

Soldier who lost four limbs has double-arm transplant (Update)

January 28 2013, by Marilyn Marchione

The first U.S. soldier to survive after losing all four limbs in the Iraq war has received a double-arm transplant.

Brendan Marrocco had the operation on Dec. 18 at Johns Hopkins Hospital in Baltimore, his father said Monday. The 26-year-old Marrocco was injured by a roadside bomb in 2009.

Those new arms "already move a little," Marrocco tweeted a month after the operation.

He also received bone marrow from the same dead donor who supplied his new arms. That novel approach is aimed at helping his body accept the new limbs with minimal medication to prevent rejection.

The military is sponsoring operations like these to help wounded troops. About 300 have lost arms or hands in the wars.

"He was the first quad amputee to survive" from the wars in Iraq and Afghanistan, and there have been four others since then, said Brendan Marrocco's father, Alex Marrocco. "He was really excited to get new arms."

The Marroccos want to thank the donor's family for "making a selfless decision ... making a difference in Brendan's life," the father said.

Surgeons plan to discuss the transplant at a news conference with the

patient on Tuesday.

Alex Marrocco said his son does not want to talk with reporters until the news conference, but the younger Marrocco has repeatedly mentioned the transplant on Twitter and posted photos. On Facebook, he describes himself as a "wounded warrior...very wounded."

"Ohh yeah today has been one month since my surgery and they already move a little," Brendan Marrocco tweeted Jan. 18.

Responding to a tweet from NASCAR driver Brad Keselowski, he wrote: "dude I can't tell you how exciting this is for me. I feel like I finally get to start over."

Brendan Marrocco has been in public many times. During a July 4 visit last year to the Sept. 11 Memorial with other disabled soldiers, he said he had no regrets about his military service.

"I wouldn't change it in any way. ... I feel great. I'm still the same person," he said.

The 13-hour operation was led by Dr. W.P. Andrew Lee, plastic surgery chief at Johns Hopkins, and is the seventh double-hand or double-arm transplant done in the United States. Lee led three of those earlier operations when he previously worked at the University of Pittsburgh, including the only above-elbow transplant that had been done at the time, in 2010.

Marrocco's "was the most complicated one" so far, Lee said in an interview Monday. It will take more than a year to know how fully Marrocco will be able to use the new arms, Lee said.

"The maximum speed is an inch a month for nerve regeneration," he

explained. "We're easily looking at a couple years" until the full extent of recovery is known.

While at Pittsburgh, Lee pioneered the novel immune suppression approach used for Marrocco. The surgeon led hand transplant operations on five patients, giving them marrow from their donors in addition to the new limbs. All five recipients have done well and four have been able to take just one anti-rejection drug instead of combination treatments most transplant patients receive.

Minimizing anti-rejection drugs is important because they have side effects and raise the risk of cancer over the long term. Those risks have limited the willingness of surgeons and patients to do more hand, arm and even face transplants. Unlike a life-saving heart or liver transplant, limb transplants are aimed at improving quality of life, not extending it.

Quality of life is a key concern for people missing arms and hands—prosthetics for those limbs are not as advanced as those for feet and legs.

Lee has received funding for his work from AFIRM, the Armed Forces Institute of Regenerative Medicine, a cooperative research network of top hospitals and universities around the country that the government formed about five years ago. With government money, he and several other plastic surgeons around the country are preparing to do more face transplants, possibly using the new minimal immune suppression approach.

Marrocco expects to spend three to four months at Hopkins, then return to a military hospital to continue physical therapy, his father said. Before the operation, he had been living with his older brother in a handicapped-accessible home on New York's Staten Island built with the help of several charities.

The home was heavily damaged by Superstorm Sandy last fall.

Despite being in a lot of pain for some time after the operation, Marrocco showed a sense of humor, his father said. He had a hoarse voice from a tube in his throat during the long surgery, decided that he sounded like Al Pacino, and started doing movie lines.

"He was making the nurses laugh," Alex Marrocco said.

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