

EDUCATION CORNER

Penile Transplantation

A First in the United States

The first U.S. penile transplant was performed in May of 2016 at Massachusetts General Hospital, following 3 ½ years of interdepartmental research and collaboration. The multidisciplinary team led by Curtis L. Cetrulo, Jr., MD and Dicken S.C. Ko, MD in collaboration with New England Organ Bank, conducted the 15 hour operation.

The recipient, Thomas Manning, 64 years old, had undergone curative partial penectomy following a penile cancer diagnosis in 2012. He experienced one serious complication the day after his surgery when he hemorrhaged and was taken back to the operating room. To watch members of his healthcare team share their observations and a post-operative statement from Mr. Manning, visit https://youtu.be/Uns8G_N4_DM.

Prior Experience

Two prior penile transplant attempts have been reported:

- A failed attempt in China (2006)
- A successful procedure in South Africa (2014); the recipient later fathered a child



Transplantation Information

Penile transplantation is a genitourinary vascularized composite allograft (GUVCA) transplant:

- The three main goals of a GUVCA (*Mass General News, New York Times*):
 - Reconstruct external genitalia to a more natural appearance
 - Re-establish urinary function within a few weeks
 - Potentially achieve sexual function in weeks to months
- This experimental surgery is paving the way for “future treatment of patients with significant pelvic and genitourinary tissue loss related to cancer, trauma or infection,” according to Dr. Ko.

What Now?

- Another patient at Massachusetts General, whose penis was destroyed by burns sustained from a car accident, is awaiting transplant following identification of a suitable donor
- Johns Hopkins University School of Medicine, who are also planning to perform penile transplants; have had a combat veteran who was injured in Afghanistan awaiting transplant for several months.
- GUVCA for wounded veterans is a main focus of interest for transplant programs due to
 - exceptionally high suicide rates among soldiers with severe genital or urinary tract damage
 - 1,367 men suffered genitourinary injuries in the military from 2001 to 2013; nearly all under 35 year olds, were injured as a result of improvised explosive devices (I.E.D.s) (*New York Times*)



References:

Massachusetts General Hospital, Mass General News, News Release

<http://www.massgeneral.org/News/pressrelease.aspx?id=1937>

Denise Grady (May 16, 2016). Man Receives First Penis Transplant in the United States New York Times. Retrieved from

http://www.nytimes.com/2016/05/17/health/thomas-manning-first-penis-transplant-in-us.html?_r=0

This in-service is also available on The Alliance blog: <http://organdonationalliance.org/education-corner-penile-transplantation/>

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