

10 THINGS YOU SHOULD KNOW ABOUT YOUR HEART INTERVENTIONS



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■ Welcome Sir, could you tell us what is Angiography and Angioplasty?

Angiography is visualisation of the lumen and blockages in the arteries supplying heart muscles by injecting dye in them under Fluoroscopy (X-ray) guidance while Angioplasty is the intervention done to remove these blockages with the help of a balloon catheter, clearing up the artery and re-establishing normal flow in them.

■ How does a Cardiologist decide whether a block needs intervention or not?

Any obstruction which is more than 65% in a major artery or in a branch supplying a big portion of the heart requires intervention. The rest can be managed by medicines. However it is the treating doctor who decides lesion significance depending on the overall clinical picture

■ How does a Cardiologist manage borderline blockages?

Fractional Flow Reserve (FFR) pressure wire and IntraVascular Ultra Sound (IVUS) can be used to assess the character and severity of blockage and guide decision making in such cases.

■ What is FFR and how does it help?

FFR is a guide wire-based procedure done through a standard diagnostic catheter that can accurately measure blood pressure and flow through a specific part of the coronary artery. >25% drop in flow and pressure across the blockage suggests significance and the need for intervention. This objective measurement helps in assessing whether or not to perform angioplasty on "intermediate" blockages, thereby removing subjective biases.

■ How Can FFR Affect Treatment of the Patient?

Measurement with a FFR wire may reveal whether an intervention will have a significant impact on the blockage. Being able to better select cases not only saves health care costs, but contributes to more appropriate patient care. Fractional flow reserve - guided stent implantation has been established to be economically attractive in cost-effectiveness analysis.

■ What is IVUS?

Intravascular Ultrasound (IVUS) is a medical imaging technique which allows us to have a detailed look into the coronary vessels from inside-out. It has a biologically compatible tube. At one end is a special probe which has ultrasound properties which captures images of the inner aspect of your blood vessels on a real-time basis. The other end of the tube is attached to a machine which converts the images captured through the ultrasound mechanism and displays them on a monitor. These images provide us with critical clinical information to help us make better treatment choices for intervention.

■ What are the benefits of using IVUS?

- View the artery — from the inside out, making it possible to evaluate the amount of disease present, how it is distributed, and in some cases, what it is made of.
- Determine the need for further treatment (angioplasty or bypass surgery)
- Determine the need for aggressive management of risk factors prior to onset of symptoms and advanced disease
- Guidance for stenting : what diameter of stent and length to be covered
- Identifying post procedure complications if any
- Evaluating the character of reblockage in stent : clotting or Restenosis

■ As a patient, how will doing IVUS benefit the result of my angioplasty?

The inside-out view of the blood vessel gives information about the appropriate stent-size required. Once the stent has been placed inside the blood vessel, the inside view of the blood vessel through IVUS can also give information if the stent is covering the diseased area completely and if it is properly hugging the vessel wall. An improper placement of the stent can lead to future complications and even to a need for another angioplasty. Studies have shown that use of IVUS during angioplasty procedures reduces the need for repeat procedures. It is the standard of care at all major hospitals worldwide.

■ Does this not add to the burden of the overall cost of procedure?

The added cost of this procedure is not great and looking at the assurance of low repeat procedures or bypass surgery provided by them, it is worth the cost.

■ How commonly are these facilities available?

Hospitals with a dedicated cardiology team, like ours at Zydus, have these facilities. We practice it as a standard of care to our patients.

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