

SU's second successful penis transplant

 By [Nicci Botha](#)

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Stellenbosch University's faculty of medicine and health sciences (FMHS) announced today that it has performed a second successful penile transplant at the Tygerberg Academic Hospital.

The procedure

Professor André van der Merwe, head of the division of urology FMHS, led the marathon operation of nine-and-a-half hours, which was performed in April.

In the surgery, the entire penis was carefully dissected from the donor to keep blood vessels, nerves and other connecting structures intact. These were marked and connected to the recipient's correlating tissue during the transplant.

The surgeons connected three blood vessels (each one and two mm in diameter to ensure sufficient blood flow to the transplanted organ; two dorsal nerves to restore sensation; the urethra; and the corpus cavernosum, which will allow the patient to obtain an erection.

The immunosuppression medication used during penis transplants is the same as that used for kidney transplants, although the dosage is reduced as time goes on, patients have to use the medication for the rest of their lives.

The patient is expected to regain all urinary and reproductive functions of the organ within six months of the transplant. A colour discrepancy between the recipient and the donor organ will be corrected with medical tattooing between six to eight months after the operation.

Penile mutilation and traditional circumcision

As in the first transplant performed in 2014, the latest recipient lost his penis 17 years ago due to complications after a traditional circumcision. The 40-year-old's identity is being protected for ethical reasons.

Penile mutilation is more common in South Africa than elsewhere in the world due to complications of circumcisions performed as part of a traditional rite of passage on young men in certain cultures. There is no formal record of the yearly number of penile amputations due to traditional circumcisions, but one study reported up to 55 cases in the Eastern Cape alone. Experts estimate that as many as 250 partial and total amputations take place country-wide every year, with suicides also being reported.

"We are committed to finding cost-effective solutions to help these men," says Van der Merwe. The procedure was part of a proof of concept study to develop a cost-effective penile transplant procedure that could be performed in a typical theatre setting in a South African public sector hospital. By applying lessons learnt from the first transplant, Van der Merwe and his team were able to significantly cut the costs of the second procedure.

The team consisted of Van der Merwe, Dr Alexander Zühlke, who heads the FMHS' division of plastic and reconstructive surgery, Professor Rafique Moosa, head of the FMHS's department of medicine, Dr Amir Zarrabi of the FMHS's division of urology and Dr Zamira Keyser of Tygerberg Hospital. They were assisted by transplant coordinators, anaesthetists, theatre nurses, a psychologist, an ethicist and other support staff.

Challenge of organ donation

The biggest challenge to this SU study is organ donation. "I think the lack of penile transplants across the world since we performed the first one in 2014, is mostly due to a lack of donors. It might be easier to donate organs that you cannot see, like a kidney, than something like a hand or a penis," says Van der Merwe.

In December 2014, Van der Merwe and his team performed the world's first successful penile transplant and more than two years later "the patient is doing extremely well, both physically and mentally", he says. "He is living a normal life. His urinary and sexual functions have returned to normal, and he has virtually forgotten that he had a transplant."

The world's first successful penile transplant was performed by Van der Merwe and his team at Tygerberg Hospital in Cape Town on 11 December 2014.

The second was done a year and a half later, on 16 May 2016, at the Massachusetts General Hospital in Boston in the United States of America.

ABOUT NICCI BOTHA

Nicci Botha has been wordsmithing for more than 20 years, covering just about every subject under the sun and then some. She's strung together words on sustainable development, maritime matters, mining, marketing, medical, lifestyle... and that elixir of life - chocolate. Nicci has worked for local and international media houses including Primedia, Caxton, Lloyd's and Reuters. Her new passion is digital media.

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