Genital Flaps for Urethral Lengthening in Female Transsexuals with Total Phalloplasty

Introduction and Objective: Urethral reconstruction presents the main problem in female to male gender reassignment surgery and includes creation of a very long neourethra, since the native urethral meatus in females is positioned too far from the tip of the glans. We evaluated new technique for urethral lengthening using different genital flaps.
Materials and Methods: Between April 2009 and October 2011, 32 female transsexuals underwent total phalloplasty with musculocutaneous latissimus dorsi flap. Simultaneously, urethral reconstruction was done using anterior vaginal flap, urethral plate, both labia minora skin flaps and dorsal clitoral skin flap. A vaginal flap is harvested from the anterior vaginal wall with the base close to the female urethral meatus and joined with urethral plate forming the bulbar part of the neourethra. Further reconstruction was performed using available hairless skin flaps. Both labia minora and available clitoral skin were dissected with long pedicle and used for urethral tubularization. This way, new urethral opening was placed as far as possible into the neophallus, minimizing the requests for second stage neophallic urethroplasty.
Results: Mean follow-up was 19 months (ranged from 5 to 36 months). Length of new urethra ranged from 14 to 21 cm (mean 17.5cm). Location of the new meatus was in 22 in the first third and in 10 cases in the second third of the neophallus, respectively. Functional voiding was noticed in 26 cases. Urethral fistula occurred in 5 and healed spontaneously in 3 or closed by minor repair in 2 cases, respectively. Urethral stricture in 3 cases was located in neophallic part and solved by dilation in 6 months.
Conclusions: Combined, good vascularized genital flaps present a good choice for urethral lengthening in female transsexuals with total phalloplasty, maximally preventing the postoperative complications. This way, requests for second stage neophallic urethroplasty are minimized.