

Doctors excited by new implant procedure in joint replacement for arthritis sufferers

Metal hips seen as breakthrough

DAVID MONTGOMERY and
RAYMOND NOTARANGELO

THE lives of thousands of people needing hip replacement operations could be transformed by a metal implant which gives full mobility and could last a lifetime.

The procedure is aimed mainly at helping young, active people whose lives usually end up being ruined after they are struck down with arthritis.

The first operation in Scotland using the technique was performed on a 41-year-old man at an Edinburgh hospital on Tuesday and the success of the surgery is being watched closely by other orthopaedic specialists across the country.

Every year, more than 50,000 patients in Britain undergo hip surgery to have conventional metal-and-plastic implants inserted in the joint. However, the metal ball wears away the plastic cap, so the implant comes loose and the joint has a limited life-span.

Now, a method developed over the past eight years by an Irish surgeon, Derek McMinn, is to offer patients an all-metal artificial hip.

The Birmingham Hip Resurfacing (BHR) implant resurfaces the head of the femur with a metal dome, which fits into a metal cap attached to the pelvis. It means there is no need for bone to be cut.

David Sochart, a consultant orthopaedic surgeon at Edinburgh's Princess Margaret Rose Hospital, is one of only 25 surgeons in the UK - and the only one from Scotland - who has been taught the technique by the Birmingham team.

He said: "I think it is incredibly promising. It is particularly useful to the young, active patient - people who want to return to a high level of activity, particularly sports. I think the potential is huge."

"Other surgeons who have an interest in joint replacement surgery will be interested in looking at it. I think you will find

a small group of surgeons who will be interested in learning the technique and performing these operations. I think it will expand quite rapidly."

Mr Sochart said his first operation using the technique - on a patient who had been crippled by arthritis - was showing early signs of success. "It is only the first day after the operation, but we are hoping that it will allow him to return to a high level of activity."

Mr Sochart, whose department carries out 1,000 hip and knee replacements, said he hoped to carry out between 20 and 50 operations using the new technique in the first year.

Around 1,200 patients have been operated on at the Birmingham hospital where trials have been carried out and the success rate is running at 99 per cent.

Among those who have received the BHR implant are David Walker, the European veteran judo champion, and Jonah Barrington, the former

British champion squash player.

Mr McMinn said the success of the trials had proven the reliability of the technique and it was being launched worldwide to meet demand.

He said: "It's working. There are tremendously enthusiastic patients all over the world. We have folks coming from Australia to Birmingham to have their hips resurfaced, so it's time to start training good surgeons in the technique in those parts of the world."

Among the problems with the traditional hip replacement methods was the need for surgeons to remove the head and neck of the femur. These were replaced with a ball, mounted on a spike and driven down the centre of the bone, which fits into a polythene cup fixed into the pelvis.

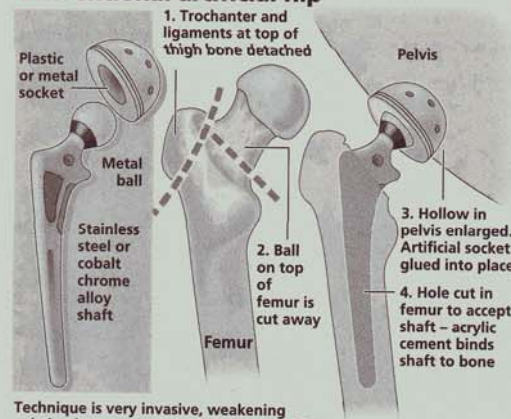
Mr McMinn said this meant having to redo the operation was a major procedure.

He said the vast majority of hip replacements were based

Surgeons get hip to worn-out joints

Current hip-replacement techniques usually mean a return visit to the operating theatre within five years

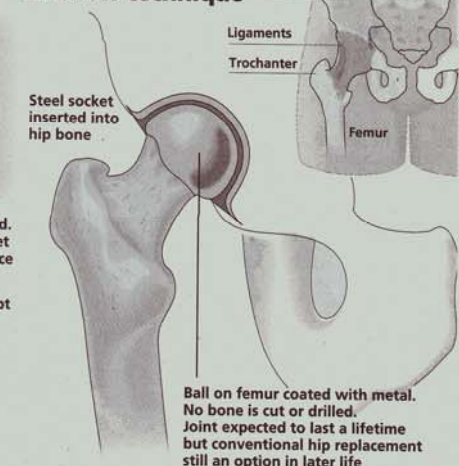
Conventional artificial hip



Technique is very invasive, weakening existing bone and may only last four to five years before patient needs another new hip

Graphic News/John Henderson

The new technique



Ball on femur coated with metal. No bone is cut or drilled. Joint expected to last a lifetime but conventional hip replacement still an option in later life

on a metal/polyester bearing, but the polyester dissolved into the bone with each step taken. This causes osteolysis, which leads to implant loosening and damage to the remaining bone, and limits the joint life to five to ten years. There was the further problem of dislocation in conventional hip replacements.

Mr McMinn said that while it would not be possible to use the

new technique on all patients, it would be suitable for around 20 per cent of those requiring hip replacement operations.

Older patients, particularly women with osteoporosis, were more likely to have poor bone quality and stood a higher risk of the implant failing.

"Resurfacing depends on having good quality bones for supporting the implant," he

said. "If you are young, have arthritic hips and have not destroyed the bone by taking anti-inflammatory medicine, then you will have a good quality foundation on which to put a good surface."

Mr McMinn said this made it particularly suitable for patients who were possible cases for total hip replacements. He said: "If you are young and wish

to be more active, particularly in sport, then you will destroy in quick time the conventional metal and plastic total hip replacement."

While the BHR was understood to be indestructible, he said that because the technique did not require any bone to be removed it would still be possible to use the conventional method in later years.