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Title: Urethroplasty with Pedicled Tunica Vaginalis for the Treatment of Long-Segment Anterior Urethral Stricture Caused by Lichen Sclerosus of Glans Penis

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Author Questionnaire

1. We have marked your project as author-provided footage, meaning you film the video yourself and provide JoVE with the footage to edit. JoVE will not send the videographer. Please confirm that this is correct.

√ Correct

2. Microscopy: Does your protocol require the use of a dissecting or stereomicroscope for performing a complex dissection, microinjection technique, or something similar? **NO**

3. Software: Does the part of your protocol being filmed include step-by-step descriptions of software usage? **NO**

4. Proposed filming date: To help JoVE process and publish your video in a timely manner, please indicate the proposed date that your group will film here: **05/07/2025**

When you are ready to submit your video files, please contact our China Location Producer, Yuan Yue.

Current Protocol Length
Number of Steps: 12
Number of Shots: 23

Introduction

NOTE to VO artist: The authors cannot provide interviews. We have to record them.

1.1. ~~**Wanglong Wang**~~: This research introduces a surgical method using a pedicled tunica vaginalis to treat long segment urethral stricture resulting from lichen sclerosus **[1]**.

1.1.1. ~~INTERVIEW: Named Talent says the statement above in an interview-style shot, looking slightly off-camera.~~ *Use 2.8*

What are the most recent developments in the field of research?

1.2. ~~**Wanglong Wang:**~~ Urethroplasty techniques are used to treat long-segment anterior urethral strictures. Among the commonly employed urethral substitutes are bladder mucosa, oral mucosa, colonic mucosa, preputial graft, and tunica vaginalis, each possessing unique advantages and limitations **[1]**.

1.2.1. ~~INTERVIEW: Named Talent says the statement above in an interview-style shot, looking slightly off-camera~~. *Use 2.9 and 2.10*

What advantage does the protocol offer compared to other techniques?

1.3. ~~**Wanglong Wang:**~~ This technique has the advantages of a high surgical success rate, convenient graft harvesting, simple operation, less trauma, and fewer complications, and it is easy to promote and carry out in primary healthcare **[1]**.

1.3.1. ~~INTERVIEW: Named Talent says the statement above in an interview-style shot, looking slightly off-camera~~. *Use 3.1*

Ethics Title Card

This research has been approved by the Human Ethics Committee of People's Hospital of Lvliang. The patients provided informed consent to use and publish their data

Protocol

NOTE: Timecodes are added as provided by the authors. The writer/postshoot note integrator has not reviewed the footage for regular (talent) shots

2. Surgical Method Using Pedicled Tunica Vaginalis for Treating Long-Segment Urethral Stricture

Demonstrator: Wanglong Wang

NOTE to VO artist: Please ensure to record the interviews also.

2.1. After anesthetizing the patient, measure and mark a position approximately 0.5 centimeters proximal to the coronal sulcus *(/ˈsʌlkəs/)* as the starting point **[1]**. Perform a circumferential incision of the foreskin at the marked position **[2]**.

2.1.1. Talent marking the 0.5-centimeter position proximal to the coronal sulcus. Author provided timestamp: DSC-8842 00:00:51-00:01:11

2.1.2. Talent making a circumferential incision of the foreskin at the marked position. Author provided timestamp: DSC-8842 00:02:33-00:02:53

2.2. Gradually retract the foreskin proximally towards the base of the penis **[1]**. Carefully dissect and release any adhesions of the inner foreskin until the penile Buck's fascia *(/bʌks ˈfeɪʃə/)* is fully exposed **[2]**.

2.2.1. Talent retracting the foreskin proximally towards the base of the penis. Author provided timestamp: DSC-8842 00:04:15-00:04:50; DSC-8842 00:06:27-00:06:35

2.2.2. Talent dissecting and releasing the adhesions of the inner foreskin and a shot of exposed Buck's fascia. Author provided timestamp: DSC-8842 00:07:35-00:07:50

2.3. Next, make a ventral longitudinal incision along the stenotic urethral segment, extending approximately 0.5 to 1 centimeter into the adjacent normal urethral tissue **[1]**. Following the incision, examine the site to confirm adequate exposure of the urethral stricture **[2]**. Insert a 24 French Foley *(/ˈfoʊli/)* catheter into the urethra **[3]**. NOTE: VO is added for the added shot.

2.3.1. Talent making the ventral longitudinal incision along the stenotic urethral segment. Author provided timestamp: DSC-8851 00:03:30-00:03:55; DSC-8851

00:04:26-00:04:40

2.3.2. Talent examining the urethral stricture segment for exposure. Author provided timestamp: DSC-8851 00:05:40-00:05:43

Added shot: 2.3.3. Talent inserting the Foley catheter into the urethra. Author provided timestamp: DSC-8851 00:06:00-00:06:20

2.4. Perform a longitudinal incision through the scrotal wall **[1]**. Sequentially incise the layers of skin and the underlying fascia */ˈfeɪʃə/* to gradually expose the parietal layer of the tunica vaginalis */ˈtuːnɪkə ˌvædʒɪˈneɪlɪs/* **[2]**.

2.4.1. Talent performing a longitudinal incision on the scrotal wall. Author provided timestamp: DSC-8851 00:09:03-00:09:13

2.4.2. Talent incising the layers of skin and the underlying fascia and a shot of the exposed parietal layer of the tunica vaginalis. Author provided timestamp: DSC-8851 00:10:10-00:11:00

2.5. Make an arcuate */ˈɑːrkjuˌeɪt/* incision on the tunica vaginalis wall near the epididymal margin **[1]**. Through this incision, open the tunica vaginalis cavity **[2]**.

2.5.1. Talent making an arcuate incision on the tunica vaginalis wall. Author provided timestamp: DSC-8851 00:11:30-00:12:22

2.5.2. Shot of the tunica vaginalis cavity being opened through the incision. Author provided timestamp: DSC-8851 00:13:28-00:13:32

2.6. Harvest a rectangular flap of approximately 1 centimeter by 7 centimeters within the tunica vaginalis cavity through excision along the course of the epididymis */ˌɛpɪˈdɪdɪmɪs/* **[1-TXT]**. Similarly, harvest a rectangular flap from another testicle **[2]**. NOTE: VO is added for the added shot.

2.6.1. Talent excising the tunica vaginalis to create the rectangular flap. **TXT: Preserve the blood vessels, fascia, and other attachments to the rectangular flap** Author provided timestamp: DSC-8851 00:16:00-00:17:00; DSC-8851 00:17:35-00:18:37; DSC-8851 00:21:34-00:21:42

Added shot: 2.6.2 Harvesting a rectangular flap from another testicle. Author provided timestamp: DSC-8863 00:12:28-00:12:32

2.7. Using the finger, gently create a tunnel by blunt dissection through the subcutaneous loose connective tissue between the scrotum and the base of the penis **[1-TXT]**.

2.7.1. Talent using ~~hemostatic forceps~~ left index finger to create a tunnel between the scrotum and the base of the penis. **TXT: Ensure the tunnel is large enough to allow the pedicled tunica vaginalis flap to pass without compression** Author provided timestamp: DSC-8863 00:10:26-00:10:46

2.8. Next, carefully feed the pedicled tunica vaginalis flap through the tunnel without torsion **[1]** and mobilize it to the site of the incised ventral urethra **[2]**.

2.8.1. Talent feeding the pedicled flap through the tunnel without torsion. Author provided timestamp: DSC-8863 00:34:53-00:35:00

2.8.2. Shot of the flap mobilized to the incised ventral urethral site. Author provided timestamp: DSC-8863 00:35:15-00:35:20

2.9. Retain the incised urethral stricture segment as a urethral plate and orient the smooth serosal *(/sɪˈroʊsəl/)* surface of the tunica vaginalis flap to face the urethral plate **[1]**.

~~2.9.1. Talent showing the incised urethral stricture segment.~~ Note: Shot removed by the author. VO does not need to change.

2.9.2. Shot of the serosal surface aligned to the urethral plate. Author provided timestamp: DSC-8863 00:14:50-00:15:00

2.10. Use 5-0 *(five-oh)* absorbable sutures to place continuous running locked sutures, approximating the edge of the tunica vaginalis flap to both sides of the urethral incision **[1-TXT]**. ~~Continually inspect the urethral lumen's patency and the watertight closure of the suture line throughout the process **[2]**.~~ NOTE: VO is removed for the deleted shot and the information is moved as a text overlay

2.10.1. Talent placing continuous running sutures along the urethral incision edges. **TXT: Inspect urethral patency and suture watertightness throughout** Author provided timestamp: DSC-8863 00:20:10-00:20:42; DSC-8863 00:28:16-00:28:40; DSC-8863 00:56:15-00:58:05

~~2.10.2. Talent inspecting the urethral lumen and suture line for patency and watertight closure.~~ Note: Shot removed by the author.

2.11. ~~Insert a 24 French Foley *(/ˈfoʊli/)* catheter into the urethra **[1]**~~. Reposition the foreskin meticulously over the glans penis **[1]**. Close the scrotal tissue in layers using fine,

absorbable sutures **[2]**. NOTE: VO is struck through for the deleted shot.

~~2.11.1. Talent inserting the Foley catheter into the urethra.~~ Note: Shot removed by the author.

2.11.2. Talent placing foreskin over the glans penis. Author provided timestamp: DSC-8864 00:05:04-00:05:16; DSC-8864 00:10:44-00:10:54; DSC-8864 00:15:35-00:15:37

2.11.3. Talent closing the scrotal tissue in layers with fine sutures. Author provided timestamp: DSC-8868 00:01:30-00:01:45; DSC-8868 00:02:49-00:03:07; DSC-8868 00:08:28-00:08:42; DSC-8868 00:13:20-00:13:23

Results

3. Results

3.1. Retrograde urethrograms demonstrated a markedly dilated urethral caliber postoperatively **[1]** compared to the preoperative state **[2]**.

3.1.1. LAB MEDIA: Figure 7 *Video Editor: Please emphasize Figure B*

3.1.2. LAB MEDIA: Figure 7 *Video Editor: Please emphasize Figure A*