



**अखिलभारतीय आयुर्विज्ञानसंस्थान, भोपाल**  
**ALL INDIA INSTITUTE OF MEDICAL SCIENCES, BHOPAL**  
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(Public Relation Cell)  
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## **1. Old man with Heart artery blocked with dense Calcium gets treated in AIIMS with Lithotripsy facilitated Angioplasty**

The cardiology Department of AIIMS Bhopal did a Complex Angioplasty with advanced Intravascular Lithotripsy, on a 70-year-old male a resident of Bhopal. Dr. Gaurav Khandelwal, Assistant Professor, Cardiology Department, and his team has carried out the procedure on 20<sup>th</sup> January.

### **The Coronary artery had 99% occlusion with heavy Calcium**

The old man had a severe chest pain one week back and on emergency basis taken to a nearby Hospital where he underwent Coronary Angiography, which showed that a major vessel supplying to Heart was 99 % occluded with dense Calcium and was as hard as stone, due to which there was hardly any forward blood flow in it. The patient continued to have Chest pain and Shortness of Breath on minimal exertion. The Doctors advised him Coronary artery Bypass Surgery (CABG) due to severe Calcification in the heart artery. Angioplasty was risky, as Stents are not able to expand in Calcified artery, and the Heart Vessels are at risk of perforations/ damage during procedure in such vessels.

The patient then showed to the Cardiology Department at AIIMS Bhopal, where he underwent successful Angioplasty with advanced Lithotripsy technique. Dr. Gaurav Khandelwal said that the patient did not want to undergo Bypass surgery due to Old age. Heavily Calcified Coronary arteries are conventionally treated with Rot ablation (drilling) during Angioplasty, which is riskier. Intravascular Lithotripsy is a new technique, in which complication chances are less. Though few cases have been done in Madhya Pradesh with this technique, but **this is probably the first case in which the main Coronary artery had heavy circumferential Calcification, causing almost total occlusion of the artery.**

### **What is Intravascular Lithotripsy**

In normal Angioplasty, blocked Coronary artery is dilated with balloon and stent is placed to keep the artery open. In Lithotripsy, a special balloon is put in Coronary artery which releases shock waves, and breaks the Calcium chunks by Vibration energy. The stent is then able to get proper expansion, and the artery opens up. This technique was conventionally used to break Kidney Stones externally, but the use of this technique to break calcium in Coronary Arteries is a new concept.

**About 10% Coronary artery patients have Calcified Coronary Artery**

Normally Calcified Coronary Artery patients are advised Bypass surgery. Bypass is considered a major operation, in which patient is hospitalized for 7 to 10 days. Lithotripsy therapy is an effective add-on to angioplasty, especially in patients with disease in a single Coronary artery. It is convenient as patients are awake, no incision is put on body, and patients are discharged in one or two days.

Taking note of the worthy achievement of the Cardiology Department, Prof. Sarman Singh, the Director, AIIMS Bhopal, has congratulated the team and said that the Institute must continue on its path of constant improvement for delivering the very best health care to the people of the region.



**Dr. Lakshmi Prasad**  
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