Phalloplasty (also known as phallic reconstruction) involves reconstructing or building a phallus (penis) that can be functional for both urinary and sexual purposes. The procedure is of particular importance to men who have experienced severe trauma to, or loss of, their penis. The other subgroup of patients who desire phallic reconstruction are transgender men who decide to undergo complete gender reassignment surgery. Two studies highlighting the outcomes of this procedure will be presented at the 111th Annual Meeting of the American Urological Association in San Diego on Saturday, May 7 at 8:30 a.m. at the San Diego Convention Center in San Diego, CA.

Study Details
Publication Number: MP59-14

**Difference in Outcomes after Total Phallic Reconstruction in the Transgender and Non-Transgender Population:** Despite its acceptance and success in the transgender population, data regarding phallic reconstruction in the non-transgender population is not often reported. As a result, researchers from Norfolk, Virginia set out to compare total phallic reconstruction outcomes, for both transgender (TG) and non-transgender (NTG) individuals, via data analysis of those who underwent total phallic reconstruction (at their institution) between the years of 1983 to 2015. Based on indication of surgery, 47 percent of the nearly 100 who underwent the procedure were assigned as transgender and 53 percent were assigned as non-transgender. Additionally, most opted for a procedure known as the “forearm free flap;” however, three selected a local pedicled flap.

Further results from the comparison showed:

- Those in the transgender group had a lower rate of post-operative complications compared to those in the non-transgender group (45 percent vs. 63 percent, respectively)
- Transgender patients demonstrated a statistically significant increased rate for urethral strictures compared to non-transgender patients (56 percent vs. 30 percent, respectively)
- Both groups reported positive outcomes in terms of urinary function (48 percent NTG vs. 38.6 percent TG), sensation (69.3 percent NTG vs. 70.4 percent TG) and the number of sexually activity (25 percent, both NTG and TG)

Researchers concluded that the TG population undergoing phalloplasty has a lower chance of overall complications, but a higher chance of urethral stricture, compared to the NTG population.

“Although the transgender and non-transgender populations are very different from an anatomic standpoint, the results of total phallic reconstruction, in both groups, are overall quite good,” said Dr. Bales. “There are not an abundant number of studies analyzing the postoperative impact of the procedure on both groups; therefore, it is important for health care providers, as well as those outside the medical community, to understand the outcomes of this type of surgery, in both patient groups. Having this information enables all parties involved to better prepare for what to expect post-surgery.”

Study Details
Publication Number: MP59-20

Total Phallic Reconstruction Using Radial Artery Based Forearm Free Flap after Penile Loss Secondary to Trauma: For those who have experienced severe urologic trauma, it can be stressful wondering if they will regain their urinary and sexual functionality. Depending on the severity of the trauma, procedures to repair the damage may range from a small skin graft to repair slight damage to a radial artery based forearm phalloplasty (RAP), to repair the most severe injuries, including a complete loss of the penis.

During a RAP procedure, surgeons remove skin, at least one artery, one large nerve and additional soft tissue from the forearm that will serve as the building block of the new penis. The inside structure is generated from nerves, blood vessels and tissue before the structure is wrapped with the forearm skin. Finally, the wrapped forearm skin is stitched on the exterior to create the shape of a penis. The new organ is carefully attached to the groin vessels, creating a penile replacement with the full potential functionality to urinate, have orgasms and ultimately enable intercourse.

As part of a single center evaluation with total phallic reconstruction using RAP, researchers from the University
College London Hospital in the United Kingdom retrospectively analyzed the clinical records of patients from their center who underwent the procedure between September 2001 and August 2015.

Results Showed:

- Penile reconstruction with the RAP following traumatic loss of the penis yielded excellent results
- All patients indicated they were satisfied with the phallus size, cosmetic appearance and sensation
- All indicated they found excellent results with sexual and urinary function
- The majority of patients were able to once again, engage in penetrative sex
- All patients who underwent complete urethral reconstruction were able to void and ejaculate from the tip of the phallus

“For those considering phalloplasty, seek out a health care provider who regularly performs gender reassignment surgery and learn more about the RAP method,” said Dr. Bales. “Based on available reported results, you should anticipate satisfactory outcomes from the procedure - in general, you should regain acceptable urinary and sexual function.”

NOTE TO REPORTERS: Experts are available to discuss this study outside normal briefing times. To arrange an interview with an expert, please contact the AUA Communications Office at 410-689-3932 or e-mail cfrey@AUAnet.org.

About the American Urological Association: The 111th Annual Meeting of the American Urological Association takes place May 6-10 at the San Diego Convention Center in San Diego, CA. Founded in 1902 and headquartered near Baltimore, Maryland, the American Urological Association is a leading advocate for the specialty of urology, and has more than 21,000 members throughout the world. The AUA is a premier urologic association, providing invaluable support to the urologic community as it pursues its mission of fostering the highest standards of urologic care through education, research and the formulation of health policy.

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