1003 **A successful very elderly case treated with IVL to the highly calcified stenosis at circumflex orifice.**

Mitsunobu Kaneko1, Daisuke Shiihara1, Hikari Nishiyama1, Naoko Inoike1, Naoto Watanabe1, Tsubasa Matsuzaki1, Hisatoshi Minato1, Mizuki Sugano1, Yugo Nara1, Yu Otsu1, Tomoko Terai1, Masashi Kasao1

[1]Department of Cardiology, Tokyo Metropolitan Police Hospital, Japan

Debulking devices are indispensable for patients with ischemic heart disease who have highly calcified lesions. Intravascular lithotripsy (IVL) is often useful in difficult to treat cases that volume reduction is desirable but slow flow risk is unacceptable. In particular, highly tortuous orifice lesions like circumflex orifice is difficult to treat by rotational atherectomy (RA) or Orbital atherectomy (OA). The number of patients with complex lesions, including highly calcified lesions, is increasing each year. We would like to discuss a case of an elderly patient who was successfully treated with IVL, as well as several other cases.

The patient was an 89-year-old man who complained of dyspnea on exertion due to congestive heart failure. He had past history of primary PCI to LM-LAD for ACS before eight years, and the orifice of circumflex remained poorly dilated due to severe calcification.

And staged PCI to the proximal RCA had performed, but unfortunately, he repeated restenosis again and again. DCB treatment and re-stenting for three times were performed, eventually resulting in re-occlusion.

Reviewing the previous angiographic and IVUS findings again, the IVUS of circumflex orifice showed some calcified nodules, full circumferential calcification, and the vessel diameter of the target lesion was within 3.5 mm. Because of his advanced age and concomitant interstitial pneumonia, the decision was made to perform PCI only to LMT-LCx with IVL under IABP support and give up bailout of the RCA occlusion.

The use of IVL resulted in good dilatation of the circumflex orifice, and ultimately a culotte stent was performed, providing a grade 2 collateral blood pathway from LCx to RCA. Postoperatively, the patient's symptoms improved dramatically.

It is often difficult to debulk with RA or OA to highly tortuous, angulated calcified stenosis at the orifice of circumflex branch. Needless to say, it is difficult to bring in RA or OA through a strut in already implanted LM-LAD stent. Then IVL is a very useful for the treatment of severely calcified lesions. I would like to briefly discuss the optimal PCI for complex calcified lesions through several cases.