



University of Dundee

Technical tip

McGee, Pauline; Hough, Matthew

Published in:
JPRAS Open

DOI:
[10.1016/j.jpra.2017.02.002](https://doi.org/10.1016/j.jpra.2017.02.002)

Publication date:
2017

Licence:
CC BY-NC-ND

Document Version
Publisher's PDF, also known as Version of record

[Link to publication in Discovery Research Portal](#)

Citation for published version (APA):
McGee, P., & Hough, M. (2017). Technical tip: Identifying the boundaries of the urethral plate in TIP Urethroplasty. *JPRAS Open*, 12, 44-46. <https://doi.org/10.1016/j.jpra.2017.02.002>

General rights

Copyright and moral rights for the publications made accessible in Discovery Research Portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from Discovery Research Portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain.
- You may freely distribute the URL identifying the publication in the public portal.

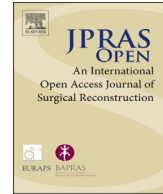
Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.



Contents lists available at ScienceDirect

JPRAS Open

journal homepage: <http://www.journals.elsevier.com/jpras-open>

Short Communication

Technical tip: Identifying the boundaries of the urethral plate in TIP Urethroplasty

Pauline McGee*, Matthew Hough

Department of Plastic Surgery, Ninewells Hospital, Dundee, DD1 9SY, UK

ARTICLE INFO

Article history:

Received 31 January 2017

Accepted 16 February 2017

Available online 9 March 2017

Keywords:

Hypospadias

Paediatric urology

Paediatric plastic surgery

Urethroplasty

Hypospadias is one of the most common congenital birth defects occurring in approximately 1 in 300 live male births. Corrective surgery aims to correct the position of the urethral meatus forming a slit like meatus in the glans.¹ Tubularized Incised Plate Urethroplasty originally described by Snodgrass in 1994² has been shown to be effective in treating distal hypospadias and associated with a low rate of complications (4%).^{1,3} It is the most commonly performed operation for distal and mid penile shaft hypospadias⁴ and the preferred technique by the senior author. Delineating the boundaries of the urethral plate and therefore the incisions for creation of the neo-urethra is often challenging as the boundary between plate and glans may be indistinct. The senior author uses Chloraprep[®] with tint routinely for pre-operative skin preparation. The product contains chlorhexidine gluconate 20 mg/ml, Isopropyl Alcohol 70 mg/ml, purified water and Sunset Yellow (E110) tint which stains the skin an orange colour to demonstrate the area that has been cleansed.⁵ We have found that the urethral plate stains a more intense shade of orange than the surrounding tissue and thus highlights the incision for the neo-urethra. We present a very simple method of identifying the boundaries of the urethral plate which may be incorporated into standard pre-operative preparation and as such does not add any additional operative time to the TIP Urethroplasty (Figures 1 and 2).

* Corresponding author. Department of Plastic Surgery, Level 5, Ninewells Hospital, Dundee, DD1 9SY, UK.
E-mail address: paulinemcgee@nhs.net (P. McGee).



Figure 1. Pre-operative photograph.



Figure 2. Intraoperative photograph following cleansing of the skin with Chloraprep®, note urethral plate stained orange.

Conflicts of interest statement

None.

References

1. Wilkinson DJ, Farrelly P, Kenny SE. Outcomes in distal hypospadias: a systematic review of the Mathieu and tubularized incised plate repairs. *J Pediatr Urol.* 2012;8:307–312.
2. Snodgrass W. Tubularized, incised plate urethroplasty for distal hypospadias. *J Urol.* 1994;151(2):464–465.
3. Snodgrass WT, Bush N, Cost N. Tubularized incised plate hypospadias repair for distal hypospadias. *J Pediatr Urol.* 2010;6(4):408–413.
4. Cook A, Khoury AE, Neville C, Bagli DJ, Farhat WA, Pippe Salle JL. A multicenter evaluation of technical preferences for primary hypospadias repair. *J Urol.* 2005;174:2354.
5. *Chloraprep® with Tint (Package Insert)*. Basingstoke: Carefusion UK 244 LTD; January 2016.