



YOUR INFORMATION

Ischemic Heart Disease

ISCHEMIC HEART DISEASE

Your diagnosis

You have been given a diagnosis of heart failure, which usually means your heart is working inefficiently. This inefficiency is usually due to two main causes: firstly, the incapacity of the heart to pump correctly and secondly, its inability to relax sufficiently to fill up with blood. There is generally an underlying problem which has caused this inefficiency. Occasionally, we don't know the exact cause of why your heart is working inefficiently (clinicians call this idiopathic). The question most patients want answering is "WHY is my heart not working efficiently; what has gone wrong?"

We believe that the cause of your heart failure is due to **coronary heart disease**, sometimes called **ischemic heart disease**.

What does this mean?

In the section that explains how your heart works, we discussed how the muscle layer of your heart has its own blood supply (see the diagram). These are fine arteries called the coronary arteries, but they supply the muscle with the vital oxygen and nutrients that it requires in order to work. When they become blocked or furred up with fat called atheroma, this builds up and causes the arteries to narrow, and therefore prevents enough blood from getting through. This process is called atherosclerosis. There are various reasons why it occurs. It can be painful as the muscle will hurt if it does not get a good blood supply (we call this angina). This usually occurs when the heart has extra work to do, usually through additional activity. If the artery becomes completely blocked, this results in a heart attack - myocardial infarction. Both angina and heart attacks can lead to heart failure. Ischaemic heart disease (IHD) is the commonest cause of heart failure. Both angina and heart attacks can lead to heart failure. Ischaemic heart disease (IHD) is the commonest cause of heart failure.

Why have I got this?

There are various risk factors which will have caused the problem.

Cholesterol

There is a tendency to think of cholesterol as something that's bad for us. This is not the case. Cholesterol is made in the liver but is also found in certain foods. We all need cholesterol as it has a vital role to play, as every cell needs it in order to do its job. It is a fat called a lipid that combines with protein in order to do its work (that's why they are called lipoprotein). There are two types: LDL - low density and HDL - high density.

LDL - low density

This carries cholesterol from the liver where it is made to the cells. Too much of this means it builds up in the arteries causing us problems, thus it gets called BAD cholesterol.

HDL - high density

This is known as GOOD cholesterol, due to its ability to carry away cholesterol to the liver to be broken down. High levels of this are very useful.

Smoking

This results in a chemical called acrolein being produced which prevents HDL doing its job.

Lack of exercise

The heart is a muscle that needs exercise. Exercising also reduces cholesterol levels and reduces our weight. Therefore, this results in less work for the heart.

Diabetes

When we have high sugar levels, deposits of sugar can also line the fine arteries.

Obesity

Being obese is associated with diabetes and being overweight. This results in the heart having more work to do.

High blood pressure/hypertension

Having underlying high blood pressure damages the heart.

Family history

Unfortunately, some people have a family history of high cholesterol called hyperlipidaemia.

How do you know that this is the reason why my heart is failing to do its job efficiently?

The tests and investigations that have been conducted have shown that the muscle of your heart has been damaged. This has been a result of having had a scan of your heart called echocardiogram or echo. You may have also have had angiography, where a dye is infused through one of your arteries. An X-ray can then identify if there are any blockages in the coronary arteries.

What is the treatment I will receive for this underlying cause of my heart failure?

You may have been on a range of medication to treat the underlying cause of your heart failure. This could include Statins to keep your cholesterol in balance and Aspirin to make your blood less sticky. This results in the blood being able to travel through the arteries without causing a clot and tackling the symptoms and pain of angina through medication. You may have also had treatment to keep the fine arteries clear, such as stents. This is a metal mesh scaffolding that sit in the parts of the arteries which are blocked in order to keep them open. Coronary artery bypass surgery is another possible treatment. This involves major heart surgery in which veins from your limbs are used to bypass the ones that are blocked.



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