



# Treatment Zaroori Hai

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**W**hen it comes to India, the situation of heart attacks is not very different in comparison to USA; probably even worse, considering the fact that our young Indian adults are already more susceptible to heart

ailments at a younger age. They get detected with heart issues about 5-10 years earlier compared to the western population.

In Dr Puneet Verma's practice alone, who is the director and chief interventional and structural heart specialist at ACE Heart and Vascular Institute, Mohali, there has been an increase of about 15 per cent in heart ailments in the young and middle age population (25 to 50 years) in the last one decade, more so in the last three years. While lifestyle modification and medication are always the first line of treatment, cardiac emergencies many times need an interventional procedure like angioplasty and stenting to open the clogged arteries.

Today, the latest generation of metallic Drug eluting stents (DES) are the mainstay of treatment option to open the blocked arteries and proven to be safe and efficacious. However, DES are made up of metals like cobalt or platinum-chromium and designed to remain permanently in the heart arteries and sometimes may interfere with healing. The foreign material inside coronary arteries can act as an irritant and lead to long term adverse events. An additional one to two per cent of adverse event rate is reported year on year with metallic DES. Eventually, the permanent implants act as a challenge and hindrance for any future re-do procedures if required in the same artery.

These problems are anticipated to be solved with the advent of next generation dissolving stents or BioResorbable Scaffolds (BRS). The presently available thin strut BRS is made from PLLA polymer which is very similar to the material used in absorbable sutures. This is designed to provide the required mechanical support to keep clogged artery open and release drug in a controlled manner to facilitate healing.

## Young Indians, are you checking your heart health post Covid ?

Post Covid, a spate of heart attack among the Indian youth is a rising concern. A recent study in USA revealed that deaths among youth due to heart attacks have spiked in most countries since the beginning of the pandemic. There has been a nearly 30 per cent increase in deaths due to heart attacks since the first two years of pandemic

### Benefits of BioResorbable Scaffolds (BRS/ Dissolving Stents)

The potential benefits of BRS over routine metallic DES includes a possible reduction in long term adverse clinical events associated with permanent implants. Once the BioResorbable Scaffolds are completely resorbed via natural process (approximately two to three years), the coronary artery is restored to its natural state with a good vasomotion. The scope of any non-invasive imaging tests such as computed tomography or magnetic resonance imaging (MRI) for any follow up study is feasible as material used in BioResorbable Scaffolds are radiolucent and do not cause a blooming effect which is observed with conventional metallic stents. But the biggest advantage of BRS over metallic stents is that it does not cage the coronary artery and keeps the option of any future re-do procedure like bypass surgery.

### Patient Testimony

The August 7, 2021, was a normal routine day for Abhay (name changed), a 30-year-old gentleman. He was getting ready for his office when he began experiencing chest pain with a reflux, which he warded off thinking a normal routine acidity due to his last night late dinner. But slowly this pain grew further and started radiating to his left arm along with sweating and palpitations. Sensing some emergency, his brother immediately rushed him to ACE Heart and Vascular Institute. His ECG and echo revealed that he had suffered a heart attack. Abhay was advised for immediate angiography and further treatment. His angiography revealed a critical blockage in one of his important arteries.

Angioplasty was planned to open his clogged artery with a stent but considering

his young age and the type of lesion in his artery, the doctors decided not to implant a routine permanent metallic stent. Rather, they decided to go ahead with next generation thin strut dissolving stent, which is one of the best treatment options available for young patients.

The overall procedure went on well and Abhay was discharged after 48 hours. He was back to his routine work in two weeks' time and has now completely adopted a better lifestyle which includes a nutritious/balanced diet along with regular exercise. Abhay has completed a year of follow up and is doing extremely good. He participated in ACE Heart and Vascular Institute's annual half-marathon organised on World Heart Day last year, a testimonial to his physical fitness.

According to Dr Verma, the next generation BioResorbable Scaffolds are better options for younger patients. "Since the launch of this indigenous BRS, we have already implanted these scaffolds in more than 70 patients and have not come across any major adverse events. Practically, all patients are doing well and on regular follow up," says Dr Verma.

The indigenous scaffold has received approval from Drug Controller General of India (DCGI) and CE approval from Europe. It has been studied in trials both in India and worldwide with excellent outcomes.

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