

51st CARDIOCON 2022: ABSTRACT

INTRAVASCULAR ULTRASOUND DERIVED MINIMAL LUMINAL AREA AND PLAQUE BURDEN OF CORONARY VESSELS IN OUR LOCAL POPULATION

Muhammad Ishaq Khan¹, Abid Ullah¹, Rafiullah Jan¹, Shafi Ullah¹

¹Peshawar Institute of Cardiology (PIC), Peshawar, Pakistan

Objectives: To report the average IVUS derived MLAs and plaque burden of coronary arteries of our local population.

Methodology: It was a retrospective observational study. A total of 64 patients having IVUS done from January 2022 to September 2022 was enrolled in this study. IVUS images were acquired using 40 MHz, 3.1 French Opticross IVUS catheter (OptiCross™, Boston Scientific, USA).

Results: Out of 54 patients, 39 (72%) were males with a mean age of 53.7 ± 14.1 years. The left main (LM) disease was found in $n = 43$ (79.6%) on coronary angiogram. The LM mean minimal luminal area was 6.68 ± 1.9 mm² and mean minimal luminal diameter was $3.83 \text{ mm} \pm 1.02$. Mean LM plaque burden was 57% (range 0-57). In proximal LAD mean MLA was 5.04 ± 2.7 mm², mean proximal reference diameter was 3.97 ± 0.64 mm and plaque burden was $53.88 \pm 16.5\%$. The pattern of the plaque was diffuse with more calcified in the LAD than in the left main stem. The mean minimal stent area achieved in patients who had received stenting was 13.05 ± 2.88 mm² in LM ($n = 15$), and 9.71 ± 2.88 mm² in proximal LAD ($n = 30$).

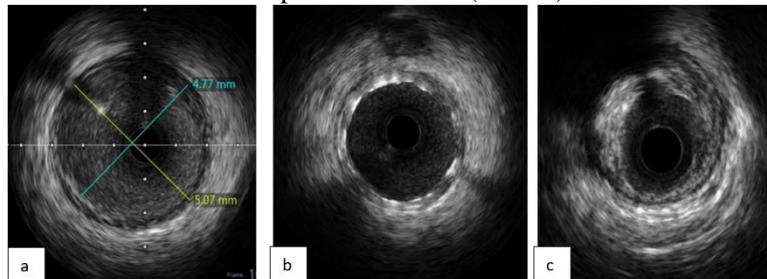


Figure 1: (a). IVUS image of left main artery with minimum plaque. (b) well apposed stent in LAD of a patient, (c). heavy plaque burden with calcification causing drop out.

Conclusion: Our local population has Coronary sizes comparable to those reported in the international literature. The stent size in major vessels like LM and proximal LAD should be guided by the use of IVUS to achieve maximum MSA to reduce adverse outcomes.

Keywords: Intravascular ultrasonography, Angioplasty, Stent

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Corresponding Author: Muhammad Ishaq Khan, Peshawar Institute of Cardiology (PIC), Peshawar.