



## Master of Medicine (MMed) in Paediatric Surgery

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### The functional and cosmetic outcome of the Ventral Slit procedure for Congenital Megaprepuce

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## Plagiarism Declaration

I, *David Beaumont Tasker*, hereby declare that the work on which this dissertation/thesis is based, is my original work (except where acknowledgements indicate otherwise) and that neither the whole work, nor any part of it has been, is being, or is to be submitted for another degree in this or any other university.

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Dr D.B. Tasker

5 September 2021

## Final Abstract

**Background:** Congenital Megaprepuce is a urological condition characterized by a megapreputial reservoir with a long redundant inner prepuce. The condition has been linked to urinary tract infections, lower urinary tract symptoms, and ballooning of the penis during voiding. An impeded urinary stream and resultant ballooning is associated with discomfort and causes parental anxiety due to the unusual appearance of phallus. Surgical correction should improve functionality, but cosmesis is also important. This study took place in a community in which traditional circumcision remains an essential rite of passage. Therefore, early surgical correction of congenital megaprepuce was complicated by the unique requirement that patients remain uncircumcised.

**Methodology:** Here we investigated the functional and cosmetic outcomes of the ventral slit procedure, an uncomplicated technique used to restore urinary flow which, importantly, preserves the foreskin. Parents of 18 paediatric patients were interviewed post-operatively regarding phallic appearance and functionality following surgery.

**Results:** Overall, the ventral slit procedure successfully restored flow, prevented ballooning and alleviated discomfort during voiding in all patients. Parents interviewed were highly satisfied with surgical outcomes, as assessed by the Pediatric Penile Perception score.

**Conclusion:** The ventral slit procedure was found to be a culturally acceptable and simple surgical solution to congenital megaprepuce.

## Acknowledgements & Contributions

I would sincerely like to thank the following individuals for their mentorship and assistance with this project:

- My supervisor, Dr Justin Howlett, for helping me start this project and seeing it through with me to the end.
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## Abbreviations

CMP	Congenital Megaprepuce
LIP	long inner prepuce
RCWMCH	Red Cross War Memorial Children's Hospital
UTI	Urinary Tract Infection
UCT	University of Cape Town

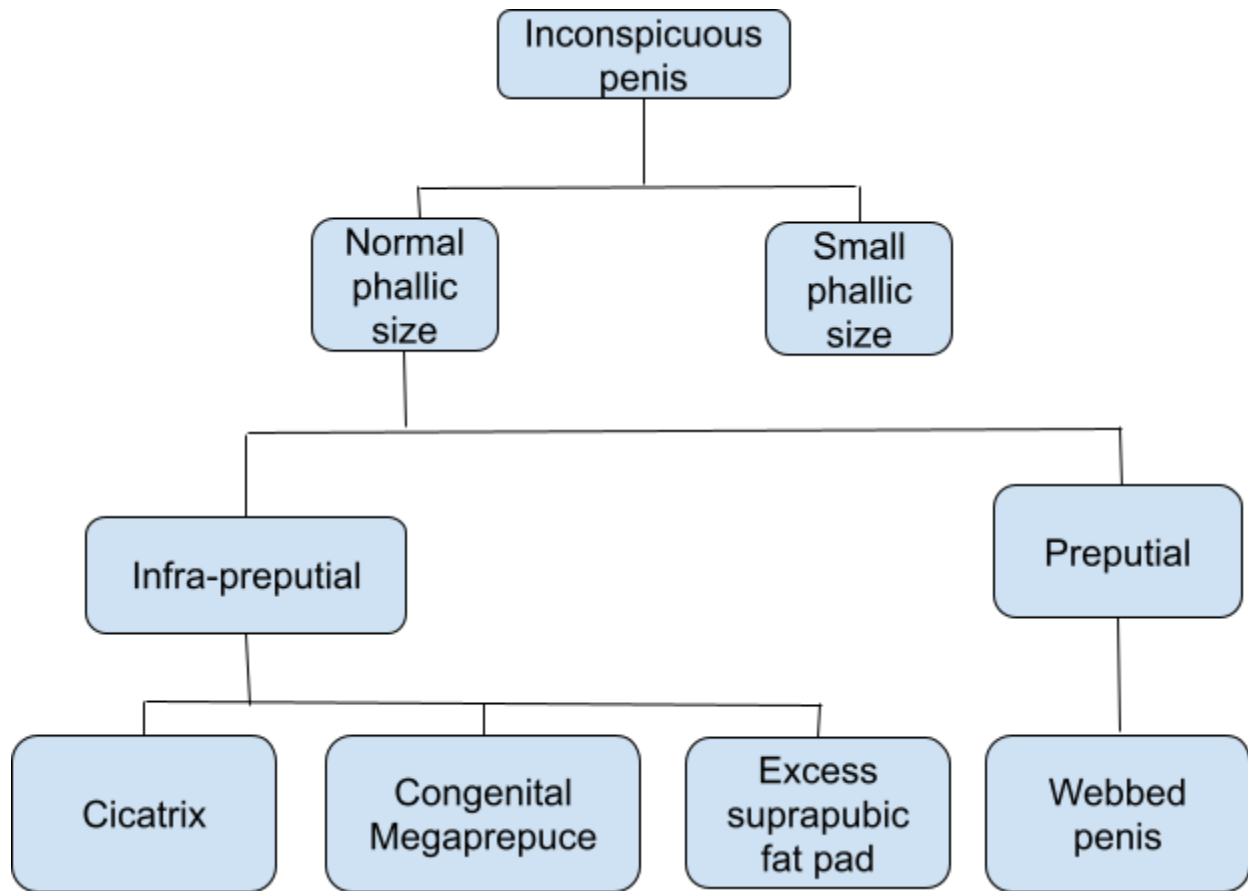
## Chapter 1: Introduction and Literature Review

Congenital Megaprepuce (CMP) is an emerging condition first described in a case report by O'Brien et al (1) in 1994, following which there have been a few series published in the literature on the surgical correction of this condition (2,3,4,5,6,7,8,9). The aetiology of this condition remains unclear, and it must be separated from the so-called buried penis. The natural history and evolution of this condition is not clear and is characterized by a megapreputial reservoir with a long redundant inner prepuce. This may be the result of a proximal stenotic preputial opening which in turn creates the impression of a foreshortened penis with ballooning of the megaprepuce during micturition, and urine leaking from this megapreputial reservoir. By definition, the condition should be present at birth, but is often missed. Congenital megaprepuce must be distinguished from several other anomalies:

- Buried Penis – this is a common anomaly frequently associated with insufficient outer penile skin, inadequate subcutaneous attachment to Buck's fascia and usually a narrow opening of the prepuce.
- Trapped Penis – a penis of normal size that has regressed behind an iatrogenic post circumcision cicatrix.
- Webbed Penis - congenital condition in which the scrotal skin extends onto the ventral penile shaft, tethering the shaft to the scrotal midline by a skin web.
- Micropenis – an unusually small penis that is normal in appearance but less than two standard deviations in size when erect or stretched for the mean age group.
- Concealed penis – a penis hidden by an excessive suprapubic fat pad and poor fixation of the shaft skin.

There are several workable classifications to describe the pathological anatomy.

Alexander *et al's* classification is most helpful in the clinical setting when faced with a child with an "inconspicuous penis". The logic flows from determining the phallic size (usually normal in this context), then the glanular position, a clear description of the condition (trapped penis, buried penis, concealed penis and webbed penis), and the underlying cause (post circumcision cicatrix, congenital megaprepuce, excessive suprapubic fat pad and penoscrotal fusion.) (2)



**Figure 1:** Schematic demonstrating criteria described by Alexander *et al* for diagnosis of CM

Maizels *et al*'s classification in 1986 of the 'concealed penis' into normal circumcised, poor skin suspension, buried penis, webbed penis, trapped penis and micropenis has been widely used in the literature, but obviously does not define the specific entity of CMP (8).

Crawford's classification system includes 3 broad categories, namely concealed penis, buried penis (partial or complete) and penoscrotal webs, again not specifically defining the specific entity of CMP (9).

Hadidi's classification for buried penis is based on morphological findings and classifies congenital megaprepuce into grade 1 (10).

The three grades are as follows:

- Grade 1: long inner prepuce (LIP) and loose attachment of skin and fascia to corporal body
- Grade 2: long inner prepuce and abnormal distal attachment of the fundiform and suspensory ligaments
- Grade 3: long inner prepuce, distal attachment of the suspensory ligament and abnormal excess distribution of the suprapubic fat

The parental concerns that brought the patients to attention are usually focused on problematic urination - the infant's megaprepuce balloons when he urinates, and there is a predisposition to maceration of the skin and potential urinary tract infections. With regard to corrective surgery, the objectives are to restore the functional anatomy to have an unobstructed urinary stream, and to improve the cosmesis, and should ideally be performed early in life. Several surgical techniques have been described to correct the anomaly of CMP, including multiple Z-plasty, removal of the suprapubic fat pad, the use of preputial island flaps, fixation of the suprapubic skin to the pubis, preputial unfurling, Ventral V-plasty, the DOLOMITE technique and various degloving/penoplasty techniques.(2, 3,4,5, 6, 7, 10, 11, 12, 13, 15). These procedures are all complex procedures in comparison to the simple Ventral Slit procedure to achieve the surgical objective of an unobstructed urinary system, resulting in an uncircumcised appearance of the phallus. The procedure is carried out with the subject anaesthetized. A straight hemostat is placed along the ventral foreskin. Once removed, the incision is made using either electrocautery or dissection scissors to incise the foreskin. The inner and outer layers of the prepuce are then approximated using 5/0 Chromic suture material (13).

At Red Cross War Memorial Children's Hospital (RCWMC), both the Ventral V-plasty technique, a novel inverted circumcision technique and a foreskin preserving Ventral Slit have been performed for congenital megaprepuce. At this particular hospital however, the latter is preferred due to unique cultural reasons. The community surrounding the hospital are largely Xhosa speaking, in which traditional circumcision known as Ulwaluko, plays an extremely important socio-sexual role in the transition from childhood to manhood (14). The initiation ritual traditionally takes place around the time of physical puberty, therefore it is a unique requirement of this region that any surgical correction for CMP leave the patient uncircumcised in order to preserve future rites of passage. Whilst the procedure restores flow, questions remain as to the cosmetic appearance, and whether or not parents are satisfied with the outcome.

Herndon *et al* (15) developed a questionnaire for the parents of children with Buried Penis, namely the Buried Penis Questionnaire (Appendix 1). The Pediatric Penile Perception Score by Weber *et al* (16) is also a validated objective tool to measure post-operative patient satisfaction. These scoring systems have been developed for assessing the outcome after "buried penis" and hypospadias surgery respectively, and in general terms, should be applicable to evaluate the functional and cosmetic outcome of the Ventral Slit procedure.

Due to extensive waiting lists for surgery, there is a considerable delay in the waiting period for surgery. This could be mitigated by the fact that the ventral slit procedure / operation itself is technically not a difficult operation requiring significant surgical expertise nor is it time consuming. Patients could be prioritized for day case surgery. More patients could be operated on if this was the procedure of choice, as opposed to a more elaborate surgery.

Ideally, these patients should be operated on as soon as possible after the diagnosis is made, as this would alleviate the discomfort associated with urination and parental concerns highlighted by this study.

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## **Chapter 2: The functional and cosmetic outcome of the Ventral**

### **Slit Procedure for Congenital Megaprepuce**

The following is a manuscript of the outcomes of the Ventral Slit procedure as a corrective surgery for CMP. It is in the form of a publication intended for submission to the South African Journal of Surgery.

Tasker, D. B., Howlett, J. & Rode, H. (2021) What is the functional and cosmetic outcome of the Ventral Slit Procedure for Congenital Megaprepuce. *South African Journal of Surgery*.

# **What is the functional and cosmetic outcome of the Ventral Slit Procedure for Congenital Megaprepuce**

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## **Abstract**

**Background:** Congenital Megaprepuce is a urological condition characterized by a megapreputial reservoir with a long redundant inner prepuce. The condition has been linked to urinary tract infections, lower urinary tract symptoms, and ballooning of the penis during voiding. An impeded urinary stream and resultant ballooning is associated with discomfort and causes parental anxiety due to the unusual appearance of phallus. Surgical correction should improve functionality, but cosmesis is also important. This study took place in a community in which traditional circumcision remains an essential rite of passage. Therefore, early surgical correction of congenital megaprepuce was complicated by the unique requirement that patients remain uncircumcised.

**Methodology:** Here we investigated the functional and cosmetic outcomes of the ventral slit procedure, an uncomplicated technique used to restore urinary flow which, importantly, preserves the foreskin. Parents of 18 paediatric patients were interviewed post-operatively regarding phallic appearance and functionality following surgery.

**Results:** Overall, the ventral slit procedure successfully restored flow, prevented ballooning and alleviated discomfort during voiding in all patients. Parents interviewed were highly satisfied with surgical outcomes, as assessed by the Pediatric Penile Perception score.

**Conclusion:** The ventral slit procedure was found to be a culturally acceptable and simple surgical solution to congenital megaprepuce.

## **Keywords**

Urology; Genitourinary surgery; Congenital Megaprepuce; Ventral Slit Procedure

## Introduction

Congenital Megaprepuce (CMP) is a penile malformation characterized by a megapreputial reservoir with a long redundant inner prepuce. The condition is often associated with problematic urination, frequent urinary tract symptoms and urinary tract infections (UTI), as well as parental concerns about phallic size due to ballooning of the penis during voiding. O'Brien *et al*<sup>1</sup> first described CMP in 1994, and since then many surgical options have been described<sup>2-9</sup>. The natural history and evolution of this CMP is unclear, and it may be the result of a proximal stenotic preputial opening which in turn creates the impression of a foreshortened penis with ballooning of the megaprepuce during micturition, and urine leaking from this megapreputial reservoir.

By definition, the condition should be present at birth, however it is often overlooked. Moreover, diagnosis of CMP should be distinguished from several other anomalies such as Buried Penis – a common anomaly frequently associated with insufficient outer penile skin, inadequate subcutaneous attachment to Buck's fascia and usually a narrow opening of the prepuce; Trapped Penis – a penis of normal size that has regressed behind an iatrogenic post circumcision cicatrix; Webbed Penis - congenital condition in which the scrotal skin extends onto the ventral penile shaft, tethering the shaft to the scrotal midline by a skin web; Micropenis – an unusually small penis that is normal in appearance but less than two standard deviations in size when erect or stretched for the mean age group; and Concealed penis – a penis hidden by an excessive suprapubic fat pad and poor fixation of the shaft skin.

Several workable classifications have been used to describe the pathological anatomy. Alexander *et al*'s classification is most helpful in the clinical setting when faced with a child with an "inconspicuous penis". The logic flows from determining the phallic size (usually normal in this context), then the glanular position, a clear description of the condition (trapped penis, buried penis, concealed penis and webbed penis), and the underlying cause (post circumcision cicatrix, congenital megaprepuce, excessive suprapubic fat pad and penoscrotal fusion)<sup>2</sup> (Figure 1). Alternative classification schemes include Maizels *et al*'s classification of the 'concealed penis'<sup>8</sup>, Crawford's<sup>9</sup>, and Hadidi's graded classification system, in which CMP falls under grade 1<sup>10</sup>.

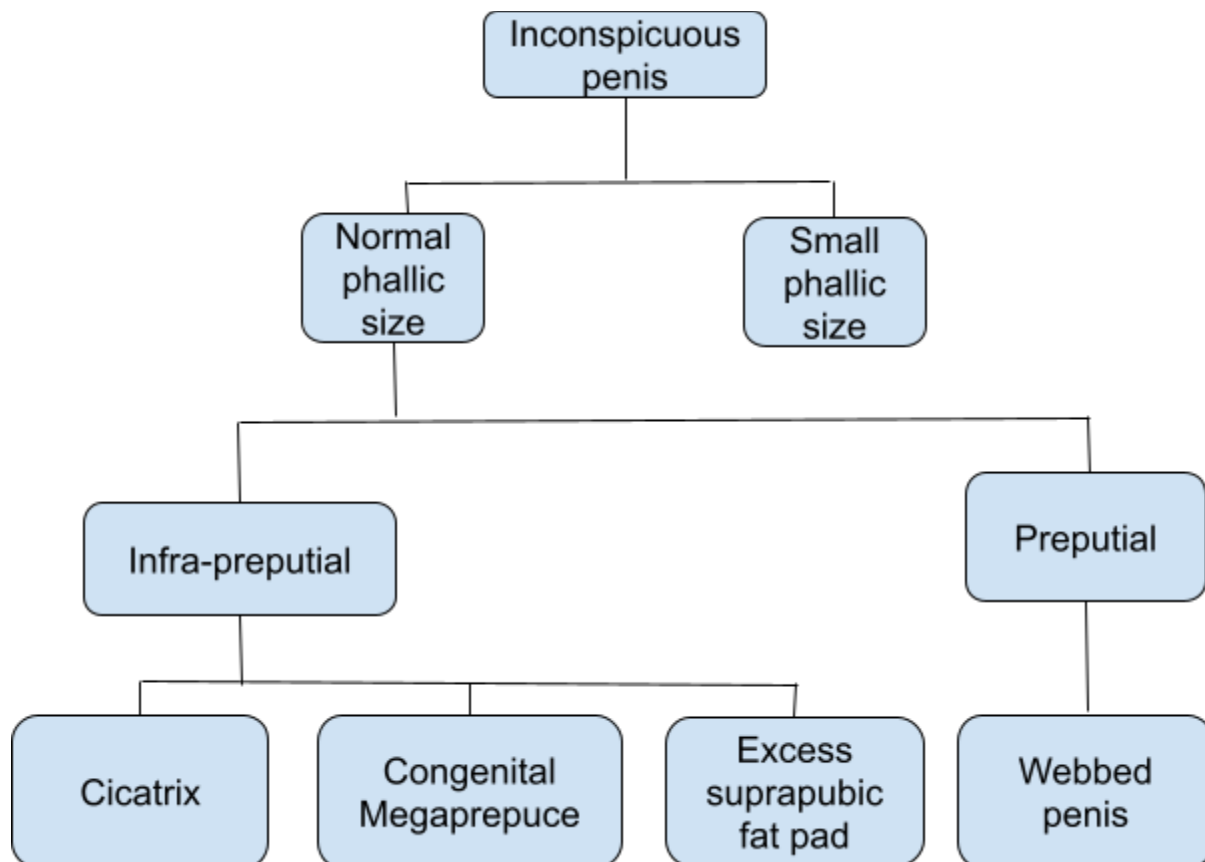


Figure 1. Schematic demonstrating criteria described by Alexander *et al* for diagnosis of CMP.

With regard to surgical correction of CMP, the objectives are to restore the functional anatomy with an unobstructed urinary stream and to improve the cosmesis. Moreover, corrective procedures should ideally be performed early in life. Several surgical techniques have been described including multiple Z-plasty, removal of the suprapubic fat pad, the use of preputial island flaps, fixation of the suprapubic skin to the pubis, preputial unfurling, Ventral V-plasty, the DOLOMITE technique and various degloving/penoplasty techniques<sup>2-7,10-15</sup>. These procedures are all complex procedures requiring considerable levels of surgical skill. All of them result in the circumcised appearance of the penis.

The ventral V slit was first described in La Vega, as a treatment for phimosis on an island where circumcision is considered culturally unacceptable. It is a simple procedure where once an adequate level of anaesthesia of the patient is achieved (general anaesthetic with a penile ring block using Bupivacaine), a straight haemostatic clip is placed ventrally in the midline of the prepuce for half a minute. Tissue scissors are then used to dissect along this line of crushed tissue, which in turn allows the glans to be exposed as the prepuce retracts. The incision is made to extend beyond the phimotic

narrowing. Holding sutures can be used to help triangulate the incised prepuce into a V-shaped pattern, and then the skin edges are approximated with a 5/0 Chromic running suture.

In comparison to all other published techniques, the Ventral Slit procedure to achieve an unobstructed urinary system, is simple and results in an uncircumcised appearance of the phallus<sup>13</sup>.

### **Setting**

At Red Cross War Memorial Children's Hospital, Cape Town, South Africa the majority of our patients with congenital megaprepuce are Xhosa speaking.

The community surrounding the hospital are largely Xhosa, in which traditional circumcision known as Ulwaluko, plays an extremely important socio-sexual role in the transition from childhood to manhood<sup>16</sup>. The initiation ritual traditionally takes place around the time of physical puberty, therefore it is a unique requirement of this region that any surgical correction for CMP leave the patient uncircumcised in order to preserve future rites of passage.

We therefore began to think of surgical options for congenital megaprepuce that were foreskin preserving, and started to perform the Ventral Slit procedure. At Red Cross we also offer patients the Ventral V-plasty technique and a novel inverted circumcision technique to those patients who want a circumcised appearance of the foreskin for CMP.

### **Aim**

The aim of this study was to evaluate whether the functional and cosmetic outcome of the ventral slit procedure is acceptable for CMP, in a culture that does not accept circumcisions.

### **Methods**

We performed a Retrospective review of the Urological database at the RCWMCH from 2014-2018 of all male infants who had a ventral slit for CMP.

Participants were then contacted telephonically and invited to attend an outpatient appointment or telephonic interview, to prospectively collect outcomes data.

The study included both an interview with parents or legal guardians as well as an intended clinical examination conducted post-operatively. Parents and guardians of study participants were asked to complete the Buried Penis Questionnaire, which was used to assess functional and cosmetic outcomes. The Pediatric Penile Perception Score was then used to report on phallic appearance where meatus, glans, penile skin and overall cosmetic appearance were scored. Informed consent for each participant was granted by parent or legal guardian.

The study protocol was approved by the UCT Health Science Human Research Ethics committee, ethics number 124/2019.

## **Research Design and Data Collection**

The study was a prospective observational review of male infants who have had the Ventral Slit procedure for CMP at the RCWMCH between 2014-2018.

## **Results**

### **Initial observations**

Eighteen male infants who had the Ventral Slit procedure for CMP performed at the Red Cross War Memorial Children's Hospital (RCWMCH) were included in the study. Seventeen infants included were South African males of Xhosa descent. The mean age of participants at the time of procedure was 13 months (range 4 - 31 months). A total of 25 cases were identified, of which 18 were contactable. Seventeen participants opted for a telephonic interview, whilst 1 patient attended an outpatient appointment.

All participants underwent the surgery under general anaesthetic, with two thirds of the patients managed as day case surgery. Mean operative time was 29 minutes (range: 7 minutes - 60 minutes), with the mean anaesthetic time of 61 minutes (range: 30 minutes to 2 hours).

The child who required a surgical time of 60 minutes, desaturated intra-operatively, and required a second procedure by an ENT surgeon simultaneously to drain a vallecular cyst.

Two patients had issues with wound dehiscence post-operatively and stayed in hospital longer than a day.

Three patients underwent further surgery: one patient required epispadias repair (incidentally detected at the time of surgery), one patient developed paraphimosis post-operatively and underwent formal circumcision, and another patient opted for further surgery with the circumcised appearance as the outcome.

### **Buried Penis Questionnaire**

The functional outcomes were as follows, using a binomial distribution for the P values:

There was a 17% drop in UTI's. ( $p= 0.00067$ )

None of the patients had ballooning of the foreskin.

Only 1 patient had hidden foreskin out of 18. ( $p=0.014$ )

No patients experienced dysuria post op.

All 18 would recommend surgery to a friend.

Parents and legal guardians of study participants were asked to complete the Buried Penis Questionnaire following the Ventral Slit Procedure (Table 1).

Table 1. Parental responses to the Buried Penis Questionnaire:

<b>Question</b>	<b>No (n=18)</b>	<b>Yes (n=18)</b>	<b>If yes, please comment</b>
Did your child have infections prior to surgery for buried penis?	15	3	2 Patients had reported UTI
Did he develop an infection after surgery?	16	2	2 Patients developed postoperative wound infections, but no UTI reported
Did urine pool behind skin prior to surgery for buried penis?	0	18	All parents reported ballooning of foreskin
Did urine pool behind the skin after surgery?	17	1	1 patient experienced post-operative wound problems and required further surgery
Did you have trouble keeping your son's skin clean prior to surgery?	18	0	
Do you have trouble keeping your son's skin clean now?	18	0	
Was the penis completely hidden behind skin prior to surgery?	0	18	
Is the penis hidden after surgery?	17	1	The patient who had wound infection post-operatively had an issue with concealment
Did your son experience pain with voiding before surgery?	6	12	
Does your son experience pain with voiding after surgery?	18	0	
Did you have negative concerns about the appearance of your son's penis prior to surgery?	0	18	
Do you think the surgery increased the length of your child's penis?	14	4	
Do you think surgery was helpful in alleviating those negative concerns?	0	18	
Would you want this surgery again or recommend it to a friend whose child had the same condition as your son?	0	18	
Did surgery make your son's penis more assessable?	0	18	

## The Pediatric Penile Perception Score

The Pediatric Penile Perception Score was used to evaluate penis cosmesis following the Ventral Slit Procedure (Table 2). One participant was available for post-operative examination, in this case assessment was made by the author. In all other cases the Pediatric Penile Perception Score was used to assess contentment of parent or guardian.

The single patient who was clinically evaluated was 4 years old at the time of review, having undergone surgery at the age of 10 months. He had a normal length phallus, with a good penoscrotal angle. He had no visible scar tissue, and no tethering of skin with the penile shaft. The foreskin appeared normal for a child his age and retracted easily.

Table 2. Cosmetic assessment of penis following the Ventral Slit Procedure:

GPS	Very satisfied (n=18)	Satisfied (n=18)	Dissatisfied (n=18)	Very Dis-satisfied (n=18)
Meatal position and shape	18	0	0	0
Shape of the glans	17	1	0	0
Shape of the penile skin	16	2	0	0
General cosmetic appearance	14	4	0	0

## Discussion

This study draws attention to the simplicity of the Ventral Slit Procedure as a suitable corrective procedure for CMP. The procedure is technically uncomplicated to perform, has minimal postoperative sequelae, and offers the additional advantage of leaving the foreskin intact.

Despite the small numbers we were able to demonstrate a statistically improved absence of dysuria and ballooning of the foreskin and a non-significant trend toward decreasing UTI's.

Despite the small numbers we were also able to demonstrate a statistically significant cosmetic satisfaction score among parents.

As indicated in the Buried Penis Questionnaire, the procedure successfully alleviated pathology associated with CMP, and relieved discomfort during voiding. Ballooning of the penis due to pooling of urine behind the foreskin, which was noted as a particular source of parental anxiety prior to surgery, was assessed in every case. Importantly, all parents and guardians found the ventral slit procedure to be an acceptable surgical

correction for CMP, and were mostly “very satisfied” with phallic appearance post-surgery. If further surgery was desirable to leave the child with a circumcised appearance, this could be performed at a later stage when the child is of a consenting age. In this case, surgery would also be less technically challenging as the child would have outgrown any issues associated with this condition if left unchecked, namely the remarkably redundant inner prepuce and the associated psychological embarrassment associated with a concealed penis.

Retrospective review of CMP cases highlighted a considerable delay in parental recognition of CMP pathology, which led to additional delays in diagnosis, highlighted here by the fact that no patients presented to us or the referring doctor before three months of age. Moreover, extensive waiting lists for surgery further delay corrective measures. Ideally, these patients should be operated on as soon as possible after the diagnosis is made, as this would alleviate discomfort associated with urination and parental concerns. Moreover, the correction of the abnormality before the child becomes self-aware, could avoid significant humiliation in the school environment. Not only does the Ventral Slit Procedure make for a culturally appropriate choice for surgical correction, but it could mitigate surgical delays as the operation itself is not technically difficult. The procedure itself is also not time consuming: our mean operative time being 29 minutes, and mean anaesthetic time of 61 minutes. Patients could be prioritized for day case surgery which would increase the number of patients treated per day.

Our recommendations for future research would be to compare circumcising techniques with the Ventral Slit procedure, as we feel mean operative times would be statistically different, whilst cosmetic and functional outcomes could rival each other. It would also be useful to validate this procedure in other settings where there was not necessarily an emphasis on whether the child appeared circumcised or not after surgery.

## **Conclusion**

To the best of our knowledge this is the first description of ventral slit for congenital megaprepuce. We were able to demonstrate that it gives a good functional and cosmetic outcome to those patients with CMP requesting foreskin preservation.

The authors therefore recommend the Ventral Slit Procedure as an ideal operation to restore flow dynamics for young male infants suffering from CMP. In this region, it represents a culturally acceptable surgical solution, with favourable cosmetic outcomes and could also bring relief to our currently overburdened surgery waiting lists.

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## Appendix 1:

### Buried Penis Questionnaire

The following questionnaire was first published by Herndon *et al* (2017) as an assessment of the parent's perspectives before and after surgery for buried penis:

1. Did your child have infections prior to surgery for buried penis?
2. Did he develop an infection after surgery?
3. Did urine pool behind skin prior to surgery for buried penis?
4. Does urine pool behind skin after surgery?
5. Did you have trouble keeping your son's skin clean prior to surgery?
6. Do you have trouble keeping your son's skin clean now?
7. Was the penis completely hidden behind skin prior to surgery?
8. Is the penis hidden after surgery?
9. Did your son experience pain with voiding before surgery?
10. Does your son experience pain with voiding after surgery?
11. Did you have negative concerns about the appearance of your son's penis prior to surgery?
12. Do you think the surgery increased the length of your child's penis?
13. Do you think surgery was helpful in alleviating those negative concerns?
14. Would you want this surgery again or recommend it to a friend whose child had the same condition as your son?
15. Did surgery make your son's penis more assessable?

### Reference

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## Appendix 2

### **The Pediatric Penile Perception Score**

The following is a scoring system described by Weber et al (2018) that has been used to assess cosmetic appearance of the anatomy of the penis following hypospadias surgery:

1. Meatal position and shape
2. Shape of the glans
3. Shape of the penile skin
4. General cosmetic appearance

All factors scored on a 4-point Likert scale as:

very dissatisfied	(0)
dissatisfied	(1)
satisfied	(2)
very satisfied	(3)

### **Reference**

Weber DM, Schonbucher VB, Landolt MA, Gobet R.  
The Pediatric Penile Perception Score: an instrument for patient self-assessment and surgeon evaluation after hypospadias repair.  
J Urol. 2008;180(3):1080-4



# Appendix 4

## Ethical Approval



UNIVERSITY OF CAPE TOWN  
Faculty of Health Sciences  
Human Research Ethics Committee



Room E53-46 Old Main Building  
Grootes Schuur Hospital  
Observatory 7925  
Telephone [021] 406 6492  
Email: [sumayah.arietdien@uct.ac.za](mailto:sumayah.arietdien@uct.ac.za)  
Website: [www.health.uct.ac.za/fhs/research/humanethics/forms](http://www.health.uct.ac.za/fhs/research/humanethics/forms)

28 May 2019

**HREC REF: 124/2019**

**Dr J Howlett**  
Department of Urology  
Red Cross War Memorial Children's Hospital  
Rondebosch

Dear Dr Howlett

**PROJECT TITLE: THE FUNCTIONAL AND ANATOMICAL OUTCOME OF THE VENTRAL SLIT PROCEDURE FOR CONGENITAL MEGAPREPUCE (MMED Candidate - Dr D Tasker)**

Thank you for your response letter dated 23 May 2019, addressing the issues raised by the Human Research Ethics Committee (HREC).

It is a pleasure to inform you that the HREC has **formally approved** the above-mentioned study, subject to the following: -

1. Please write out HREC in full and explain their rights and why they can phone the HREC.

**Approval is granted for one year until the 30 May 2020.**

Please submit a progress form, using the standardised Annual Report Form if the study continues beyond the approval period. Please submit a Standard Closure form if the study is completed within the approval period.

(Forms can be found on our website: [www.health.uct.ac.za/fhs/research/humanethics/forms](http://www.health.uct.ac.za/fhs/research/humanethics/forms))

**We acknowledge that the student: Dr David Tasker will also be involved in this study.**

**Please quote the HREC REF in all your correspondence.**

Please note that the ongoing ethical conduct of the study remains the responsibility of the principal investigator.

Please note that for all studies approved by the HREC, the principal investigator **must** obtain appropriate institutional approval, where necessary, before the research may occur.

Yours sincerely

**PROFESSOR M BLOCKMAN**  
**CHAIRPERSON, FHS HUMAN RESEARCH ETHICS COMMITTEE**

Appendix 5  
Department of Surgery Study Approval



**UNIVERSITY OF CAPE TOWN**



**Department of Surgery**  
Departmental Research Committee  
**Dr Timothy Pennel**  
D24 Office, Grootte Schuur Hospital  
Observatory 7925  
South Africa  
Tel (021) 404 3430  
Email: [tim.pennel@uct.ac.za](mailto:tim.pennel@uct.ac.za)

7 Feb 2019

Dr D Tasker  
Department of Surgery  
University of Cape Town

Dear Dr Tasker

RE: Project 2018/150

**PROJECT TITLE: The Functional And Anatomical Outcome Of The Ventral Slit Procedure For Congenital Megaprepuce.**

The above protocol has been reviewed by the Department of Surgery Research Committee. I am pleased to inform you that the committee approved the scientific merit of the study, and endorse the protocol for submission to the relevant ethics committee.

Although this letter serves as confirmation that the above protocol has successfully passed through the surgical DRC, respective ethics committees still require DRC chair signature before submission.

Please use the above project number in all future correspondence,

Yours sincerely

DR TIMOTHY PENNEL  
CHAIRMAN: RESEARCH COMMITTEE

# Appendix 6

## RCWMCH Study Approval



DR AN PARBHOO  
Manager: Medical Services  
Red Cross War Memorial Children's Hospital  
Email: Anita.Parbhoo@westerncape.gov.za  
Tel: +27 21 658 5430 Fax: +27 21 658 5006/5166

27 August 2019

Dr D Tasker  
Paediatric Surgery Registrar

Dear Dr Tasker,

RESEARCH: RXH: RCC 198

**PROJECT TITLE: The functional and anatomical outcome of the Ventral Silt procedure for Congenital Megaprepuce**

It is a pleasure to inform you that the hospital Research Review Committee has approved your application to conduct above-mentioned study at Red Cross War Memorial Children's Hospital.

Kindly note as follows:

1. To negotiate with your surgical colleagues for space at an appropriate day the time in the Surgical Outpatients Department.
2. As this is not part of the direct clinical care of the patient, payment of the additional clinic visits would need to be made to the hospital – please set up an account with the hospital's fees department as per the attached trial registration form. Kindly forward the form to [Natasha.Jaffha@westerncape.gov.za](mailto:Natasha.Jaffha@westerncape.gov.za).

Yours sincerely,

A handwritten signature in black ink, appearing to read 'An Parbhoo'.

DR AN PARBHOO  
MANAGER: MEDICAL SERVICES