higher necrotic core content in atherosclerotic plaques derived from ACS patients. VH is a new, promising method of atherosclerotic plaque evaluation in vivo. However, one of the major limitations of the VH system is the inability to distinguish intraluminal thrombus from tissues within the atherosclerotic lesion. Currently available VH software categorizes thrombus as fibrous or fibro-fatty tissue, which in case of high thrombus content leads to inaccurate lesion morphology analysis. That is why the system manufacturer (Volcano Therapeutics Inc.) advises to exclude thrombus from the analysis at the stage of manual lumen tracing. Exact identification of the border between thrombus and the atherosclerotic lesion itself is very difficult especially in the case of lesion rupture when thrombotic mass fills the emptied plaque cavity. Such a situation is very frequent in ACS patients’ culprit lesions. Therefore, in our opinion, at the current stage of VH system development, lesions with either angiographic or IVUS evidence of thrombus should be excluded from the final morphology analysis.

References

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Coronary plaque composition of culprit/target lesions according to the clinical presentation: comment

In their article, Surmely et al. describe the differences in atherosclerotic plaque morphology, assessed by Virtual Histology (VH) between patients with chronic stable angina and acute coronary syndromes (ACS). Analysed plaques were considered to be the culprit or target lesions. Interestingly, ACS patients’ plaques were characterized by significantly higher content of fibrous and fibro-fatty tissue than lesions observed in stable angina subjects. This observation is opposite to the previously published data, derived from both histopathology and VH studies, which indicate