

# CENTER FOR RECONSTRUCTIVE URETHRAL SURGERY



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# 9<sup>th</sup> Conference of the Arab Association of Urology

## 7<sup>th</sup> International Conference of Jordanian Association of Urological Surgeons



**Amman – Jordan**

**22 – 24 November 2011**

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# The Team



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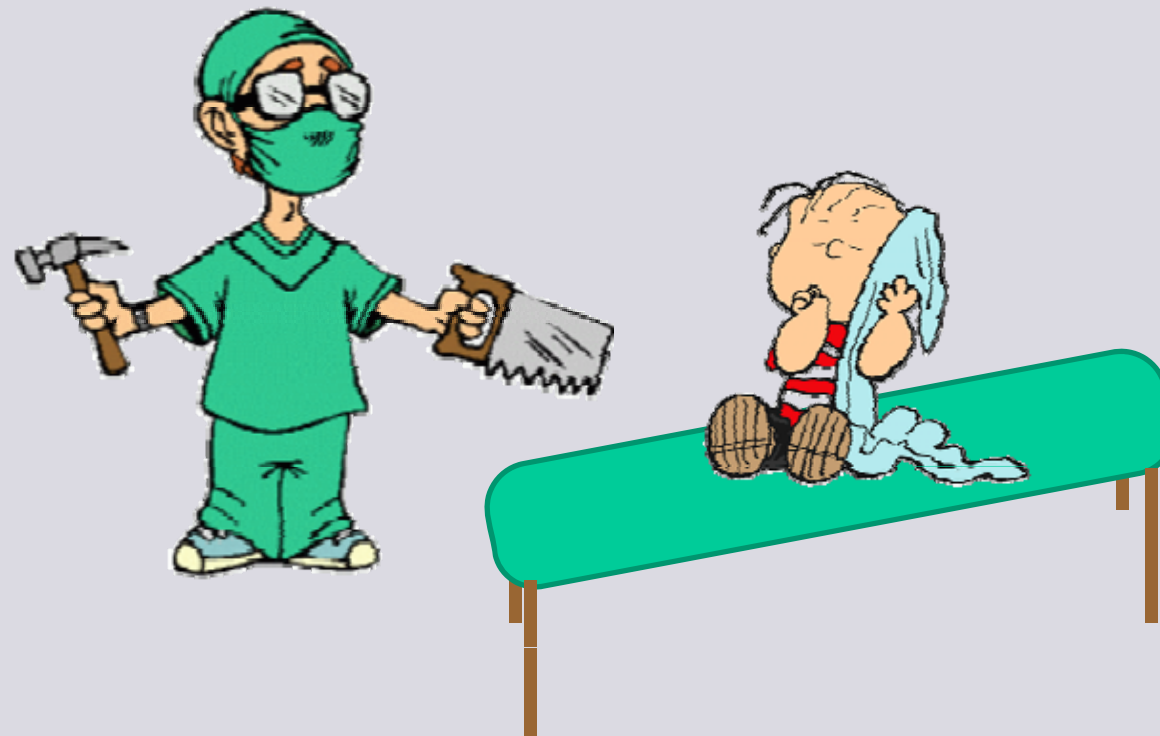
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# Surgical options in adult patients with failed hypospadias repair







**Professor Sava Perovic – Belgrade - Serbia**

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# **Surgical Challenge in Patients Who Underwent Failed Hypospadias Repair: Is It Time to Change?**

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**Urol Int 2010; 85: 427-435**

**The study is a retrospective observational analysis  
of the patient chart of those who were treated for failed  
hypospadias repair in 2 centers from 1988 to 2007**



**1176 patients**



**Urol Int 2010; 85: 427-435**

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# **Our experience on 1176 patients showed four different types of surgical options:**

- 1. Patient requiring only urethroplasty**
- 2. Patient requiring only corporoplasty**
- 3. Patient requiring urethroplasty and corporoplasty**
- 4. Patient requiring complete resurfacing of the genitalia**

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<b>Group</b>	<b>Type of complication</b>	<b>Type of repair</b>	<b>N° patients</b>
<b>1</b>	<b>meatal or urethral stricture, retrusive meatus, fistula, diverticulum, other</b>	<b>urethroplasty</b>	<b>301 (25.5%)</b>
<b>2</b>	<b>residual penile curvature, corpora cavernosa deformity, penile shortening or torsion</b>	<b>corporoplasty</b>	<b>60 (5.2%)</b>
<b>3</b>	<b>stricture, fistula, diverticulum associated with residual glans or penile curvature or deformity</b>	<b>urethroplasty corporoplasty</b>	<b>166 (14.1%)</b>
<b>4</b>	<b>glans dehiscence, glans necrosis, glans torsion or curvature, loss of penile/scrotal skin, midline septum, abnormal peno.scrotal or peno.pubic junction, buried penis, trapped penis, other</b>	<b>genitalia resurfacing</b>	<b>649 (55.2%)</b>
<b>total</b>			<b>1176</b>

**Urol Int 2010; 85: 427-435**

# Urethroplasty

Group	Type of complication	Type of repair	N° patients
1	meatal-urethral stricture, retrusive meatus, fistula, diverticulum, other	urethroplasty	301 (25.5%)

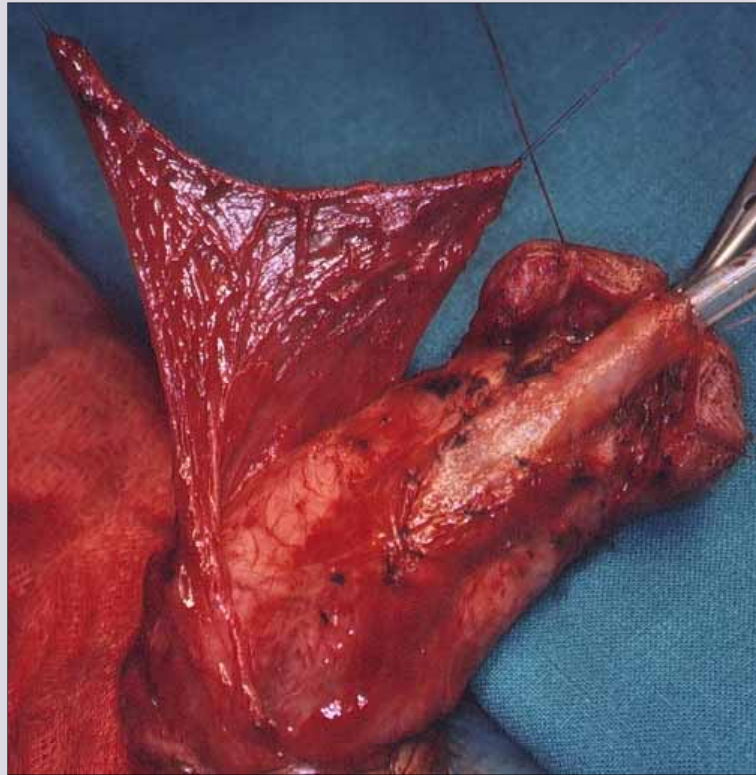
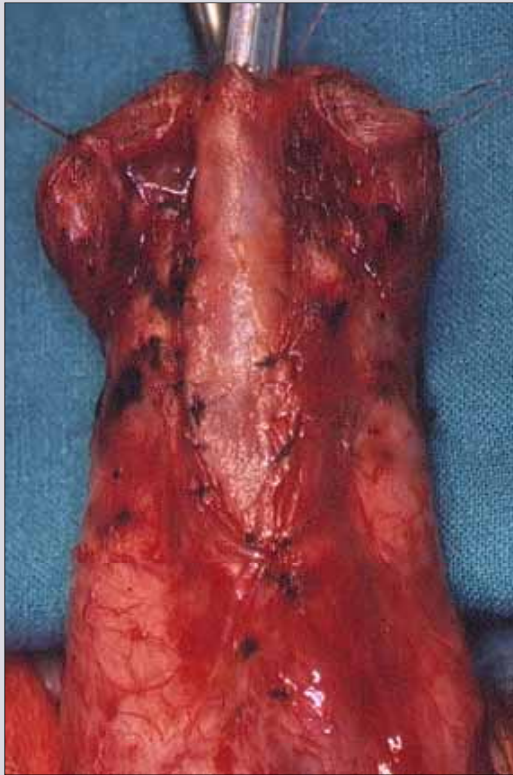
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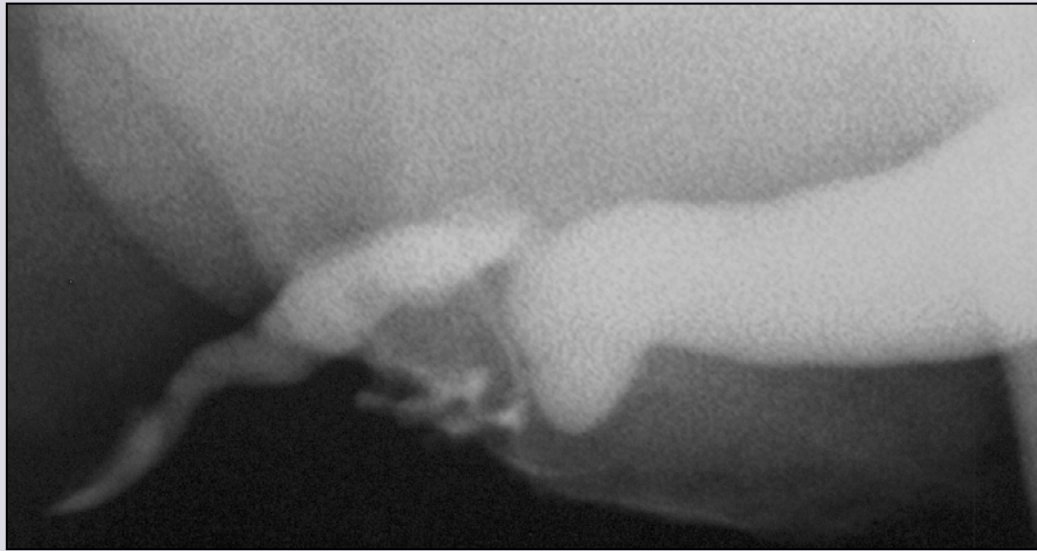
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## Ventral onlay oral mucosa graft



## Dorsal onlay oral mucosa graft







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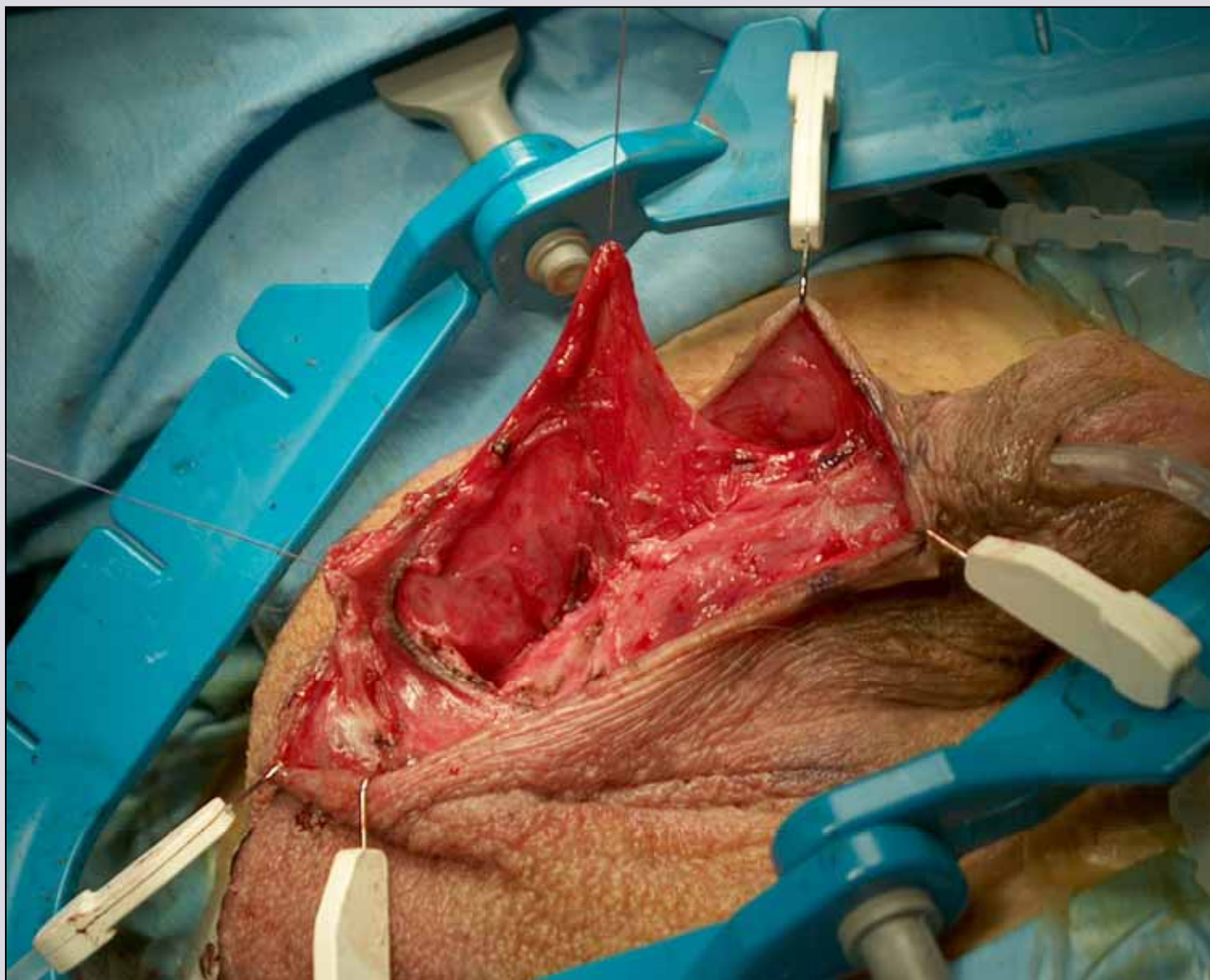
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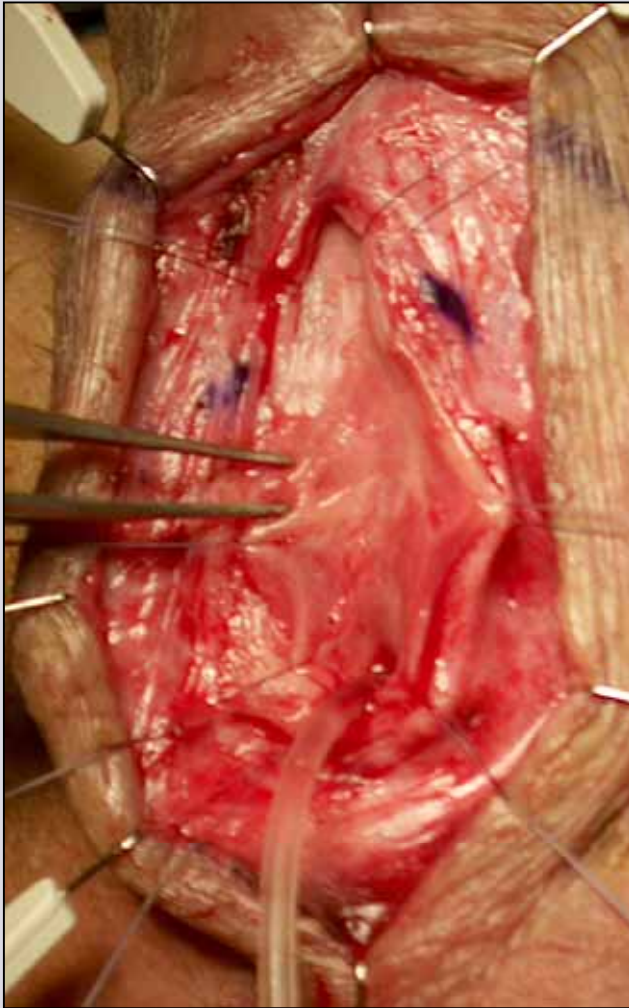


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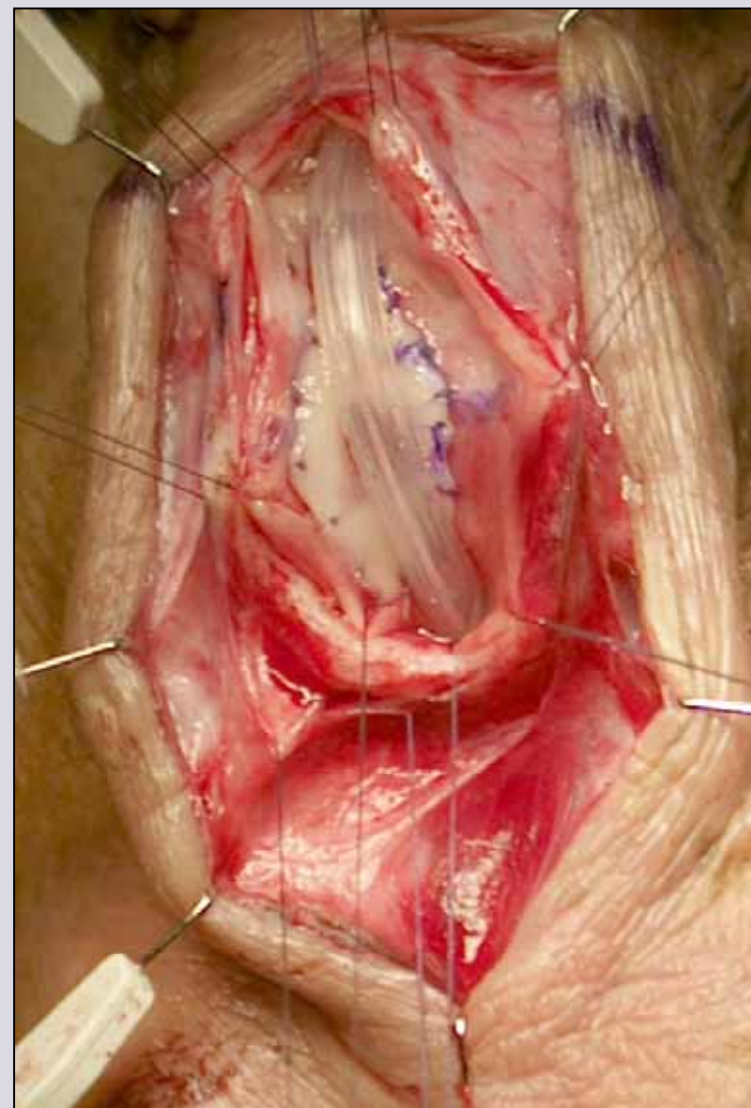
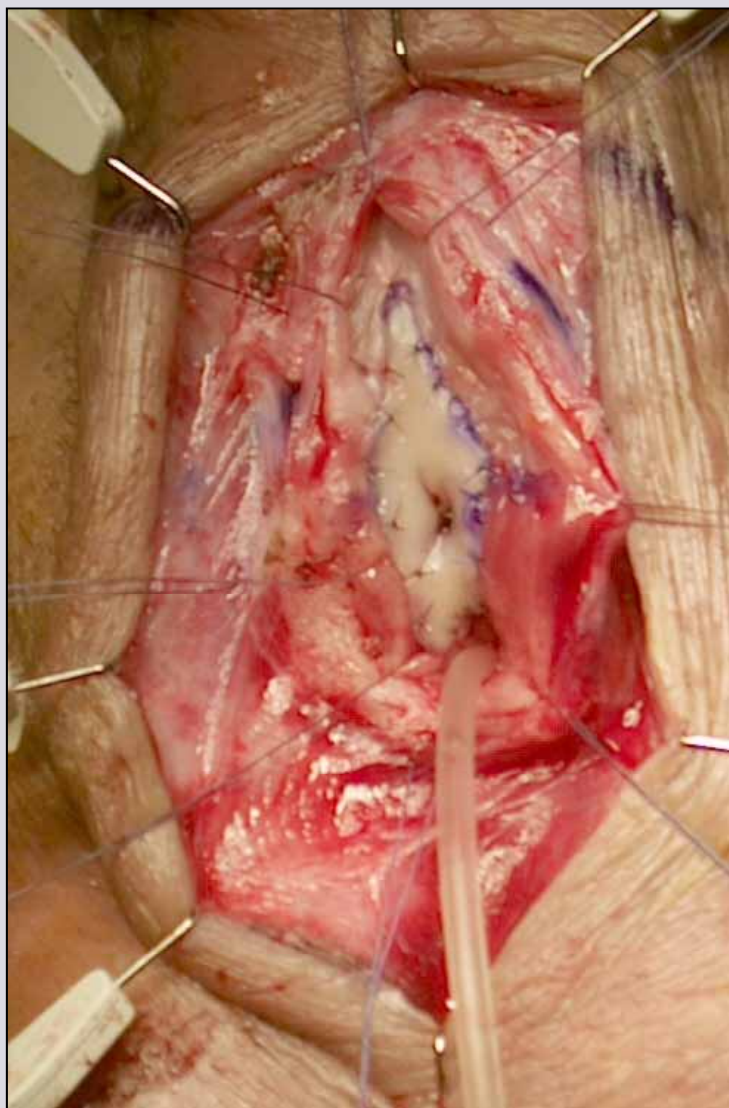
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## Dorsal inlay oral mucosa graft

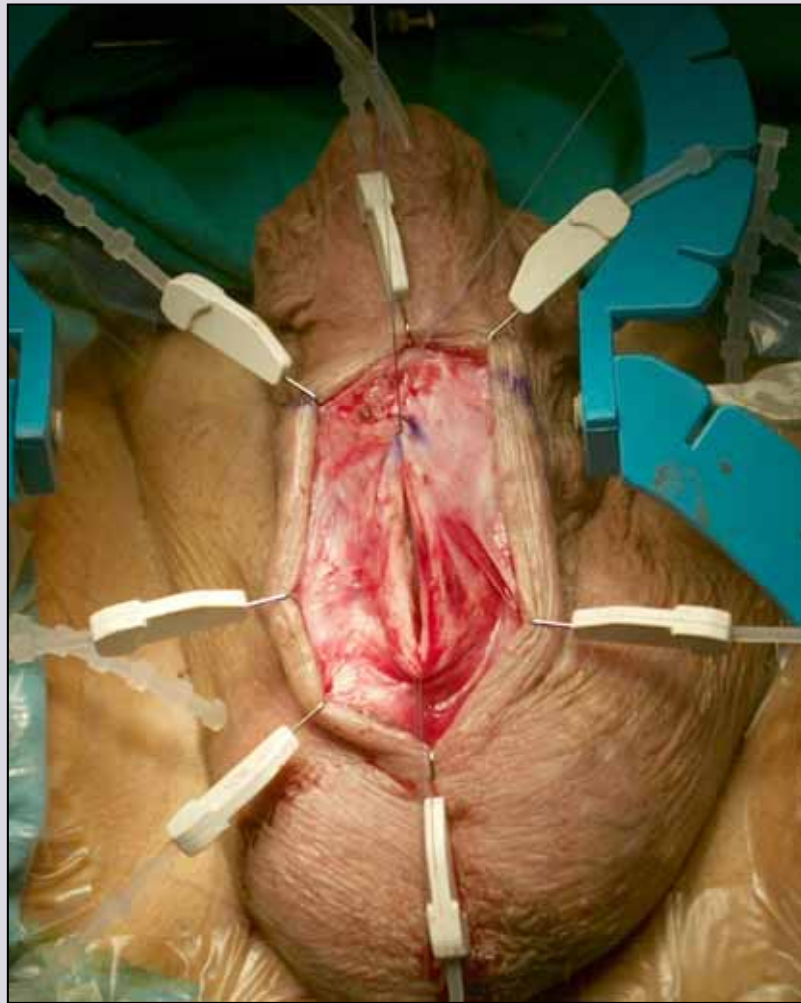






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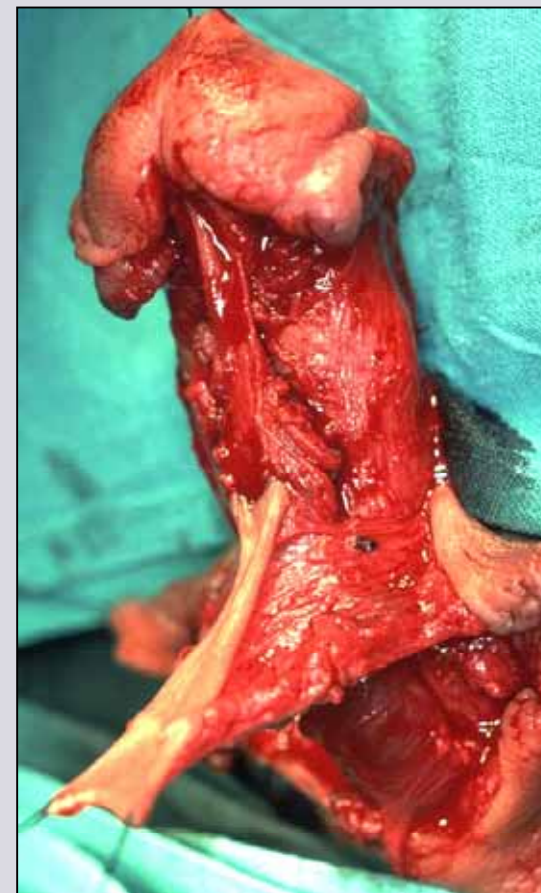
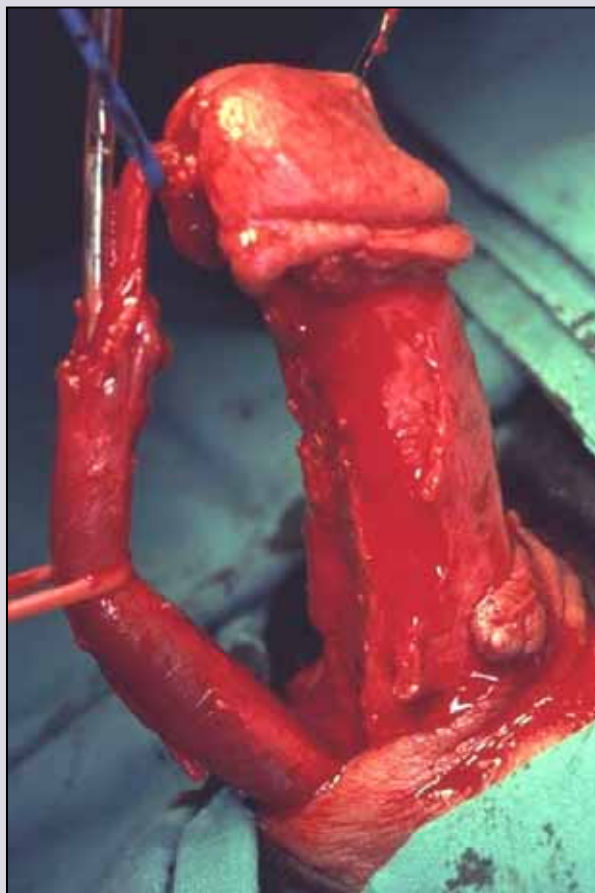


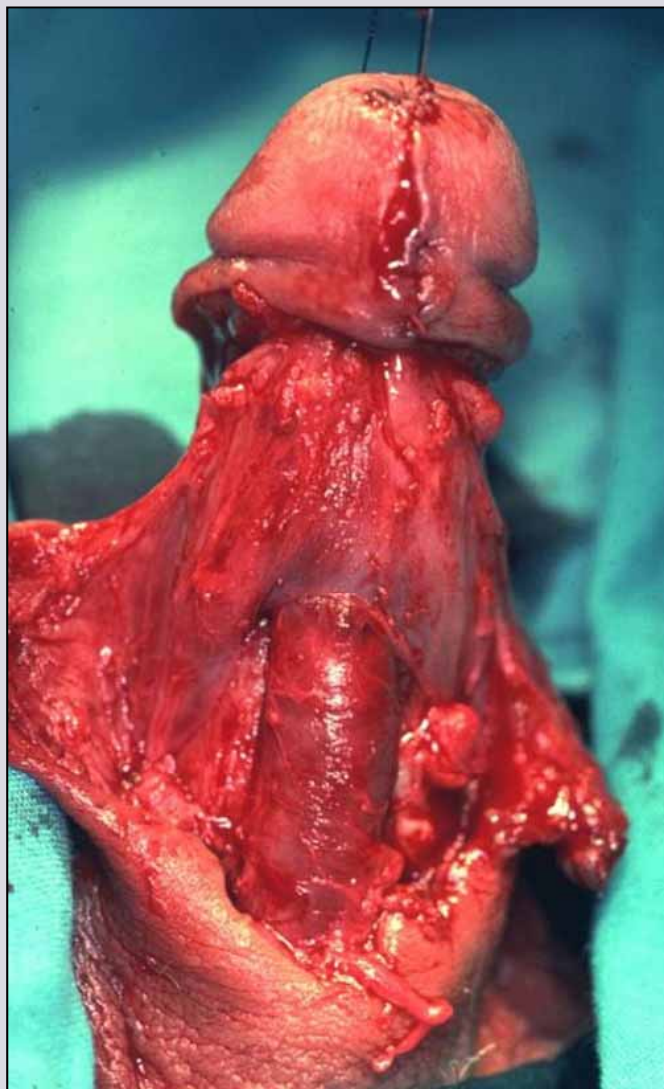
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## Dartos fascial flap urethroplasty





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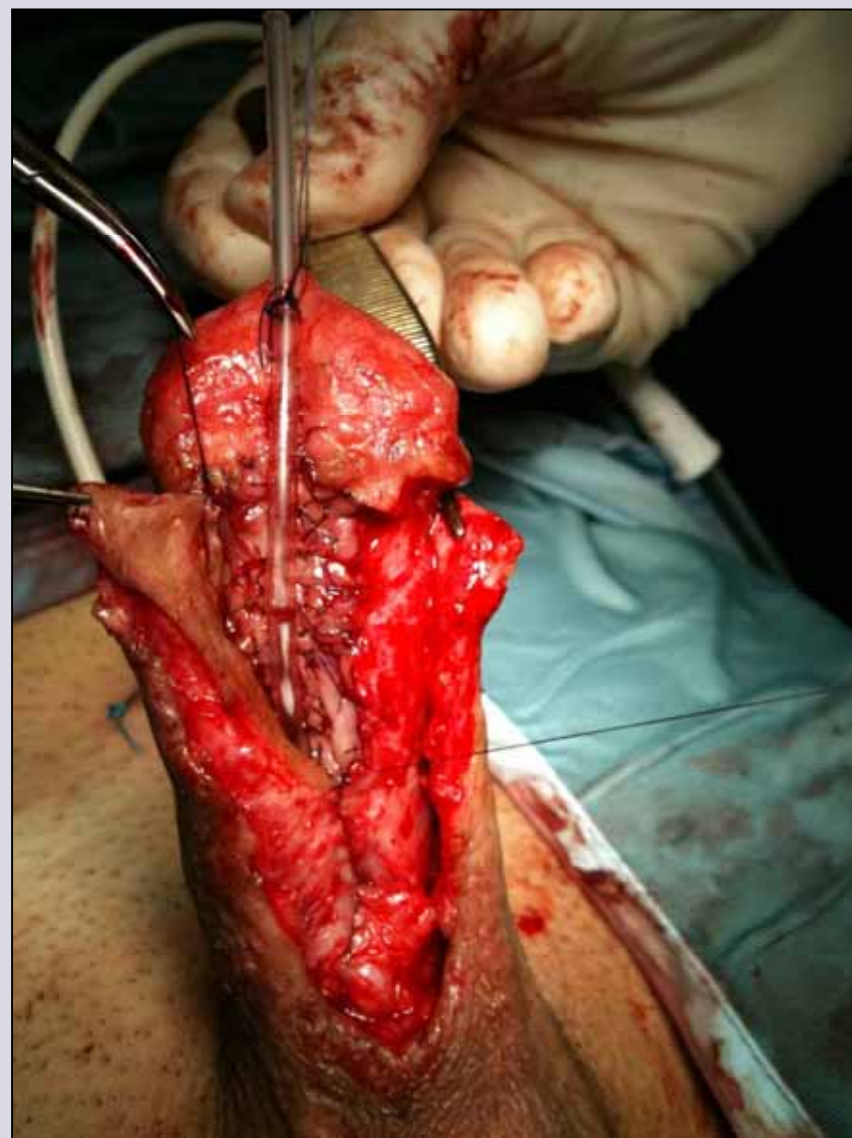
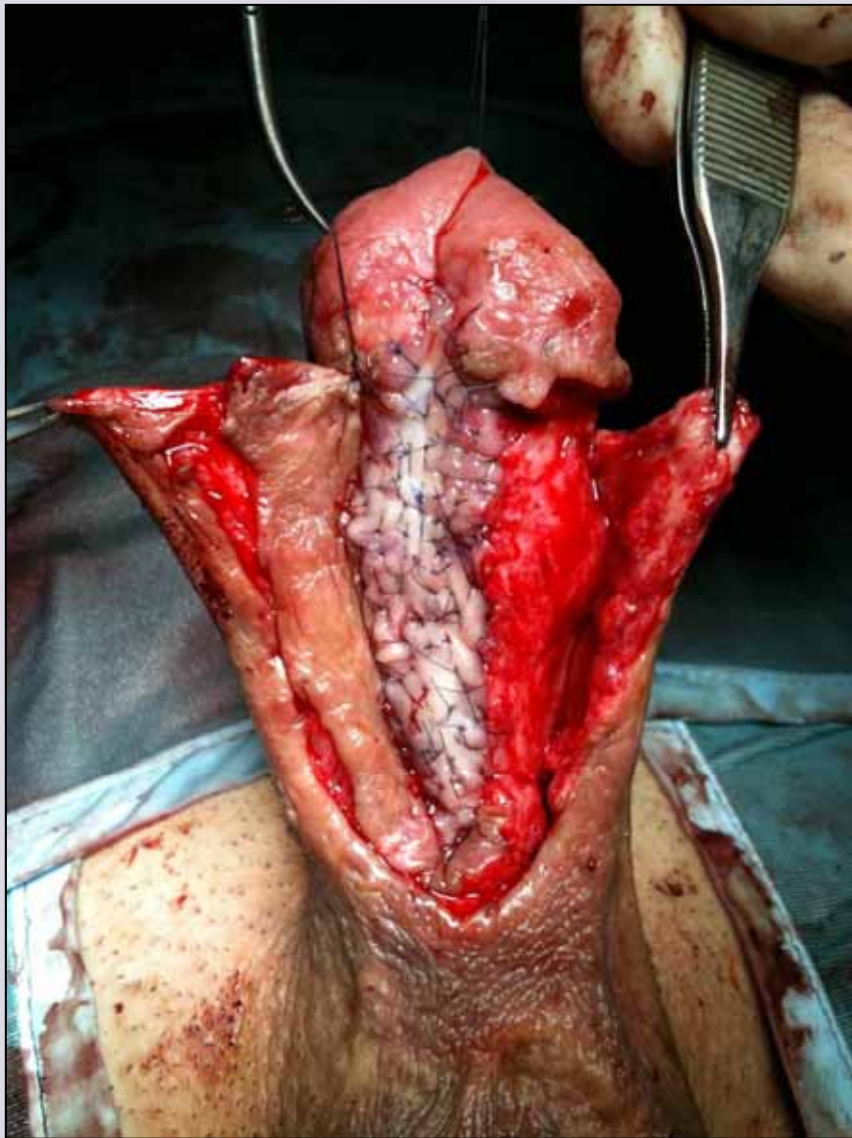


# Combined dartos fascial flap and oral mucosal graft urethroplasty



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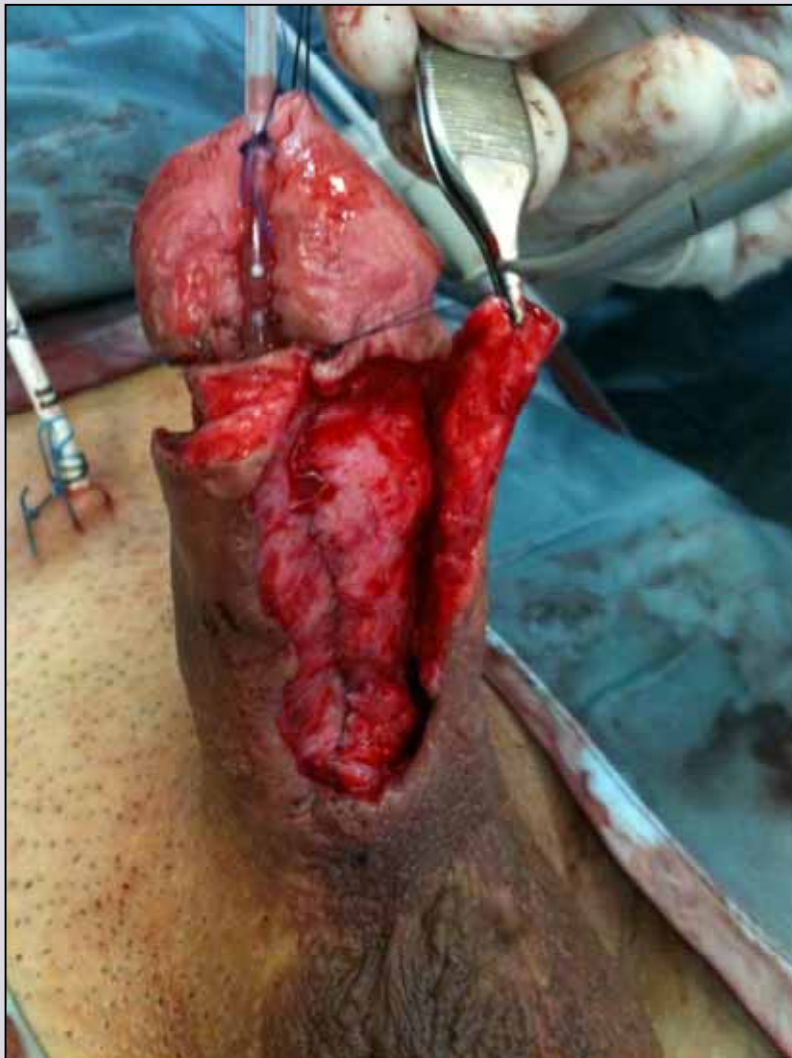
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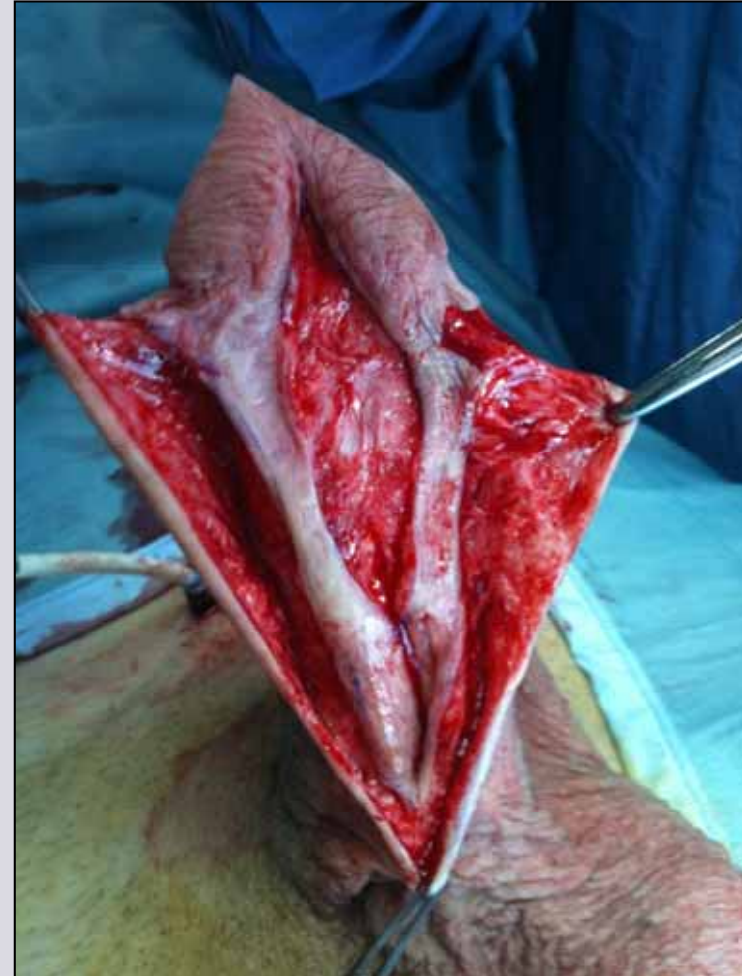




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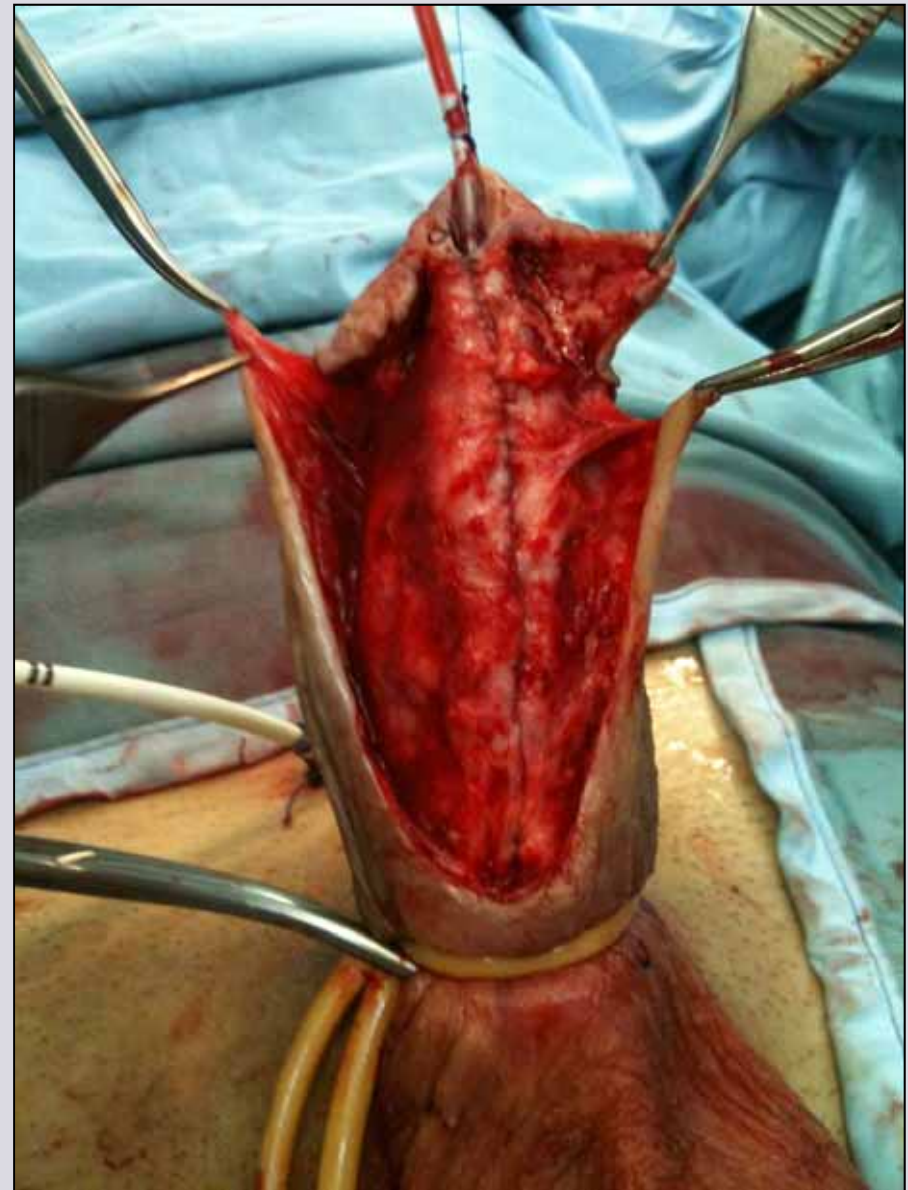
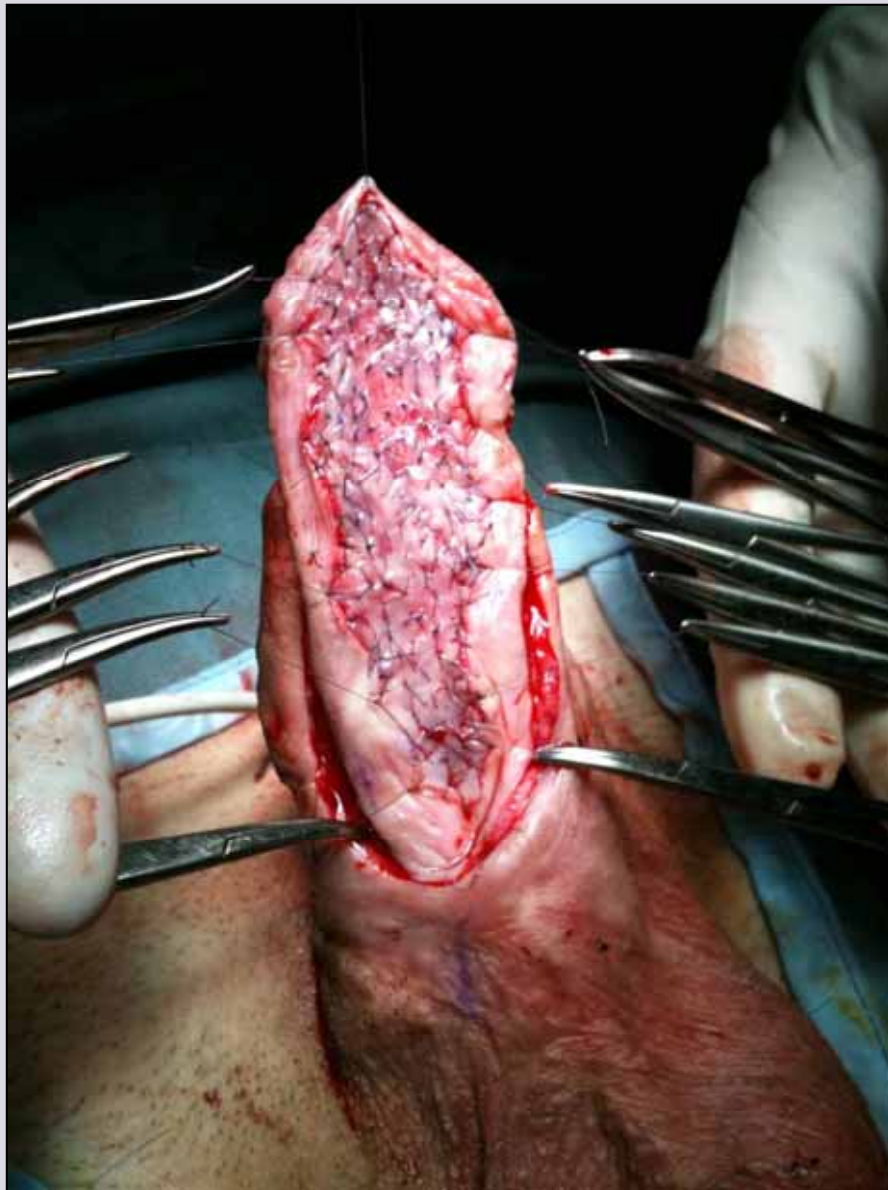
# Two-stage urethroplasty with oral mucosal graft



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**Oral mucosa is a versatile material to use in one-stage  
(onlay – inlay), two-stage or combined (flap + graft)  
procedures for urethral reconstruction in patients  
with failed hypospadias repair.**



## **The choice of the surgical technique should be based on:**

- **Intraoperative features of the stricture and genitalia.**
- **Surgeon preference (flap vs graft) (skin vs oral mucosa) (one-stage vs two-stage).**
- **Surgeon background (pediatric vs adult) (plastic vs urologist).**

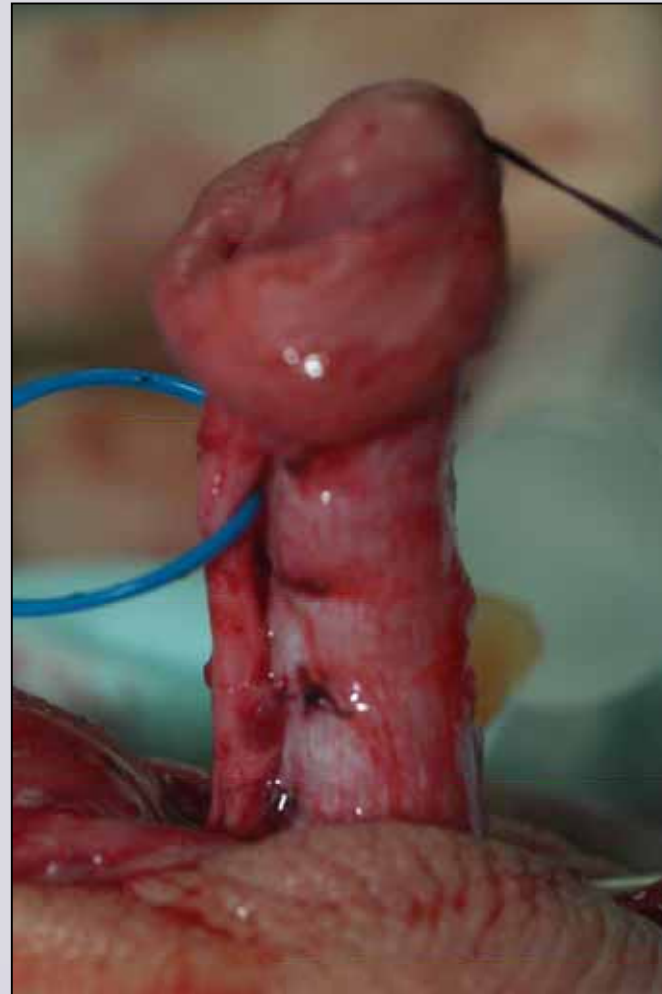


# Corporoplasty

Group	Type of complication	Type of repair	N° patients
2	residual penile curvature, corpora cavernosa deformity, penile shortening or torsion	corporoplasty	60 (5.2%)

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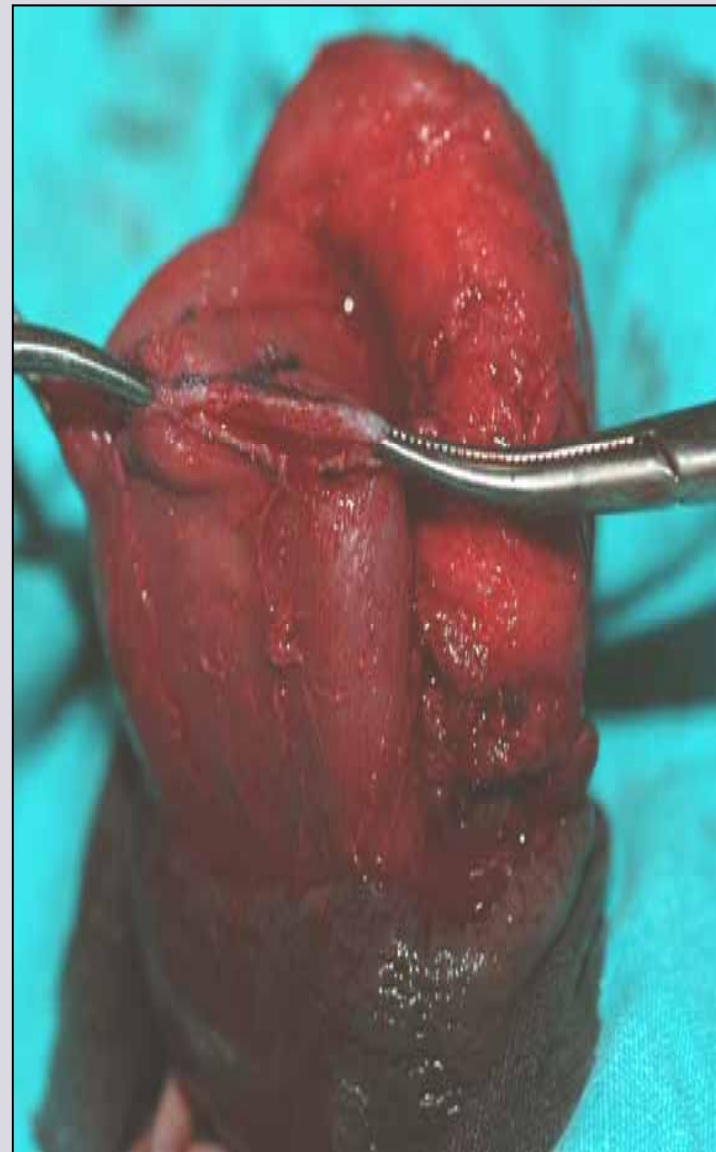
# Shorthening technique using multiple small incision and suture



# Shorthening technique using penile disassembly and incision corporoplasty

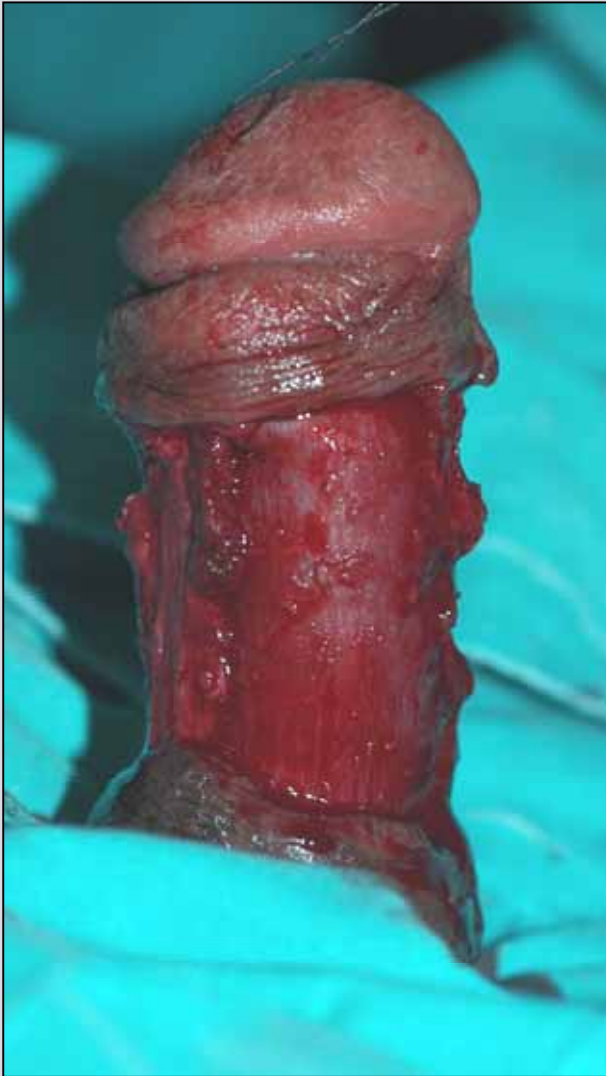






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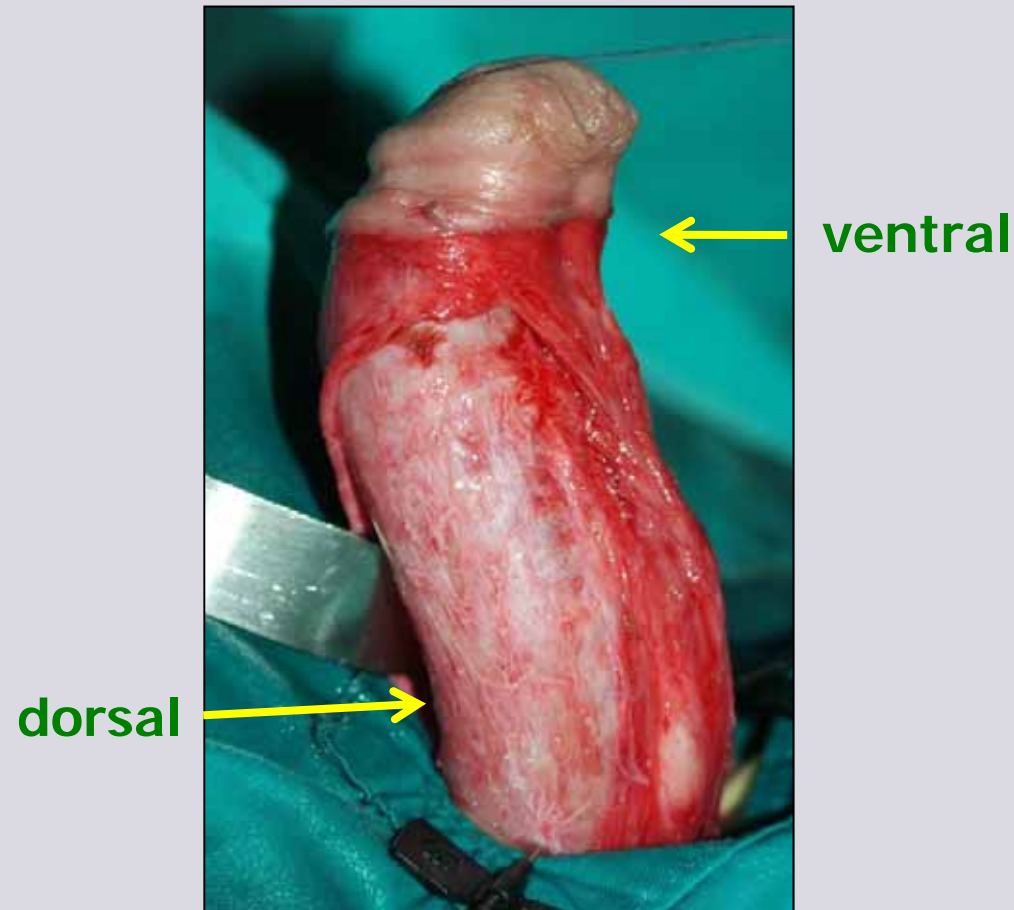
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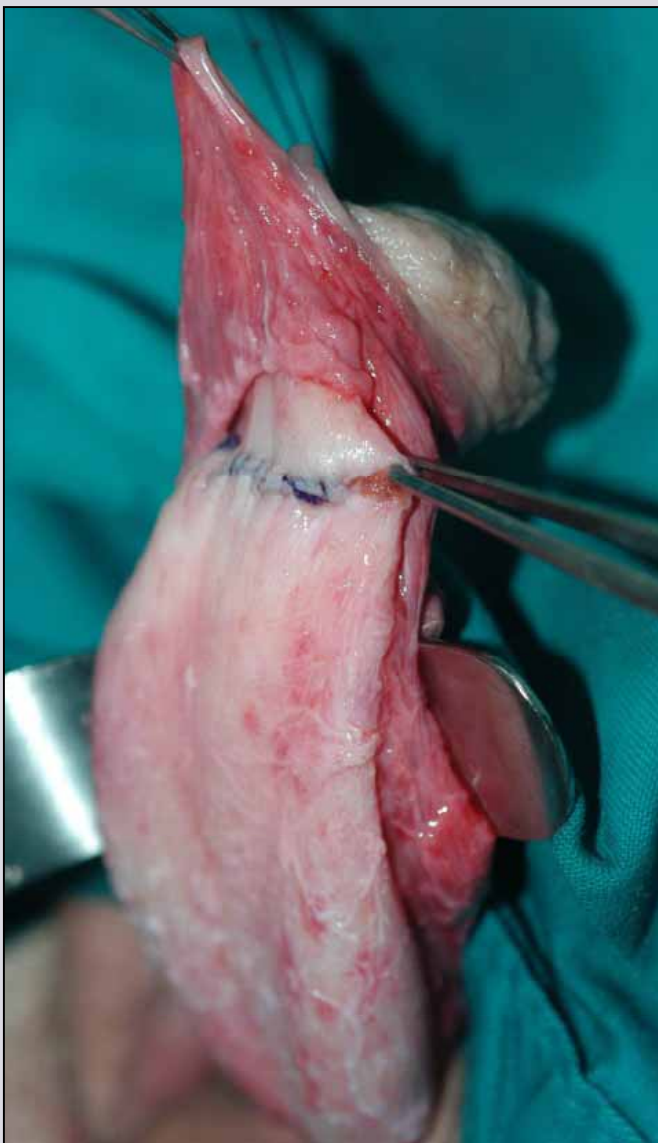
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# Double “S” curvature (arrows) modified using double incision and corporoplasty

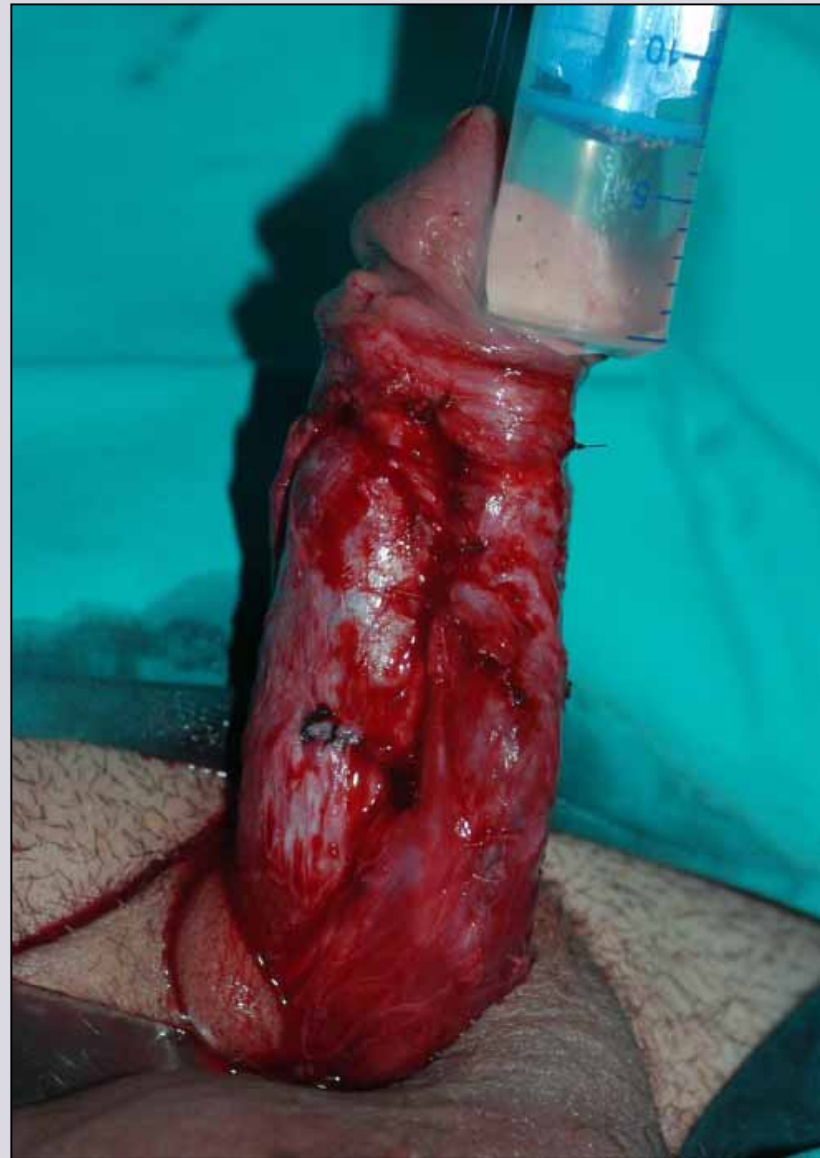






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**The Nesbit's technique still represents a simple and effective procedure in patients with residual penile curvature due to failed hypospadias repair.**

**In selected patients, the technique require to be modified and settled according to the feature of the penile curvature or torsion.**



# Urethroplasty and corporoplasty

Group	Type of complication	Type of repair	N° patients
3	stricture, fistula, diverticulum associated with residual glans or penile curvature or deformity	urethroplasty corporoplasty	166 (14.1%)

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# Urethral fistula and residual distal curvature



# Multiple incisions and suture corporoplasty



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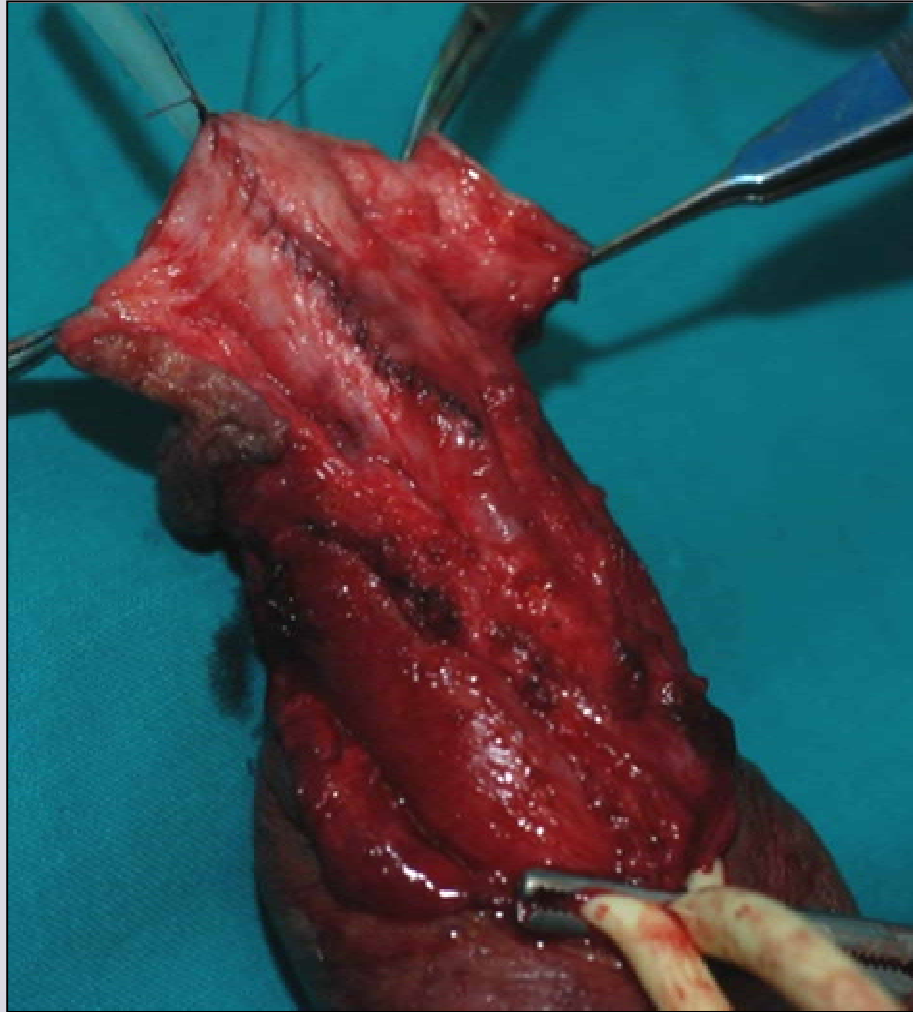
# Multiple incisions and suture corporoplasty



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# One-stage urethroplasty covered by dartos fascial flap





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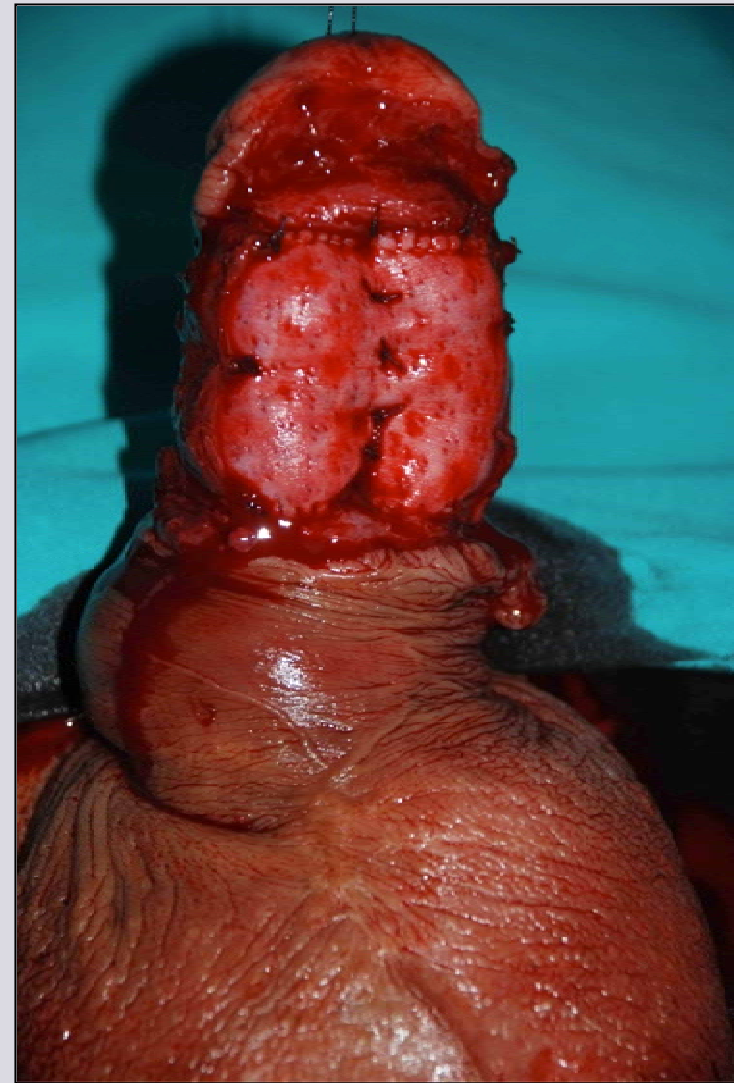
# Short urethra, fistula and residual distal curvature



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## Ventral graft for penile lengthening



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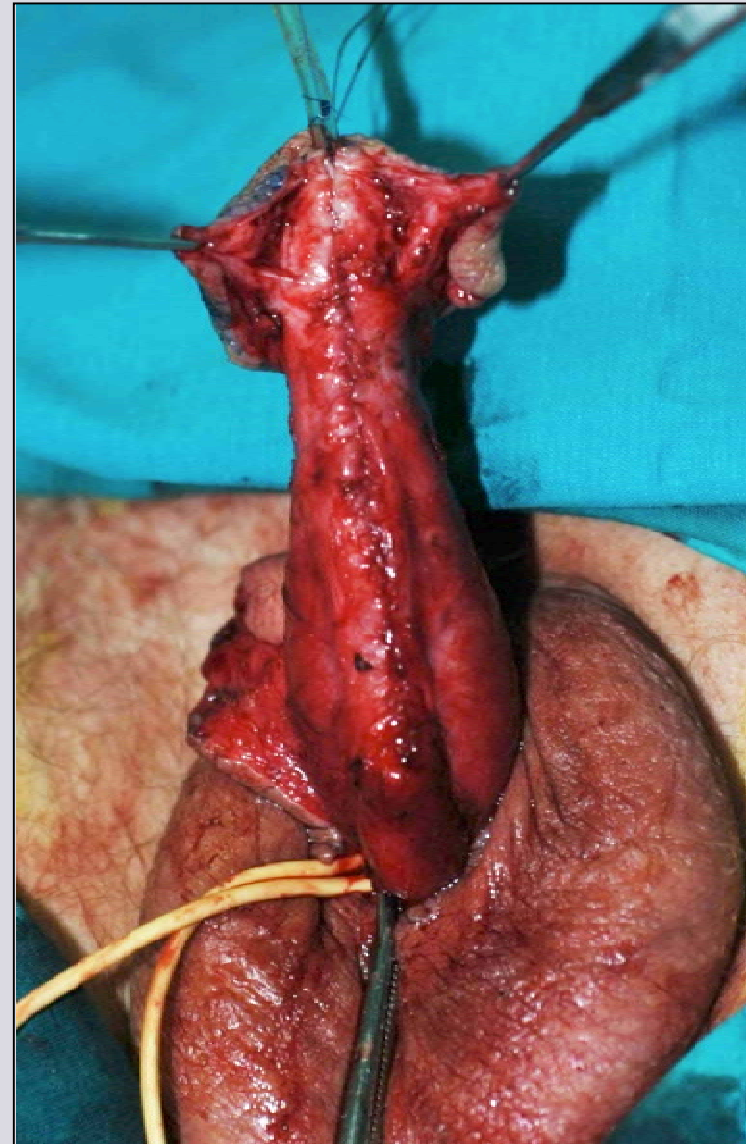
# Two-stage urethroplasty using oral graft



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**Patients with failed hypospadias repair requiring combined urethroplasty and corporoplasty still represent a difficult population to treat.**

**In selected patients, combined two-stage urethroplasty and corporoplasty using grafting material is often necessary to obtain a satisfactory penile length and functional urethra.**



# Genitalia resurfacing

Group	Type of complication	Type of repair	N° patients
4	glans dehiscence, glans necrosis, glans torsion or curvature, loss of penile/scrotal skin, midline septum, abnormal peno.scrotal or peno.pubic junction, buried penis, trapped penis, other	genitalia resurfacing	649 (55.2%)

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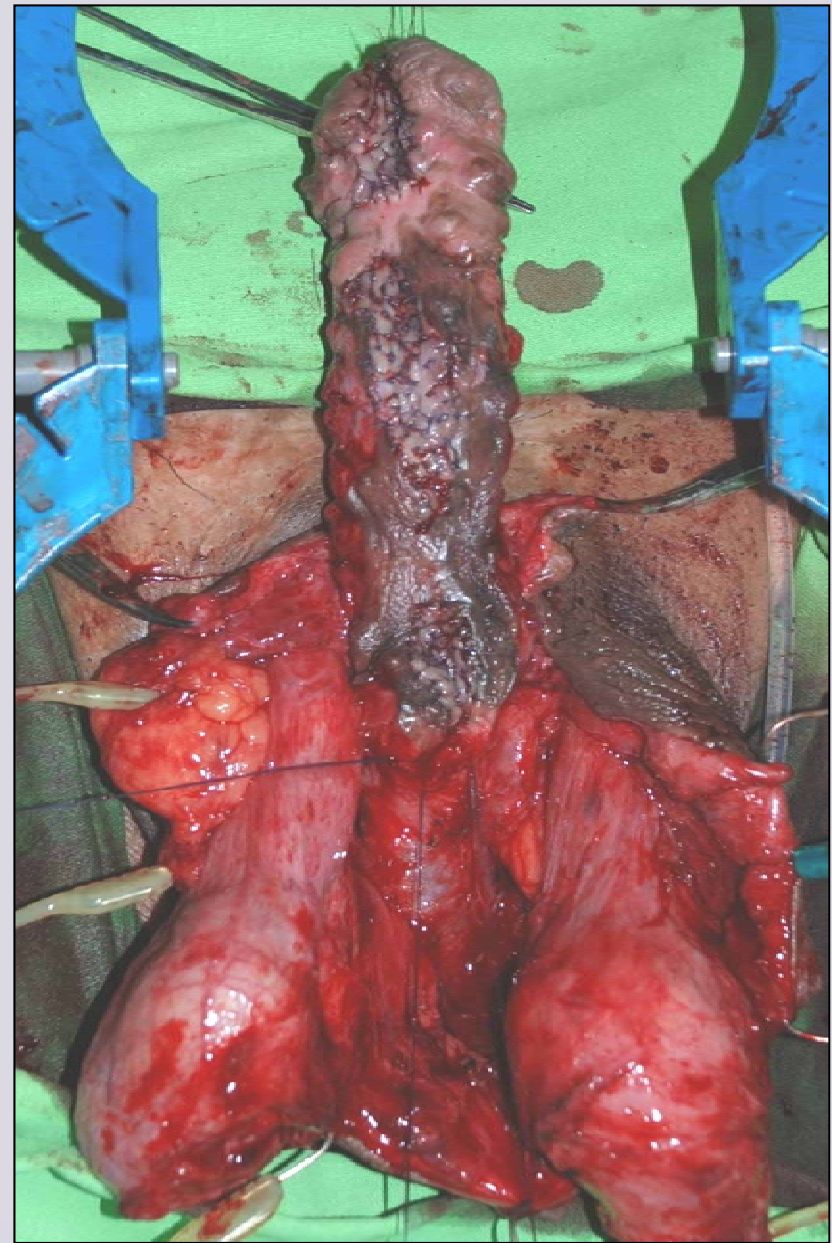
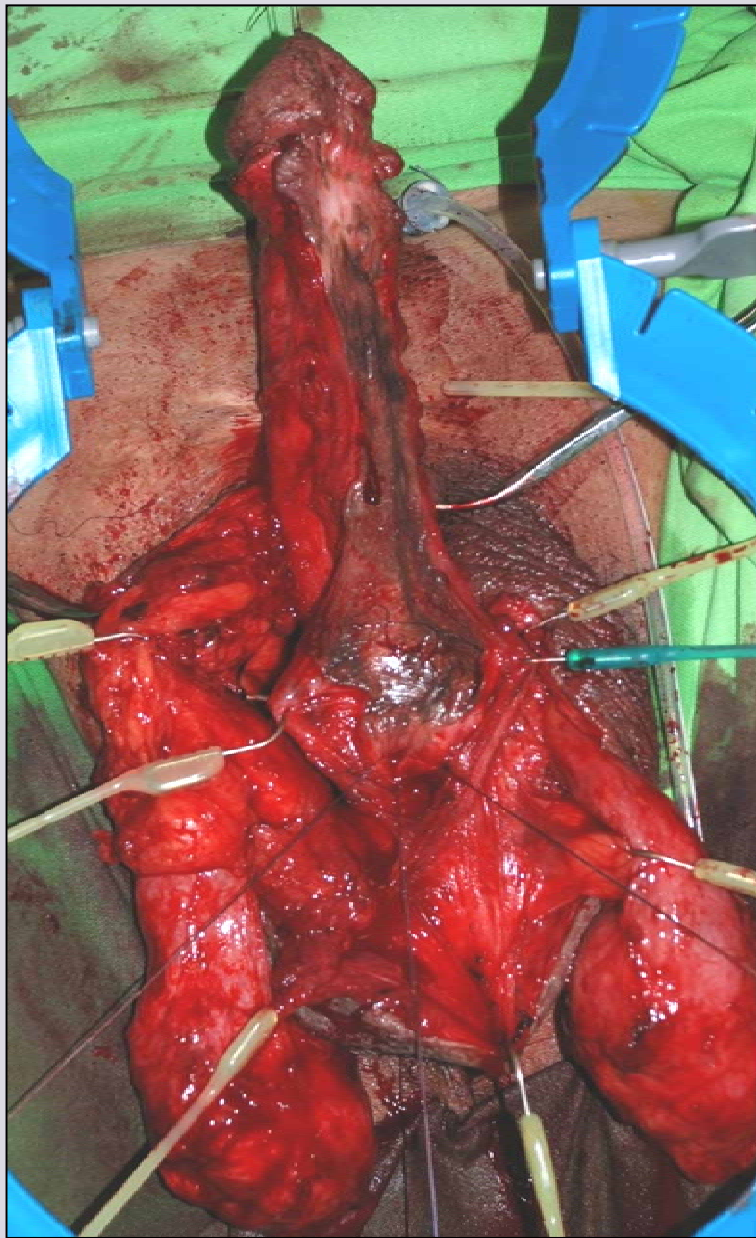
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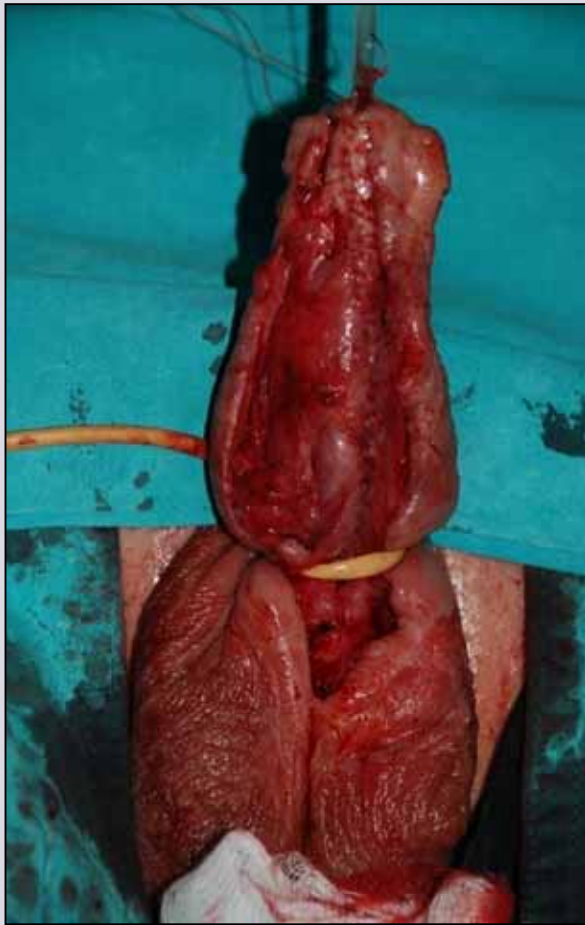


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**Patients with failed hypospadias repair requiring complete resurfacing of the genitalia should be referred to a specialized center.**



## **Success or failure ?**

- **End-point of the reconstructive surgical itinerary**
- **No meatal or urethral dilation**
- **Absence of complications or poor aesthetic outcome requiring revision**

## Results in 1176 patients

Type of repair	N° patients	Mean follow-up months	Success rate %	Failure rate %
urethroplasty	301 (25.5%)	58.6 (12-186)	270 (89.7%)	31 (10.3)
corporoplasty	60 (5.2%)	63.2 (12-237)	58 (96%)	2 (3.3%)
urethroplasty corporoplasty	166 (14.1%)	60 (12-210)	147 (88.5%)	19 (11.5%)
genitalia resurfacing	649 (55.2%)	59.8 (12-192)	561 (86.4%)	88 (13.6%)
<b>total</b>	<b>1176</b>	<b>60.4 (12-237)</b>	<b>1036 (88.1%)</b>	<b>140 (11.9%)</b>

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## Conclusions

**Failed hypospadias repair is not a problem for the pediatric urologist, because the mean age of patients was 31 years.**

**Failed hypospadias repair is not a problem for the urethral surgeon, because only in 25.5% of cases the reoperative surgery was restricted only to the urethra.**

**Failed hypospadias repair involves, in the majority of patients (55.2%), the urethra, corpora cavernosa, glans, penile shaft and skin, requiring complete resurfacing of the genitalia.**



# Conclusions

**Failed hypospadias repair is a complex problem requiring full collaboration between the urethral surgeon and the surgeon widely skilled in reconstructive surgery of the genitalia (penile prosthesis implant, surgery for Peyronie's disease, surgery for male to female transition, surgery for complex defects of the corpora cavernosa).**

# Conclusions

**Shouldn't patients with complex failed hypospadias repair be referred to a Center of expertise?**



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**Next month, this lecture will be fully available on our website**

**Thank you !**

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