

New op to cure a dicky heartbeat - in a flash

Daily Mail By David Hurst 13th September 2011

Up to half a million Britons suffer from atrial fibrillation, an irregular heart-beat that can be life-threatening. Surgery to treat it often needs to be repeated.

Charity manager Scott Rosser, 34, from Croydon, Surrey, was the first person in the country to undergo a procedure with a greater success rate.

THE PATIENT

Looking back, my heart problems started in my teens. I remember being out shopping aged 14 when I suddenly felt dizzy. My heart was beating really fast.

This kept happening about once a month, but each time it passed in a few minutes, so I thought it was nothing to worry about.

But then last year it suddenly started happening a couple of times a week. One night, my heart started racing and when I woke up nine hours later it was still going like that. Walking to A&E that morning, I could see my chest moving because my heart was pounding so hard.

At hospital, the doctors did an electrocardiogram, where they record the rhythm and electrical activity of your heart. They said my heart was averaging 150 beats a minute — when the average for an adult is 60 to 80.

I was put on Flecainide drugs to slow down the heartbeat, and a few days later saw a cardiologist. He told me I had atrial fibrillation, which meant my heart was beating at an irregular rhythm.

The blood wasn't getting pumped around the body and brain as it should, and that was leading to dizziness and palpitations.

The consultant said there was no real reason why I had atrial fibrillation, though I've since found out my mother had it and there's a family history of heart disease.

I continued on the drugs, but I worried about having a stroke or a heart attack. My wife Mila and I had to cancel a holiday to Bali because I couldn't get travel insurance.

Then in May I was referred to Dr Oliver Segal. He said I could go on another type of drug, beta-blockers. These might regulate my heartbeat, but can have side-effects such as tiredness, low blood pressure and impotence, so I really didn't fancy taking them long-term.



'Since the operation my heart rate is normal and I can feel a huge difference,' said Scott Rosser

We discussed an operation in which they use radiowaves to burn away tissue around my heart.

Dr Segal warned 50 per cent of people need two of these operations for it to work, and there were risks each time such as stroke and even getting a hole in the heart. I decided to have the operation and was put on the three-month waiting list.

Then in July, Dr Segal rang and said there was a new procedure with a much better first-time success rate of 90 per cent.

He would put a tiny camera inside a deflated clear balloon into my heart. This would allow him to see inside my heart so he could burn away the abnormal area much more accurately.

And he would need to operate only once. Dr Segal said I'd be the first in Britain to have this procedure, but I was happy to go ahead. I had the three-hour op in August.

When I came round my chest felt sore, as did my leg where they'd inserted the tube with the balloon (the tube is fed up a blood vessel to the heart).

I was told these would take a few weeks to feel better. The next day I was able to go home. I took a few weeks off work, but I could have been back after a few days. Since the operation my heart rate is normal and I can feel a huge difference.

I go back to see Dr Segal in November, but he expects my heart to remain normal.

I don't have to worry about more operations, and I can do everything I want again, including maybe finally making that trip to Bali.

THE SPECIALIST

Dr Oliver Segal is consultant cardiologist at The Heart Hospital, part of the NHS University College London Hospitals. He says:

One in 100 Britons will suffer atrial fibrillation or an erratic heartbeat.

Normally, our heartbeat is controlled by our inbuilt pacemaker, the sinoatrial node, which sends out an electrical signal to ensure blood is pumped in and out of the heart at a regular rhythm.

But with atrial fibrillation, the pulmonary veins (which deliver blood from the lungs to the heart) interfere with this, firing off random electrical signals as well.

As a result, the atria — the upper chambers of the heart — contract only partially and they do so rapidly. Oxygenated blood can't get to the areas that need it, causing symptoms such as dizziness, breathlessness and chest pain.



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If the heart beats very fast for too long it can cause the heart to dilate and eventually fail. There is also the risk of blood pooling in the heart, leading to a blood clot which can travel to the brain.

Until now the only hope of a cure was surgery — inserting fine tubes from the groin into the heart to deliver radiofrequency energy (a bit like microwaves) to destroy tissue surrounding the pulmonary veins. A scar forms, creating a barrier, which stops the abnormal electrical signals being sent out so the heart beats normally.

Surgeons used 3D computer-generated maps of the patient's heart to give an impression of what we were doing inside the body, but these were not 100 per cent accurate. As a result, this surgery had only a 50 per cent success rate because we sometimes didn't build a sufficient scar to stop all the electrical signals.

This meant many patients needed two or more procedures. Each time, they risk complications — 1 per cent of patients have a stroke and one in 300 need more surgery as a result of damage caused by the operation.

Many patients decide not to take the risk and instead regulate their condition by taking daily drugs such as Flecainide, Digoxin or beta-blockers. Unfortunately, these don't work especially well in the majority of patients and have side-effects, too.

But a new procedure developed in the U.S. is allowing us to see inside the beating heart for the first time.

We put a clear balloon into the heart containing a tiny camera, ½ mm in width. When it's inflated inside the heart, the balloon pushes out the blood in the area, so we can use the camera to get a clear view of the tissue we need to treat.

The laser balloon cures atrial fibrillation in 90 per cent of cases first time. Patients are treated under general anaesthetic. We insert a 5mm tube made of plastic through a vein in the groin and up to the heart.

The deflated balloon, containing the camera, light and laser, is passed through this into the pulmonary veins and then inflated with a clear fluid. We watch images from the camera on a monitor.

Risks are the same as for traditional surgery, though it seems the risk of stroke and narrowing of the pulmonary veins are lower. This new device will potentially transform treatment of atrial fibrillation. It will also save costs to the NHS as patients are much less likely to need more than one operation.

Privately, the operation costs £15,000 to £20,000. It is available on the NHS only at The Heart Hospital, but is likely to be offered by other hospitals soon.

For more information, email emily.pegg@uclh.nhs.uk or call 020 3456 6030.