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Dire Wounds, a New Face, a Glimpse in a Mirror

By **CRAIG S. SMITH**

LYON, [France](#), Dec. 2 - The world's first person to wear a new face awoke Monday, 24 hours after her operation in the northern city of Amiens, and looked in the mirror.

The swollen nose, lips and chin she saw there were not her own - those had been ripped from her head by her pet Labrador in May - but for the 38-year-old woman, whose face had become a raw, lipless grimace, they were close enough. She took a pen and paper and wrote for the doctors, "Merci."

On Friday, those doctors defended their rush to give the woman a partial face transplant just months after her disfigurement, despite the enormous risks of death and psychological difficulties. They dismissed objections that they were bent on glory at the expense of the patient, whose identity is being withheld at her request.

"We are doctors," said Jean-Michel Dubernard, who led the transplant team and who helped carry out the first hand transplant in Lyon seven years ago. "We had a patient with a very severe disfigurement that would have been extremely difficult, if not impossible, to repair with classic surgery."

In a news conference at Édouard-Herriot Hospital in Lyon, where the patient was transferred for monitoring of immunosuppressive therapy that will continue throughout her life, the doctors explained how the woman's gruesome wounds almost immediately made her a candidate for the world's first face transplant. They heatedly denied local news reports that quoted her estranged teenage daughter as saying she was suicidal, raising questions about whether she was psychologically stable enough for the operation.

Dr. Dubernard has faced such accusations before. Clint Hallam, the man he selected for the world's first hand transplant, refused to keep up with the lifelong drug regimen required to suppress immune responses, along with regular exercises to train the new hand. After three years he had the hand removed.

According to Dr. Dubernard, the woman had quarreled with her daughter one evening in May at her home in the northern city of Valenciennes, and the daughter had left to spend the night at her grandmother's.

The woman was agitated, he said, and took a sleeping pill. At some point during the night, he said, she arose and stumbled through the house, encountering the dog.

Local news reports have suggested that the woman, who is divorced, fell unconscious and that the dog chewed and clawed her face in an attempt to revive her. But Dr. Dubernard said the dog had been adopted from the local pound and was known to be aggressive. The dog has since been destroyed.

Shortly after the woman's injury, Dr. Bernard Devauchelle, head of face and jaw surgery at Amiens University Hospital, decided that the woman was a candidate for a partial face transplant and sent an urgent request for help in locating a donor to the French Biomedicine Agency, which oversees the allocation of organs for transplant in France. The window for a successful transplant was narrow, the doctors said, because the wound was developing scar tissue.

Dr. Benoît Lengelé, a Belgian surgeon who assisted in the transplant, said the woman would have required at least three or four traditional [plastic surgery](#) operations to rebuild her face with skin flaps from other parts of her body, but the results would never have been aesthetically or functionally satisfactory.

Meanwhile, the woman's injury had made it difficult for her to talk or even drink and eat, because food and liquid spilled easily from her mouth. The doctors said her ability to open her jaw was also progressively diminishing as her wounded tissue stiffened. In July, Dr. Devauchelle consulted with Dr. Dubernard, who visited the woman in early August.

"The moment she removed her mask, which she always wore, I had no more hesitation," Dr. Dubernard said Friday.

No information was given about the donor, a brain-dead woman whose anonymity is protected by law. She was located on Saturday at a hospital in the northern city of Lille, 85 miles from Amiens.

Brain-dead patients in France are presumed to be organ donors unless they have made explicit provisions to the contrary, and approval by next of kin is not normally required. But given the delicacy of the case, the donor's family was consulted about the possible harvesting of part of the donor's face during the initial interviews that are undertaken to ensure that the deceased had not given instructions preventing organ donations.

A special team of psychologists worked with the family on Saturday afternoon as the doctors involved were notified that a potential donor had been found. By midnight Saturday, Dr. Devauchelle, who led the surgical team, was in Lille to begin harvesting the face while another team of surgeons in snowy Amiens began removing scar tissue from the patient in preparation for the transplant.

Harvesting of the face was complicated by the convergence of several teams to remove other organs from the donor, but the operation was complete by 5 a.m. Sunday. Before the donor's funeral, a separate team of doctors reconstructed her face with a silicone prosthesis made from a cast taken before the dissection.

"The restoration was remarkable," Carine Camby, the director of the French Biomedicine Agency, said of the prosthesis. Dr. Devauchelle rushed to Amiens with the patch of face, chilled in a saline solution to 39 degrees Fahrenheit, and began the transplant, starting with microsurgery to connect the blood vessels feeding the face. Dr. Devauchelle said blood circulation to the transplanted portion was restored at 9 a.m. Sunday, four hours after it had been severed from the donor.

The operation continued into Sunday afternoon as a team of eight surgeons connected muscle and nerves "as fine as the fibers hanging from a string bean," Dr. Dubernard said. Finally they sewed up the skin and mucous membranes of the mouth, working 15 hours in all. As they were cleaning the woman's face and preparing bandages, silence fell over the operating room.

"The result was beyond our expectation," said Dr. Lengelé, part of the surgical team. "It was marvelous."

A nurse asked if they might applaud, and when one of the doctors nodded, the nurses began to clap.

By Friday morning, the woman was eating and drinking and speaking clearly, the doctors said. Though she does not yet have muscular control or feeling in the transplanted portion of her face, she is able to open and stretch her mouth with the facial muscles that had remained intact.

The doctors said it would be months before they knew how much, if any, feeling or motor control she would have in the graft, though they said the swelling had already begun to recede and her appearance was relatively normal.

"There is only a thin scar running around the transplanted area," said Dr. Lengelé, adding that the patient had already showed signs of psychologically accepting the transplant, saying Thursday, "This is my face."

The doctors stressed that the appearance was determined as much by the underlying bone structure as by the features of the skin, but added that the donor's skin color, texture and thickness presented a "stunning" match to the recipient's. If the transplant is ultimately successful, they said, the woman will look neither exactly as she did before nor like her donor.

"It will be a new face," Dr. Devauchelle said.

A patch of tissue taken from the donor's forearm and transplanted under the woman's arm will allow doctors to monitor the body's response to the graft without having to take scarring biopsies from her face. The doctors said the woman had already passed the period when thrombosis, or blood clots, presented the greatest risk to her life, but that the most critical time for a possible rejection of the graft would come in the next week.

Dr. Dubernard said he had already injected [stem cells](#) from the donor's bone marrow into the patient in an attempt to enhance her body's tolerance of the transplanted tissue. After reviewing successful hand transplants, he theorized that cells produced by the marrow of the donor's hands were the critical element in the operation's success. He added that another "infusion" of the donor's bone marrow stem cells would be given to the patient on the 11th day after the transplant. The transplant did not include bone.

As with all transplants, the doctors said, there was about a 33 percent risk of death, a 33 percent risk that the body will reject the graft and only a 33 percent chance that the transplant will prove successful. Surgical teams in other countries, including the United States, are closely watching the outcome before proceeding with face transplants they are planning.

"We think of all the people who have been disfigured to whom we could give new hope," Dr. Dubernard said.

Lawrence K. Altman contributed reporting from New York for this article.

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