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Too young for metal

The shocking news of young celebrities /sports enthusiasts under 50 years falling prey to sudden heart attack has again reignited the discussion of young Indian hearts at risk

Though this could be a surprise for many, but it is a hard-core fact that cardiologists encounter in their daily practice. Indians are prone to suffer from heart disease at a much earlier age (almost 33 per cent earlier) than other regions of the world and often it shows up without a warning bell or knock in the door that 50 per cent of all heart attacks in Indian men occur under the age of 50 and 25 per cent of them are men under 40. The trend is not very different for Indian women; in fact, there has been a three per cent increase reported as per Indian Heart Association.

To emphasise more about the fact, it's typical to have a heart attack in your 20s or early 30s. So, the very first question which cardiologists often encounter is, why young Indians are at a high risk of heart disease?

As stated, multiple factors have led the young population to face this situation such as rising trends of co-morbid conditions like diabetes, obesity, and hypertension. Besides this, lack of physical activity, genetic family history, mental health condition smoking, and improper diet accelerates it further.

Dr. Lakshmikanth P
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Consultant & Interventional Cardioligist,
Apollo Hospital, Bengaluru

Dr Lakshmikanth P, a consultant and interventional cardiologist at Apollo Hospital, Bangalore, says, "As an interventional cardiologist, I always encourage young population to adapt to a healthy lifestyle. They should be more aware about mental health and stress management, and always work towards the controllable risk factors of heart disease."

Most widely used treatment option consists of the latest generation Drug Eluting Stent (DES) which has been adopted as a mainstay option for angioplasty.

However, this Drug Eluting Stent is made up of metals like cobalt-chromium or platinum and designed to stay permanently in the heart arteries even after healing. The foreign material inside the coronary arteries can act as an irritant or foreign body, leading to long term adverse events.

The permanent metallic stents can also act as a hindrance for any future re-do procedure if required in the same artery. Post angioplasty, with permanent metallic stent, patients are often advised to take powerful blood thinners for a long time.

According to a large patient level meta-analysis study, who have undergone stenting, ischemic adverse events related to coronary stenting continue to accrue beyond the first year; regardless of the type of stent implanted. Very late stent-related adverse events do occur at the rate of approximately two per cent per year.

This often puts cardiologists in a dilemma to implant a permanent metallic stent in younger population as they have a long life ahead. This unmet clinical need with metallic stents led to the innovation of next generation dissolving stents or bioresorbable scaffolds.

BioResorbable Scaffolds

They are made up of naturally dissolving material, similar to the one used in dissolving suture. Initially, it works as a normal metallic drug eluting stent to open blockages and deliver the drug to facilitate healing over the horizon of treatment. While disappearing naturally within two to three years after the healing is complete, it benefits the vessel to open in its natural capacity.

Patient's Testimony

A 22-year-old patient began experiencing chest pain on the left side radiating to left arm associated with sweating and palpitations. As the chest pain and discomfort grew, he was rushed to Apollo Hospital, Bannerghatta Road, Bengaluru. His ECG and echo revealed that he suffered a heart attack. Based on the preliminary check-up and reports, he was referred for angiography and further treatment to Dr Lakshmikanth P. His angiography revealed a critical blockage in one of his arteries with a lot of thrombus burden.

Dr Lakshmikanth P recommended angioplasty. Considering the patient's age, Dr Lakshmikanth P shared his view that the patient was too young for a metal stent. Also, taking in consideration the type of lesion in his artery, Dr Lakshmikanth P decided not to implant a routine permanent metallic stent but to go ahead with the next generation thin strut dissolving stent which is one of the best treatment options available for young patients as these stents dissolve overtime (within two to three years). Thus, this brought the artery to its normal shape. This indigenous scaffold has received approval from the Drugs Controller General of India (DCGI) and CE Approval in Europe. It has been studied in research trials in India and worldwide, supporting its positive safety, and efficacy.

Post a successful angioplasty, the patient was discharged from the hospital in three days and he resumed his routine work within a week. He is maintaining a better lifestyle, completing more than six months of post-operative follow up.