

# CASE OF THE WEEK

## LIFE WINS

### TOPIC : INTRACORONARY LITHOTRIPSY: SINGLE CENTRE EXPERIENCE



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#### Abstract

##### Background and Aims

Coronary calcification remains a significant challenge for the contemporary interventional cardiologist. We aim to describe the use of intravascular lithotripsy (IVL) in severely calcified vessels in our centre

#### Methods

A retrospective Single-center analysis of patients treated with IVL between June 2019 and January 2024. Technical and procedural success, as well as procedural complications and 30-day outcomes (death, myocardial infarction, or repeat target vessel revascularization), was recorded.

#### Results

26 patients underwent IVL: 78% were male and the mean age was  $70.1 \pm 12.0$  years. LAD was the main vessel to get treated with IVL and 2 underwent IVL in the left main stem. All balloons were successfully delivered with 100% procedural success. There was one procedural complications. At 30-day follow-up, all patients were doing good

#### Conclusions

In this largest Single centre case series of IVL for calcified lesions in central India, we demonstrate that IVL is deliverable, safe, and effective at calcium modification.

Keywords: coronary artery disease, lithotripsy, coronary calcium, percutaneous coronary intervention

**Table 1 - DEMOGRAPHICS**

Sr No.	Baseline Characteristics (n=26)	Percentage (%)
1	Age (y)	72
2	Males	78
3	DM	86
4	HTN	92
5	Hyperlipidemia	34
6	Previous MI	72
7	Previous PCI	70
8	Previous CABG	56
9	Previous CVA	49
10	Renal Insufficiency	67

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**Table 2 - Procedure-related Details**

Sr No.	Procedure details (n= 21)	Percentage (%)
1	Femoral Access	100
2	Arteries treated	
	• LMCA	2
	• LAD	100
	• LCX	56
	• RCA	42
3	Angiographic calcification	
	Mild	48
	Moderate	74
	Dense	100
4	Number of Pulses delivered	80
5	Number of stents	3
6	Use of other calcium modifying modalities	14

**Table 3 - Procedure related Details**

Sr No.	Procedure details (n= 21)	Percentage (%)
1	Femoral Access	100
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3	Angiographic calcification	
	Mild	48
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4	Number of Pulses delivered	80
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6	<b>Use of other calcium modifying modalities</b>	<b>14</b>

**Table 4 - Details the outcomes in our cohort**

Sr No.	Parameters	Percentage (%)
1	Technical success	86.4
2	Procedural success	100
3	• Angiographic complications:	
	• Dissection	0
	• Slow flow	0
	• Perforation	3.84
	• Abrupt closure	0
	• No reflow	0
4	Use of other calcium modifying devices	13.6
5	30-day complications:	
	• Death	0
	• Myocardial infarction	0
	• Repeat target vessel revascularization	0

**What was new !**

Our results establish the efficacy of IVL in treating highly calcified coronary lesions in a range of real-world patients. Comprising many lesions, LMS, Unstable lesions in ACS which were not included in the original DISRUPT-CAD trials of IVL.

**LIMITATIONS**

1. This is a relatively small observational case series from single centre
2. IVL was chosen at the operator's discretion
3. Imaging was not available
4. It did not have any comparison groups.
5. Selection biases in the choice of IVL vs. other calcium debulking device.

Follow-up was limited to 30 days, and longer-term outcomes remain to be seen.

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