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**HIGH PRESSURE POST-DILATION IMPROVES
IMPLANTATION QUALITY OF DRUG ELUTING STENTS**

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Objectives Effect of high pressure post-dilation on implantation quality of drug eluting stents was evaluated by optical coherence tomography (OCT).

Methods Consecutive patients with acute coronary syndrome and type A lesion in left anterior descending coronary artery (LAD) were enrolled into the study. The nominal pressure of preloaded balloon was used to deliver sirolimus eluting stents. OCT was used then to obtain following parameters: 1. stent apposition rate (SAR). 2. minimal lumen diameter (MLD). 3. minimal lumen area (MLA). 4. maximal distance of strut to endovasculum (DSEmax). 5. apposition strut per centimetre (AS/cm). 6. mean distance of apposition strut to endovasculum (MDASE). Finally, non-compliant high pressure balloons were adapted to dilate the

implanted stents with 18 atm and OCT studies were repeated.

Results Sixteen patients (male 9, 62.34 ± 7.15 years) were enrolled into the study. Total 16 sirolimus eluting stents were implanted in LAD without death and complications. Mean stent length and diameter was 19.75 ± 9.61 mm and 3.14 ± 0.56 mm respectively. Comparison between OCT parameters before and after high pressure post-dilation was shown in table.

Nominate pressure dilation	High pressure post-dilation	p value
SAR 13/16 (81.25)	1/16 (6.25)	<0.05
MLD 2.87 ± 0.76	3.35 ± 0.84	<0.05
MLA 3.25 ± 0.92	3.82 ± 0.81	<0.05
AS/cm 19.3 ± 5.47	2.14 ± 0.35	<0.01
DSEmax 423.51 ± 67.49	51.43 ± 13.25	<0.01
MDASE 317.36 ± 78.24	83.42 ± 21.93	<0.01

Conclusions Stent apposition rate was 81.25% if nominate pressure was adapted to delivery drug eluting stent in type A lesion of LAD. This rate could be decreased 92.31% by post-dilation of 18 atm with non-compliant balloon.