

ONLAY ISLAND FLAP (223 CASES): THE TIMES THEY ARE CHANGING IN HYPOSPADIAS REPAIR

K Khelif, S Ralea, F Collier

Objectives: To review and discuss our results of patients who underwent hypospadias surgery using the modified onlay preputial island flap technique with intermediate well vascularised tissue.

Methods: We reviewed retrospectively the record of 223 hypospadiac patients who underwent a 1-stage onlay preputial pediculated flap repair since 1991, mainly by the same operator (F.C). The pediculated island graft was applied in an "onlay" fashion on the urethral plate, covered by an intermediate vascularised flap in all cases.

Mean age at surgery was 36.4 months (9 months- 17 years), and mean follow-up duration 31 months (3 months- 9 years).

The hypospadiac meatus was subcoronal in 32 (14.3%), at the distal, mid, and proximal third in 137 (61.4%), 29 (13%) and 8 (3.6%), respectively. Penoscrotal in 16 (7.2%) and perineal in 1 (0.4%). Mean length of the island flap graft was 15 mm (8-45 mm). 9 (4%) had previous hypospadias surgery, 11 (5%) a meatoplasty and 4 (1.8%) a previous circumcision.

Results: 210 (94.2%) patients had excellent functional and cosmetic results after one single procedure.

Complications requiring secondary operation occurred in 11 (4.9%) patients: 7 fistulas, 1 distal end breakdown, 1 meatal retraction, 1 urethral stenosis and 1 necrotising fasciitis.

1 meatal stenosis and 1 fistula were managed conservatively (0.9%).

Discussion: Technical key points will be discussed: neourethra coverage with a vascularised intermediate flap, hypoplastic urethra excision, sharp dissection and constant tissue respect, sparing diathermy use, urethral stenting, optical magnification, and skilled hypospadias team.

Conclusion: The modified onlay preputial island flap technique is a very reliable and safe technique in well experienced hands, allowing excellent results with a very low complication rate, and should be recommended even in urethral defects of 8-9 mm. Some technical details are essential to provide better results.

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Contact information of Abstract Presenter:

Title: Dr.

Name: Khelif

Surname: Karim

Institution: University Children's Hospital Queen Fabiola, Brussels, Belgium

Address: Avenue JJ Crocq, 15

1020 Brussels

Belgium

Tel.: +322/4773197

Fax.: +322/4787404

E-mail: karim.khelif@huderf.be