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Journal of Pediatrics & Neonatal Care

Editorial

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Hypospadias management; in a new era

Volume 5 Issue 8 - 2016

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Received: December 14, 2016 | **Published:** December 21, 2016

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The goals of primary operation of hypospadias area unit a straight phallus with a functional urethra, while not fistulas or strictures, and a cosmetically acceptable appearance. These goals could also be achieved employing an antecedently described treatment formula for primary reconstruction. Severe hypospadias and hypospadias with a major ventral curvature are treated using the two-stage procedure described by Bracka. Tubularized incised plate urethroplasty (TIP procedure) has been used to correct nothing distal hypospadias with mild ventral curvature. Repeat surgery includes 3 main steps: (1) correction of penial curvature; (2) replacement of the defective urethra with either native well-vascularized tissues or free grafts; and (3) reconstruction of the ventral facet of the phallus, which incorporates meatoplasty, glanuloplasty, spongioplasty and shaft skin plasty.

Many techniques are planned for hypospadias repair. In sorting out the 'best' technique, new procedures still emerge. Urethroplasty is also performed using native or distant 'extragenital' tissues. local tissues, particularly the prepuce, are thought to provide the most effective results, being vulnerable to both urine and air; stretchy, enabling them to deal with erection; and non-hairy, to avoid stone formation. unfortunately, the restricted handiness of those tissues for repeat surgery may mandate the employment of extragenital tissue, as well as buccal mucous membrane, bladder mucosa, skin and tunica vaginalis. These tissues, however, have limitations. Skin grafts exhibit contraction and have comparatively low elasticity. Bladder and buccal membrane are comparatively thin, predisposing to diverticulation upon distal obstruction. The obtainable area of mucosa could generally limit the potential length of the neourethra. Thus, alternatives are regularly investigated. Extragenital tissues are significantly required in complicated cases, as well as circumcised patients, patients with a scarcity of appropriate shaft skin, and patients with a protracted defect requiring reconstruction.

A search for different sources of extragenital tissue has led to the employment of buccal mucosa in advanced urethral reconstructions.[1,2] This tissue is ideally suited to urethral reconstruction, being well tailored to contact with both fluid and air. The tissue permits the growth of blood vessels, is immune to infection, and causes very little morbidity at the donor area. attributable to its elasticity and sensible durability, buccal mucosa is used as an onlay, inlay, or tube graft and may usually be used to reconstruct the urethra in an exceedingly single stage.

Tissue engineering had approached urethral replacement in several methods. The noncellular approach involves the utilization of natural or artificial matrices, typically termed scaffolds, to encourage the body's aptitude to repair itself. These matrices are often collagen based, biologically degradable and eventually are replaced by a host endowed in-growing cells. Scaffolds can even be harvested from different autologous, allogeneic or xenogeneic sources, then be processed by chemical and mechanical modalities to get rid of cellular components for ultimate implantation.[3] The cellular approach principle is to use donor cells processed before implantation and either seeded into the scaffold (cell-seeded scaffold approach) to enhance the expansion or regeneration of purposeful tissue, or used alone – the stem cell approach. The most effective source of cells in cell-seeded scaffolds is autologous, to eliminate the chance of rejection and associated complications of immunosuppression.[4]

Acknowledgements

None.

Conflict of interest

The authors declare no conflict of interest.

Funding

None.

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