

## First-ever face transplant surgery is completed

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Surgeons in France claim to have performed the world's first face transplant, although not of a whole face. A 38-year-old woman severely disfigured in May by a dog attack received a "partial" triangular graft, consisting of the chin, lips and nose from a dead woman donor.

"Today, the patient is in excellent general condition, and the graft is normal," the surgical team, led by Jean-Michel Dubernard of the Edouard Herriot Hospital in Lyon, said in a statement.

The operation was performed on Sunday 27 November at the University Hospital Centre (CHU) in Amiens, northern France, and the surgical team says further details of the procedure will be issued on 2 December.

The woman's injuries were so severe that she could scarcely speak or chew. "This type of injury is extremely difficult, if not impossible, to repair by the usual maxillofacial surgical techniques," the statement says.

The breakthrough ends a race between teams in France, the US and Britain to perform the procedure first. "Now they've done it, I can breathe a sigh of relief," says Peter Butler, head of a team hoping to perform a similar procedure, but with a whole face, at the Royal Free Hospital in London, UK. "Now, the pressure's off, which is great."

### Aesthetic unit

Butler says the woman's graft will consist of skin, fat and muscle tissue, including veins, arteries and nerves. "Right now, she will be very swollen, and it will take 14 days or so for that to disappear," he told a briefing in London. "Within 24 hours they'll know if the graft will survive and, beyond that, failure is unusual."

Butler thinks that scarring will probably be minimal because the transplanted zone is a so-called "aesthetic unit", meaning it attaches at natural junctions that should hide the scars. Surgeons will monitor the transplanted flap every 2 hours to ensure it's perfused with blood. They will also monitor for tissue rejection, which will be a risk during the first two weeks.

"If the blood vessels become blocked, there's a risk of the operation failing," says Iain Hutchison, consultant facial surgeon at St Bartholomew's Hospital in London. "And there's a medium-term risk of the immunosuppressive drugs failing to control rejection."

Even if the graft takes, the patient will need to take immunosuppressive drugs for the rest of her life. This raises the risk of virally-induced cancers by decreasing the patient's ability to keep dormant viruses in check.

### Identity crisis

The patient and her family must also confront psychological consequences of the procedure, including possible crises of personal identity.

"Facial appearance is very closely associated with an individual's sense of personal identity, so the recipient must adapt to this new 'identity', as well as to other people's responses to it," says Stephen Wigmore, chair of the ethics committee of the British Transplantation Society.

Likewise, families of the donor must adjust to the possibility that they may see a living person resembling their dead relative, although computer simulations suggest that a transplanted face will have a "hybrid" appearance in which the facial features of the donor are altered by the bone structure of the recipient.

### Closely followed

Butler says his team is about to start screening potential patients for a whole facial transplant. But it would be 6 to 12 months at the earliest before he attempts the procedure, which must also be cleared by the ethics committee of the Royal Free Hospital.

Other teams vying to perform the procedure are at the Cleveland Clinic Foundation in Ohio, and at the University of Louisville School of Medicine in Kentucky, both in the US.

"This is an exciting development," says John Barker, who leads the effort at the University of Louisville. "We will be following the outcome closely for the medical, psychological and ethical information that may be gained."

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<http://www.londonplasticsurgeryassociates.co.uk/breast-augmentation-surgeon.htm>

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