

Pioneering surgery on girl, 12, reverses heart transplant

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[The Guardian](#)

A 12-year-old girl given a heart transplant 10 years ago is believed to have become the first person in the UK to have the donor organ removed and her own heart reconnected.

Hannah Clark was two when diagnosed with cardiomyopathy, which made her heart twice the size it should have been and placed it under such strain that it would probably have given out within a year. A team led by Sir Magdi Yacoub operated on Hannah when she was a baby and put a "piggy-back" donor heart next to her own, which remained in place while the new organ took over the job of pumping most of her blood. All had seemed well until last November when a routine checkup revealed that Hannah had begun to reject the new heart.

Mr and Mrs Clark, of Mountain Ash in south Wales, asked surgeons at Great Ormond Street Hospital in London to remove the donor heart and reconnect the dormant one, but they said they were reluctant because it had never been done before. The parents approached Sir Magdi, world famous as the heart transplant pioneer, and the 70-year-old agreed to come out of retirement to advise the surgical team. The operation was performed on February 20, and proved a remarkable success.

"The doctors couldn't believe how everything had gone to plan but when Professor Yacoub came back on the scene I knew we had the best person," Mrs Clark said. "They were expecting it to take at least eight hours, but she was out within four hours. They also said she could be in intensive care for weeks, maybe months; they just didn't know, because it was the first time it had been done.

"Hannah recovered so well she was able to come home within five days." The procedure means that the girl no longer has to take the strong anti-rejection drugs she had been on while she had the donor heart. She has also battled lymph cancer for the past few years, and is in remission after successful chemotherapy in January this year. A spokesman for the cardiac team at Great Street Ormond Hospital said: "We are delighted that

Hannah is doing so well. We believe that this combination of circumstances is the first for children or adults in the UK."

Prof Peter Weissberg, medical director of the British Heart Foundation, said that surgeons had suspected for some time that failing hearts might be able to recover if given respite by a "piggy-back heart". He said: "Today the approach would be to implant a mechanical heart, called a ventricular assist device, to take over the work of the inflamed heart in the hope that the heart will recover, and the device can be taken out after a few months.

"Ten years ago such devices were not sufficiently reliable, which is why Hannah received a donor heart alongside her own."



Docs Reverse Girl's Heart Transplant

LONDON, April 13, 2006

(CBS/AP) A girl whose body began to reject a donor's heart has had it removed because her own heart is now strong enough to pump her blood on its own again, her doctor said Thursday.

Doctors transplanted a donor heart to "piggyback" on Hannah Clark's diseased organ a decade ago, said Dr. Victor Tsang, one of the 12-year-old's surgeons.

When she developed severe complications with her immune system recently, doctors at the Great Ormond Street Hospital decided to remove the donor heart so they could take her off the immune suppression drugs she needed to keep her body from rejecting it.

They had determined that her own heart had recovered sufficiently to work on its own, Tsang said.

"It is a very unique situation for a piggyback heart transplant to offer a window, a period of time, for the diseased heart to recover sufficiently to take over the circulation again 10 years later," he said.

CBS News correspondent Elizabeth Kaledin reports the procedure is rarely done — only about 12 have been performed on children in the United States. Instead of remov-

ing the damaged heart muscle, doctors surgically attach a second, donor heart. The second heart takes over function of the weakened heart, and then the two work together.

The donor heart was disconnected, and Hannah's own heart — which was never removed — was able to cope on its own, **CBS News** reports.

Hannah had suffered from cardiomyopathy, a condition in which her heart was inflamed to much bigger than its original size. Tsang said she made a quick recovery and went home less than a week after the operation.

The hospital said she was doing well, but because her case was so unique doctors did not know what her long-term prognosis was.

Sir Magdi Yacoub, who performed Hannah's original heart transplant when she was two, advised surgeons who carried out the operation on Feb. 20.

He told the BBC that the surgery was a "very happy ending".

The hospital said it believed her operation was the first of its kind in Britain.

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Girl Has Heart Transplant Reversed After Ten Years

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Imagine having a heart transplant ten years ago, you find your body is starting to reject the transplanted heart after so much time, and doctors manage to reverse the whole process so your original heart is working inside you again. This is what happened to 12-year-old Hanna Clark, UK.

Hanna had a heart transplant when she was two years' old. She had to have a transplant because she had cardiomyopathy. This means her heart was too big, double its normal size - doctors said it would stop working within a year.

Her new heart took over the job of pumping blood around her body. Her own heart was not taken out - it stayed there.

When Hanna went for a check-up in November, 2005, doctors discovered that her body was rejecting her new heart (her body was beginning to treat the donor heart as a foreign/alien body).

So, doctors disconnected the donor heart and allowed the original one to take over the job of pumping blood around her body. Hanna is doing well, say her doctors. She may be in intensive care for quite a while. As this is a new area of medicine, it is hard to predict how long it will be before she can leave hospital.

As far as Hanna is concerned, she can't wait to get back to school, said her mother.

During her twelve years of life, Hanna has also had to fight lymph cancer. After successful treatment it is in remission.

The doctor who carried out her original heart transplant twelve years ago, Sir Magdi Yacoub, said that at the time he had hoped her own heart would recover. He liaised with two surgeons who carried out the transplant reversal. Sir Magdi, in a BBC programme, described this outcome as a 'happy ending'.

If a patient has cardiomyopathy, and that heart is allowed to rest, as in Hanna's case, it does now seem that it is able to recover.

Hanna's mother said she is grateful to the heart donor, whose organ saved her daughter's life when she was two.

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