-months follow-up OCT and non-NA group which did not have. Neoatherosclerosis was defined as a lipid neointima or calcified neointima. As a result, maximum irregular protrusion area was significantly larger in NA group than non-NA group. Receiver operating characteristic curve revealed that the cutoff value of maximum irregular protrusion area for NA group was 0.16mm2. Multivariate analysis revealed that major irregular protrusion, defined as maximum irregular protrusion area was $\geq 0.16 mm^2$, was the significant and independent factor correlated with the 8-month development of neoatherosclerosis.

Conclusion: Major irregular protrusion in post-stenting OCT imaging may be a powerful predictor for the 8-month development of neoatherosclerosis after new generation DES implantation. (1297 characters)

5. Clinical Implications (complete the following sentence):
   ***My study will help enable cardiovascular clinicians to...**

My study will help enable cardiovascular clinicians to use major irregular protrusion, defined as maximum irregular protrusion area was 0.16mm2 and more, in post-stenting OCT as a powerful predictor of the 8-month development of neoatherosclerosis after DES implantation.

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