

## CARDIOLOGY

### The big breakthrough

Chest pain or angina due to coronary artery disease can be treated with procedures to open or bypass the choked blood vessels.



**Dr Eric Hong**  
Cardiologist

#### **EH Heart Specialist Pte Ltd**

3 Mount Elizabeth  
#03-09 Mount Elizabeth  
Medical Centre  
Singapore 228510  
Tel: 6736 1068  
www.eheartspecialist.com

When the passages to the heart become blocked or narrowed due to a build-up of cholesterol plaque, blood flow to the heart slows down, starving the heart muscle of oxygen and causing chest pain known as angina. If a clot develops and the flow of blood is completely stopped, a heart attack occurs, causing symptoms such as excruciating pain, dizziness and sweating. If the blood to the heart is stopped for too long, the heart muscle can start to die, a potentially fatal occurrence.

#### Clearing a path

Blockages in the blood vessels leading to the heart can be treated with a procedure known as angioplasty. This procedure – done under local anaesthesia – involves threading a thin tube called a catheter through a small incision in an artery in the leg or arm that leads to the heart. The blocked artery is opened by inflating a tiny balloon in it. The expandable balloon pushes the built-up plaque against the artery wall so that the blockage is cleared and normal blood flow to the heart muscle is restored. The balloon is then removed.

To keep the blood vessel walls open and prevent any further collapse, a metal stent is used. Special stents coated with medication may be used. These drug-eluting stents help prevent the development of excessive tissue growth that could potentially narrow or totally block the artery over time.

#### Who is suitable?

Angioplasty is not for everyone. It is often recommended in conjunction with medical therapy for people who:

- Have persistent and



intolerable chest pains despite medical treatment

- Have moderate to severe arterial narrowing and a high risk of either a heart attack or death

Angioplasty is less often recommended if the main artery in the left side of your heart is narrowed or if your heart muscle is weak. It is also not recommended in cases of multiple diseased blood vessels. The procedure is also less effective in diabetics. For these patients, bypass surgery may be preferred. In coronary artery bypass surgery, the blocked part of your artery is bypassed using a blood vessel from another part of your body so that the blood flow makes a 'detour' before going to the heart.

Angioplasty is an invasive procedure and there are possible complications, although these are relatively infrequent. The risk depends on many individual factors which will be discussed with your cardiologist before the procedure. Some risks of angioplasty include:

**Re-narrowing of the artery or restenosis.** With the introduction of stents, this is a less common occurrence.

Drug-eluting stents for instance, reduce the risk of occurrence to less than 10%.

**Blood clots forming within stents.** These clots can narrow or close the artery, causing a heart attack. To prevent this, adherence to the prescribed regimen of blood-thinning drugs helps reduce this risk.

**Bleeding at the incision site.** Some bleeding or bruising where the catheter was inserted is normal, but serious bleeding can sometimes result.

#### Living well after angioplasty

Coronary angioplasty will significantly improve your quality of life, reduce chest pain and improve your ability to exercise. But keep in mind that it doesn't cure your heart disease. You will need to continue to maintain healthy lifestyle habits and comply with the medication/treatment plan prescribed by your doctor. Keep to a heart-healthy lifestyle by:

- Quitting smoking
- Lowering blood cholesterol
- Keeping to a healthy weight
- Controlling any other co-existing conditions such as diabetes and high blood pressure
- Exercising regularly 