

Center for Reconstructive Urethral Surgery



GUIDO BARBAGLI M.D.

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Founded 1949

Polish Urological Association

41st Scientific Congress



Gdańsk – Poland

8 – 10 September 2011

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Center for Reconstructive Urethral Surgery

The Team



Salvatore Sansalone

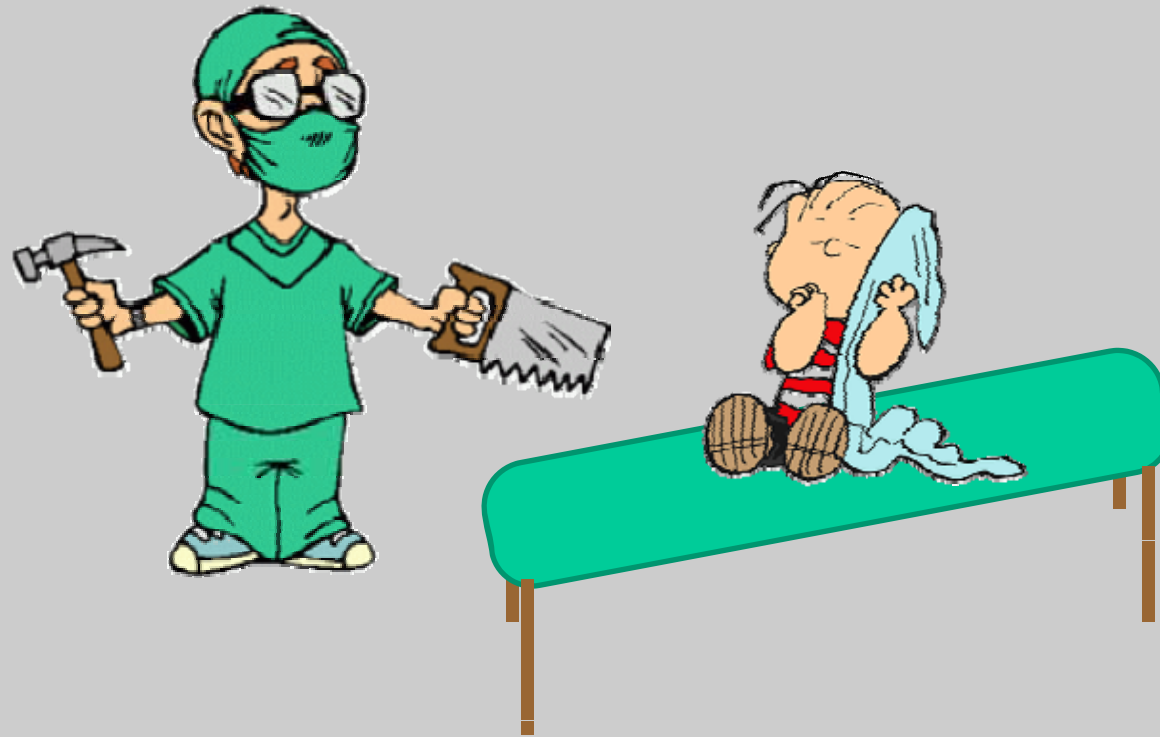


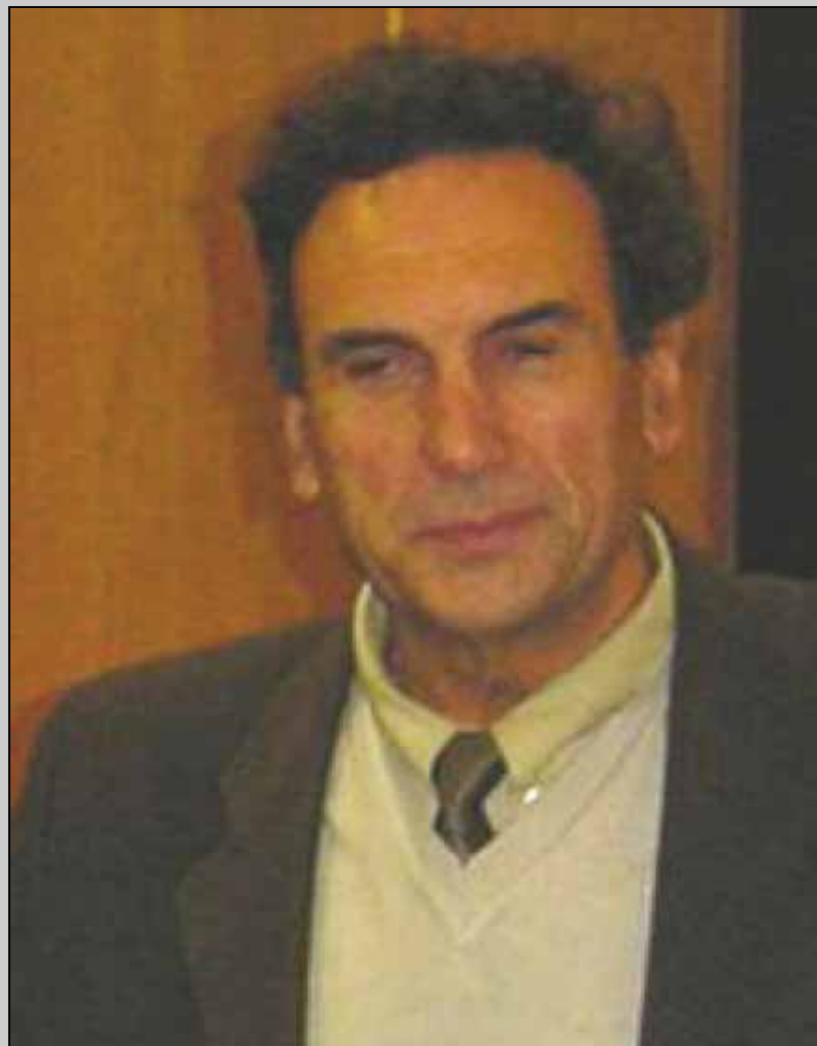
Sofia Balò



Giuseppe Romano

Problems of urethral stricture in adult male after penile and urethral reconstructive surgery in childhood





Professor Sava Perovic – Belgrade - Serbia

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Center for Reconstructive Urethral Surgery

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**



223 patients

**The Center for
Reconstructive
Urethral Surgery**

Arezzo - Italy

1176 patients



953 patients

**The University
Children's
Hospital**

Belgrade - Serbia

Urol Int 2010; 85: 427-435

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**

Urol Int 2010; 85: 427-435

Group	Type of complication	Type of repair	N° patients
1	meatal or urethral stricture, retrusive meatus, fistula, diverticulum, other	urethroplasty	301 (25.5%)
2	residual penile curvature, corpora cavernosa deformity, penile shortening or torsion	corporoplasty	60 (5.2%)
3	stricture, fistula, diverticulum associated with residual glans or penile curvature or deformity	urethroplasty corporoplasty	166 (14.1%)
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%)
total			1176

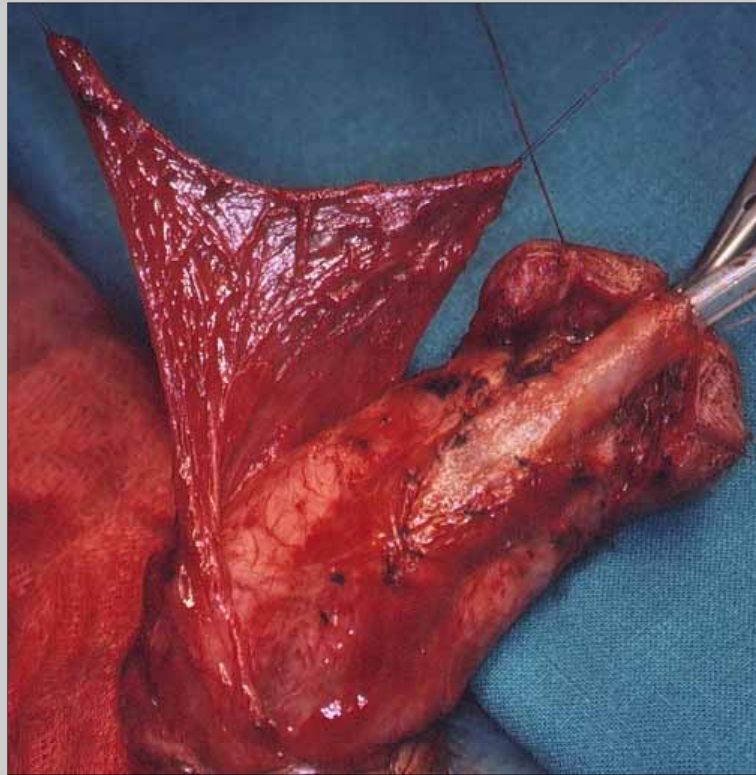
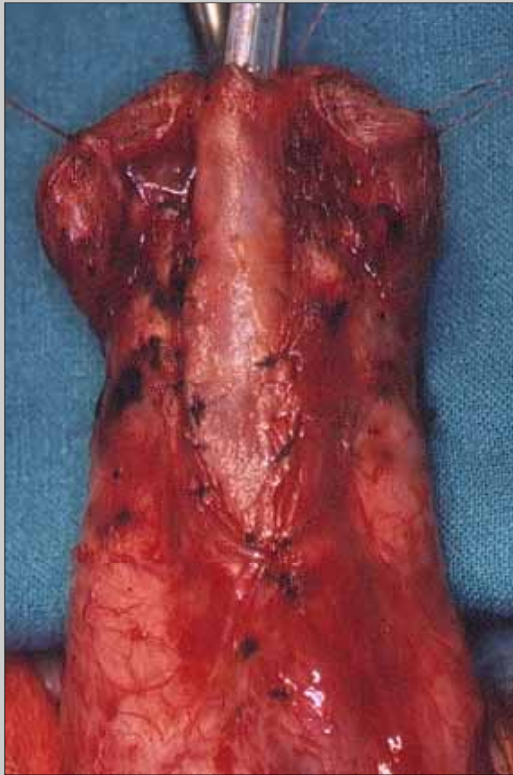
Urol Int 2010; 85: 427-435

Urethroplasty

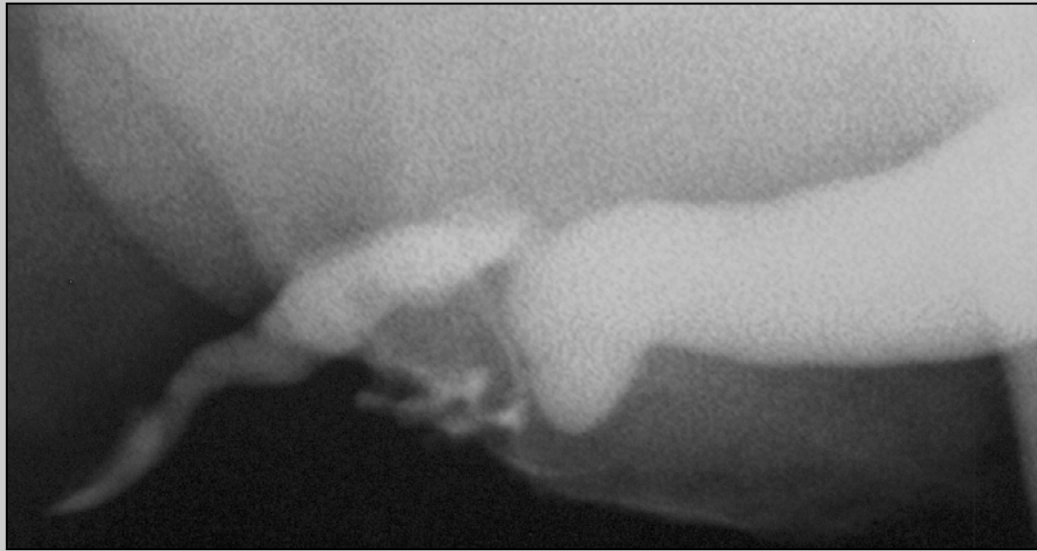
Group	Type of complication	Type of repair	N° patients
1	meatal-urethral stricture, retrusive meatus, fistula, diverticulum, other	urethroplasty	301 (25.5%)

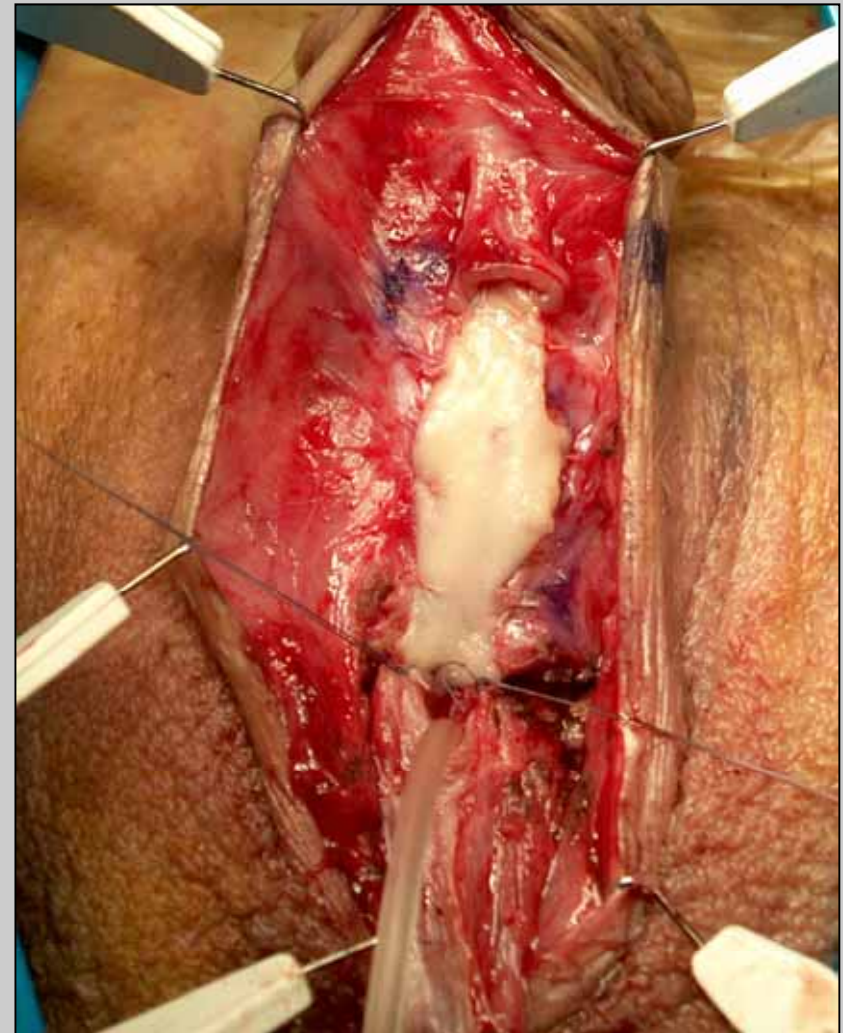
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Ventral onlay oral mucosa graft

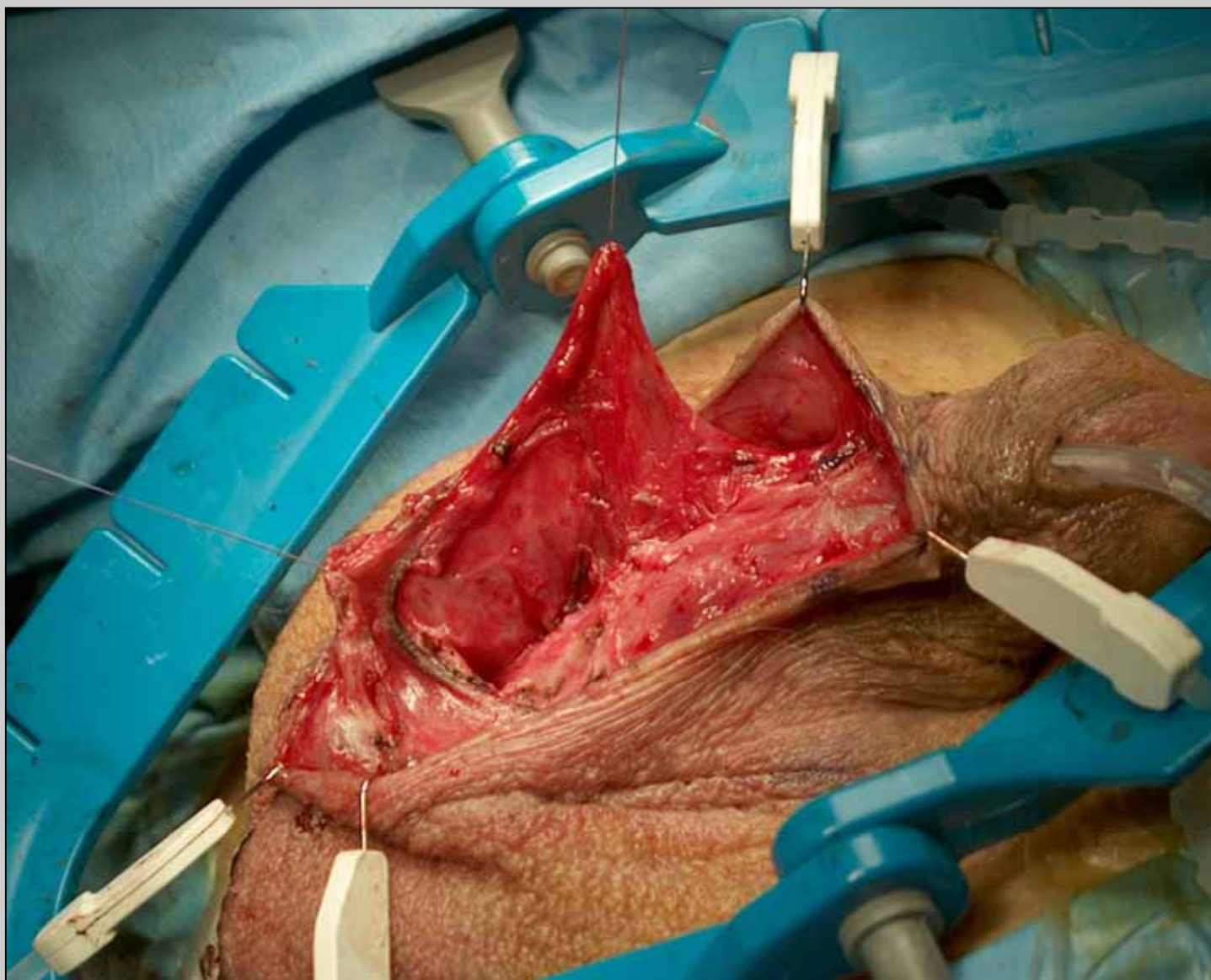


Dorsal onlay oral mucosa graft

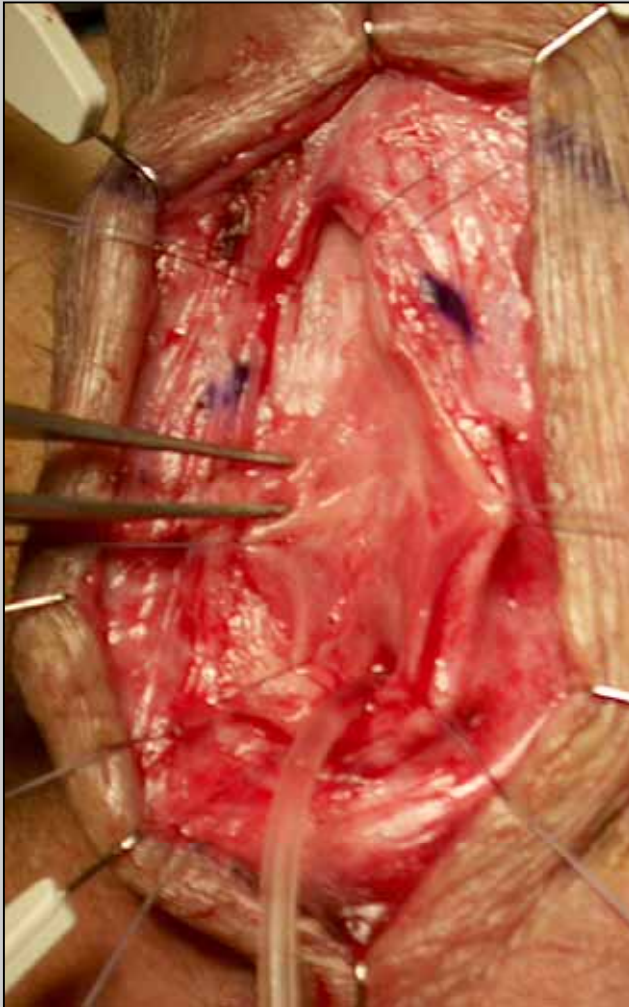


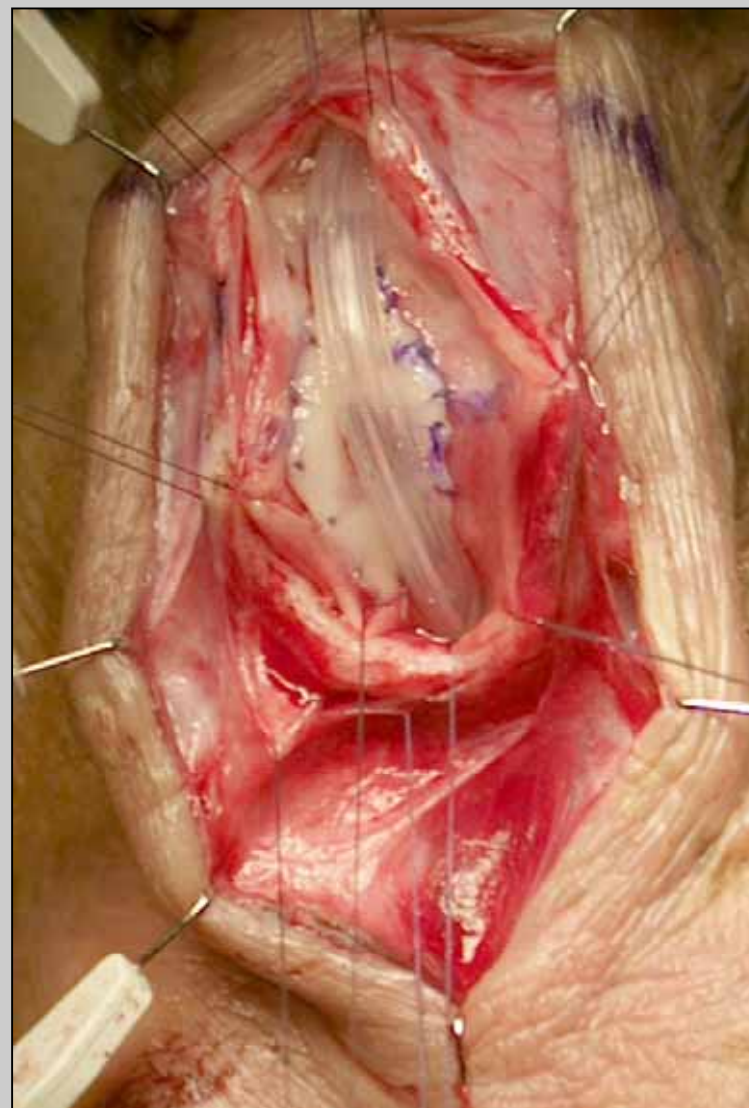
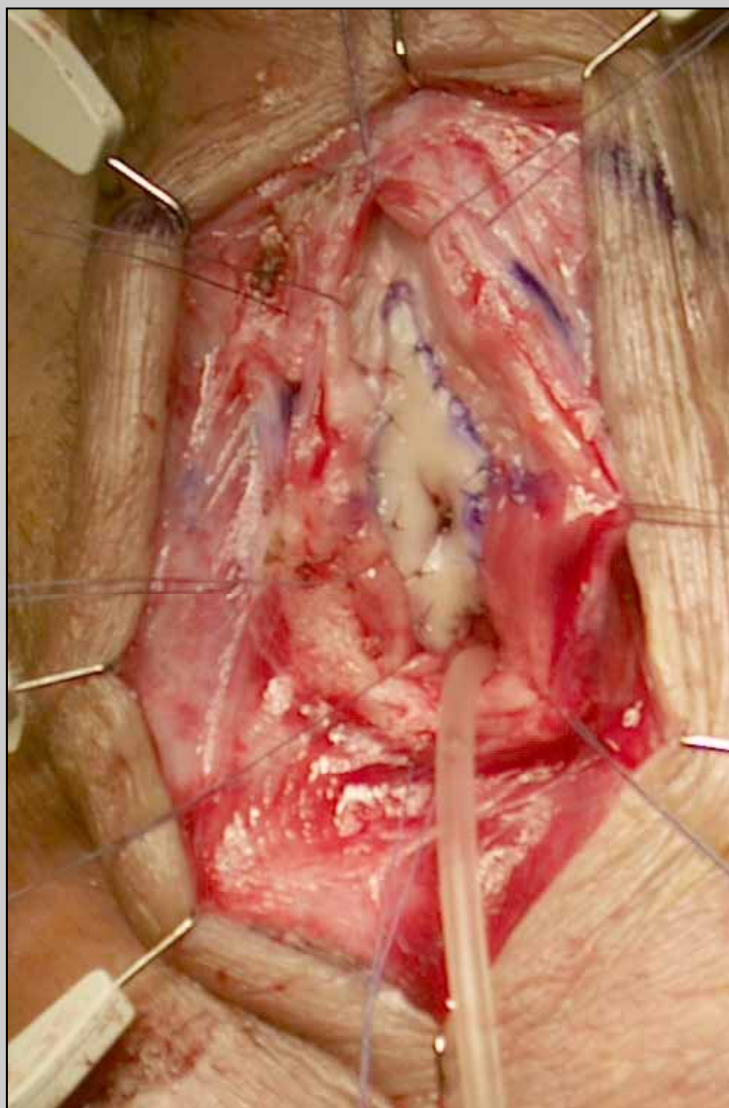


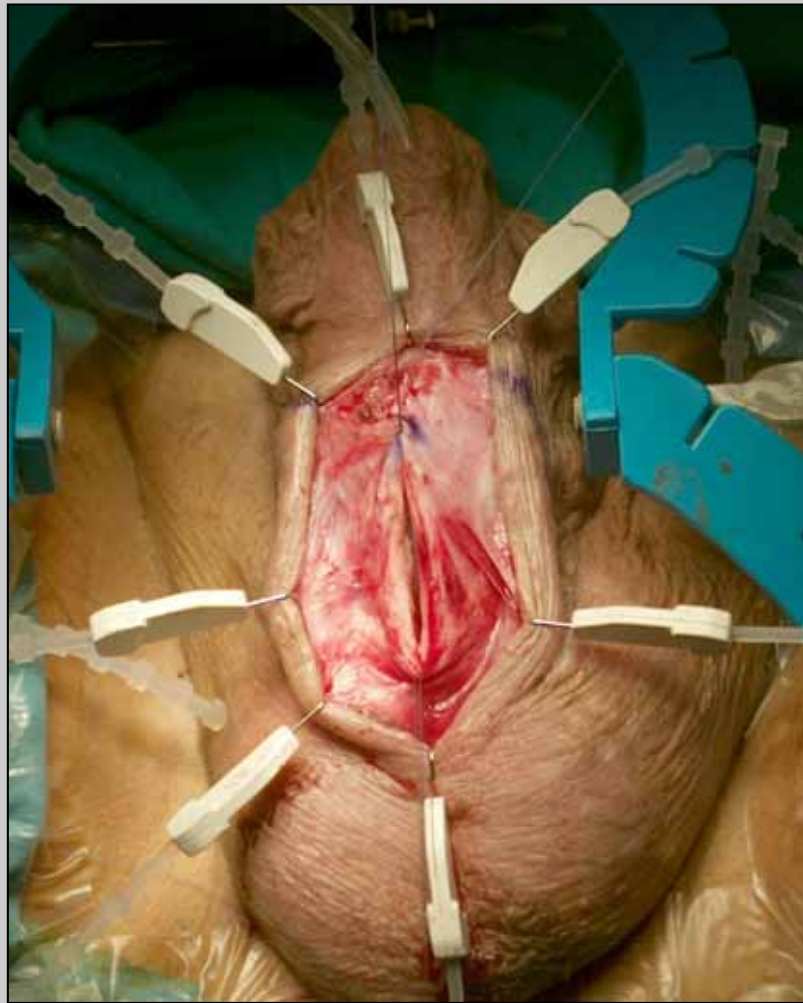




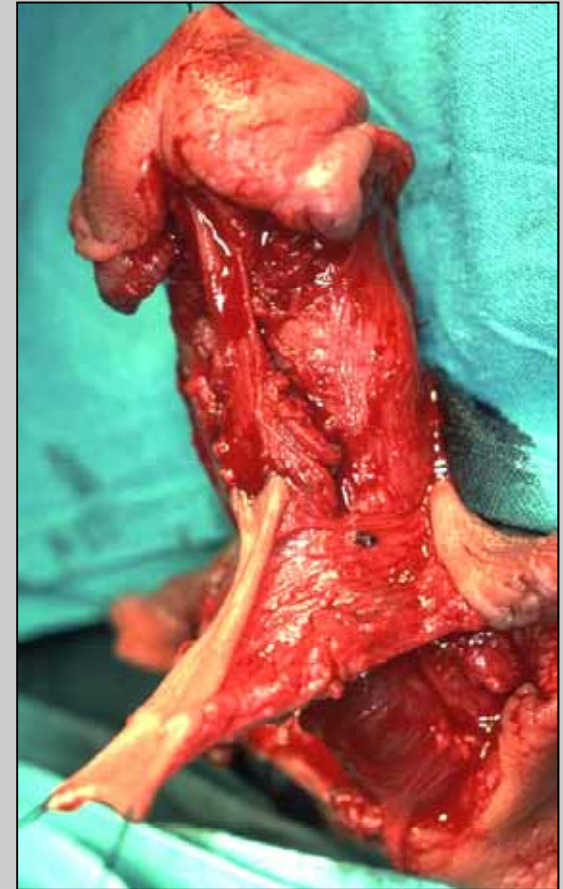
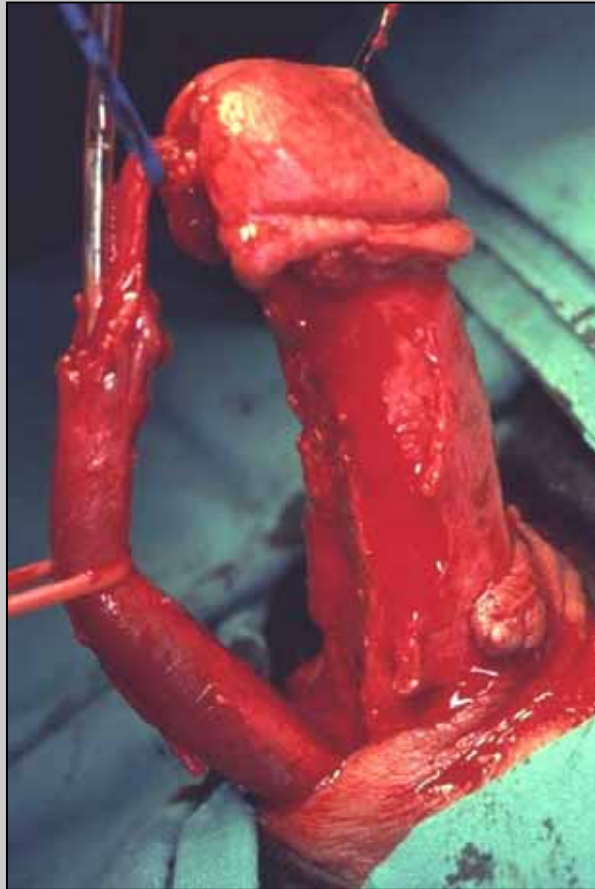
Dorsal inlay oral mucosa graft

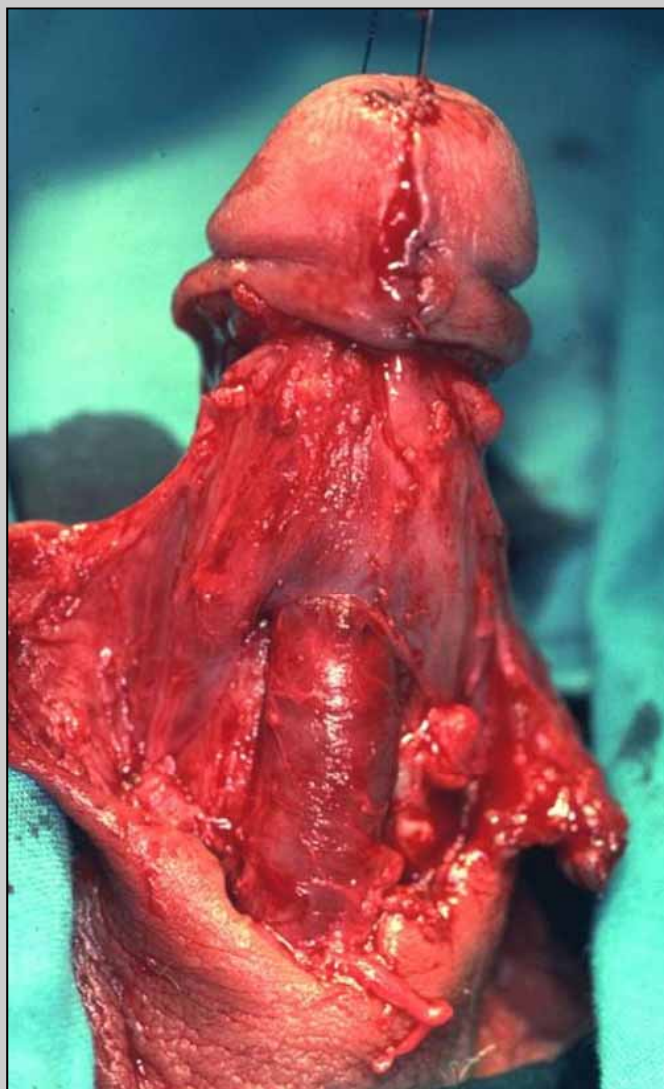






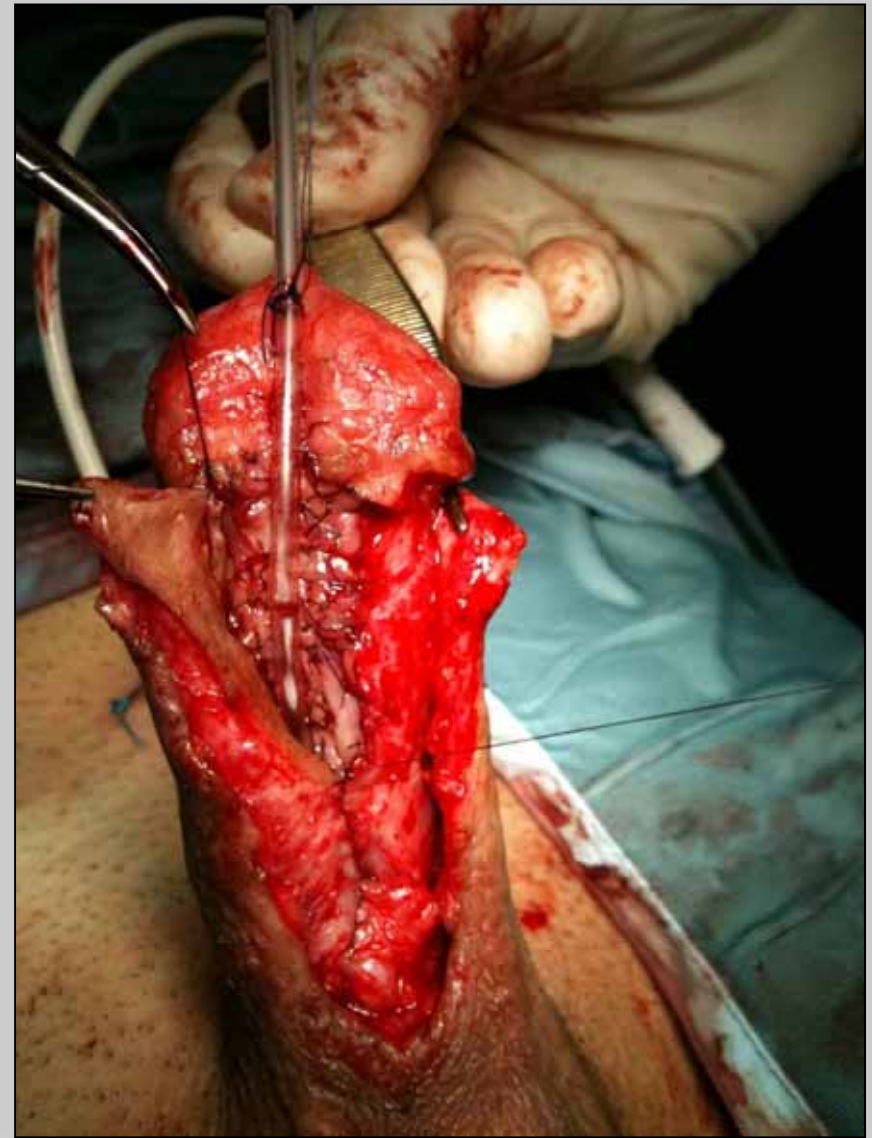
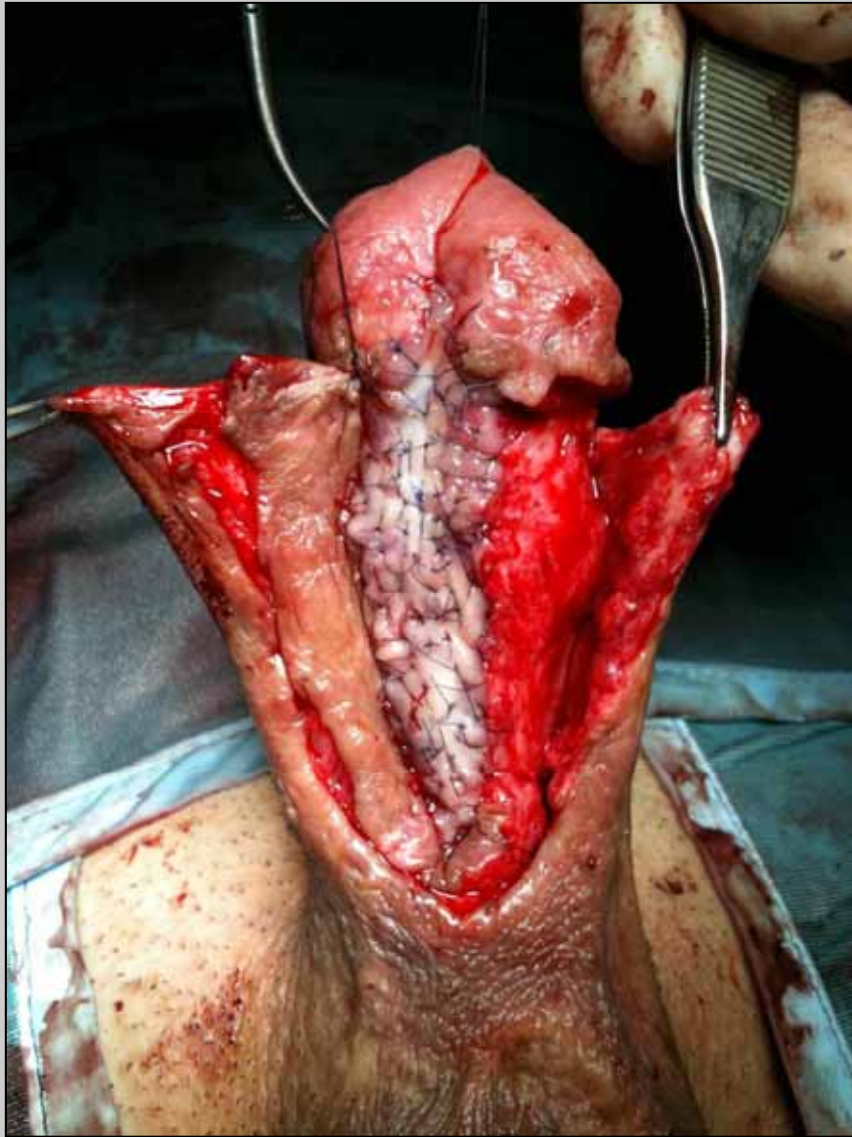
Dartos fascial flap urethroplasty

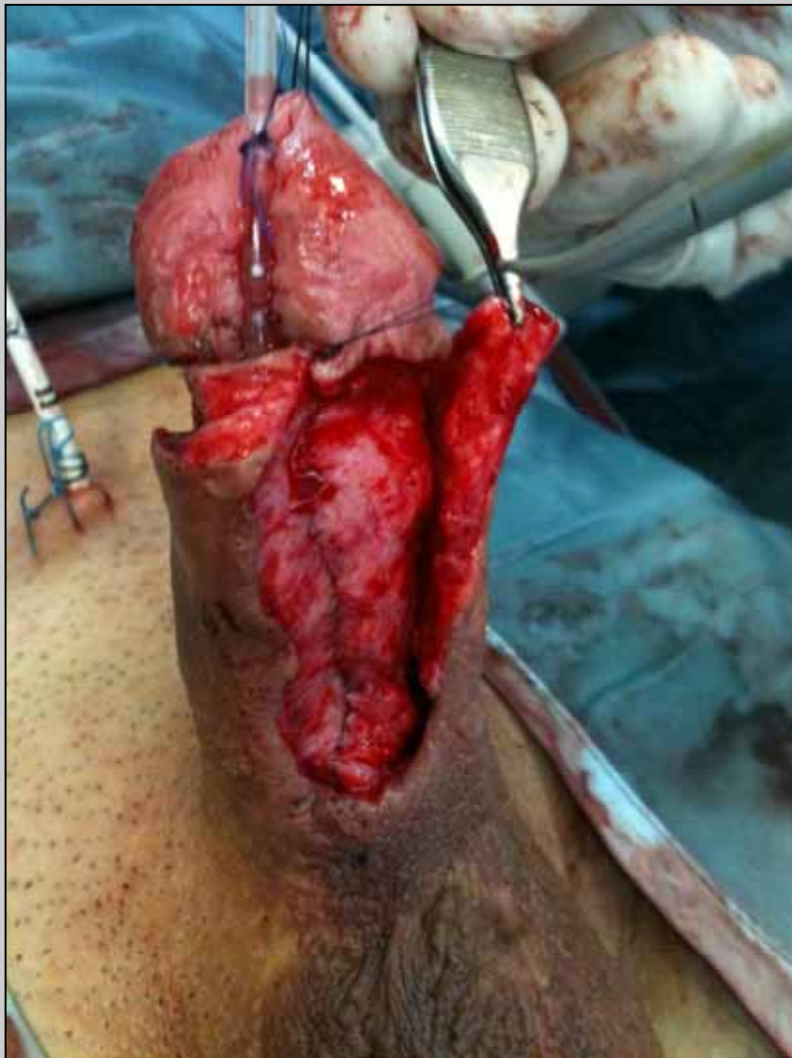




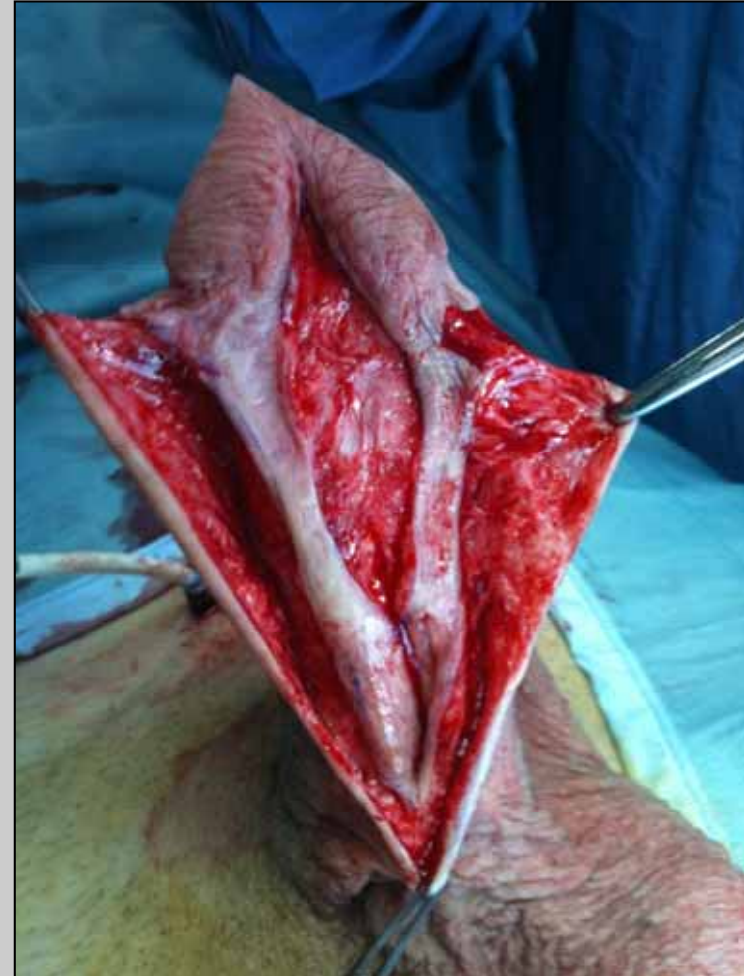
Combined dartos fascial flap and oral mucosal graft urethroplasty

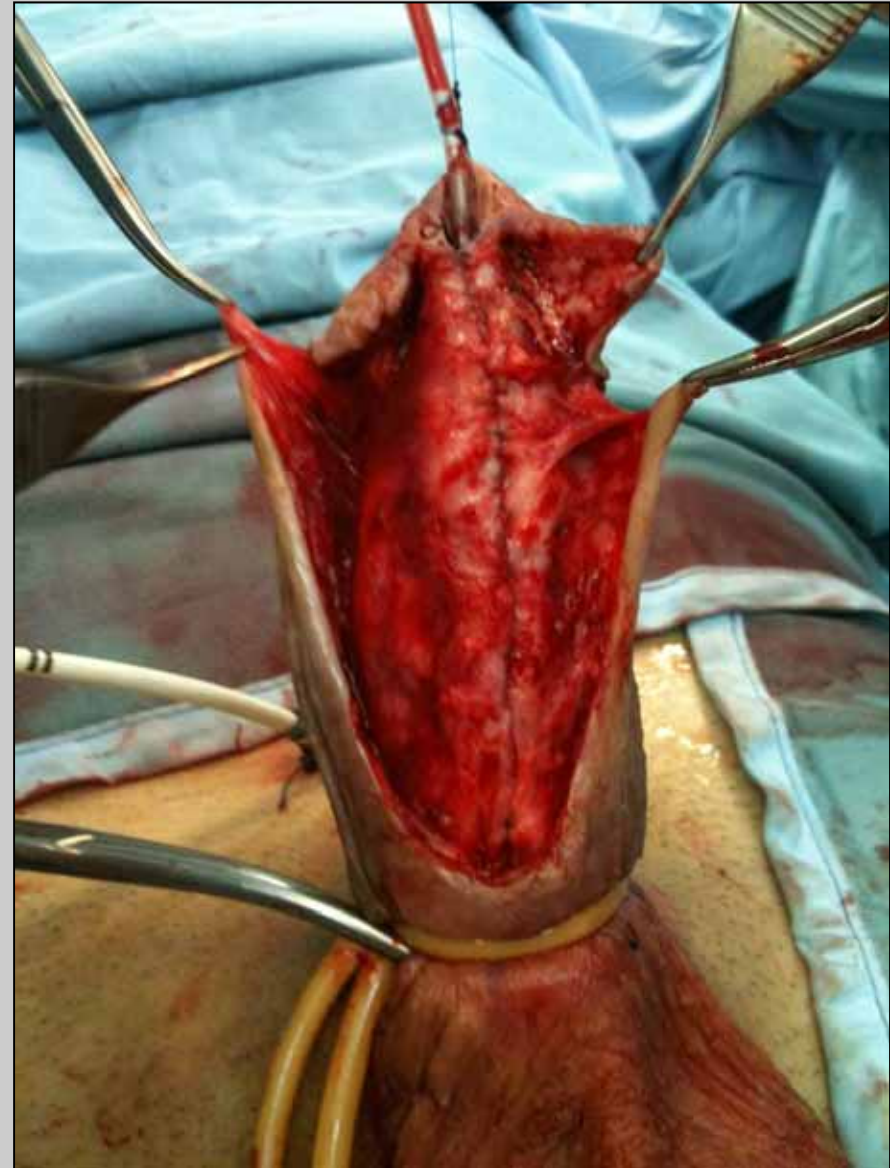
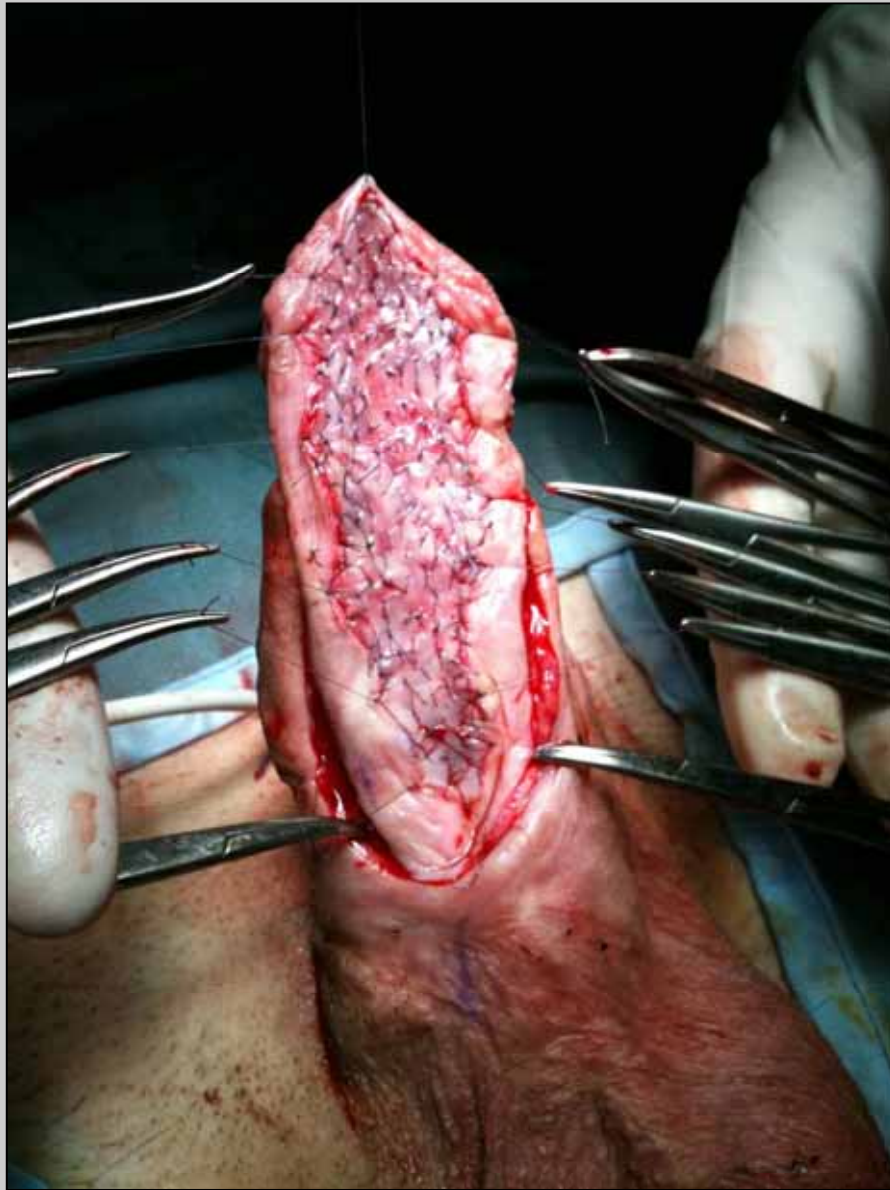






Two-stage urethroplasty with oral mucosal graft







**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:

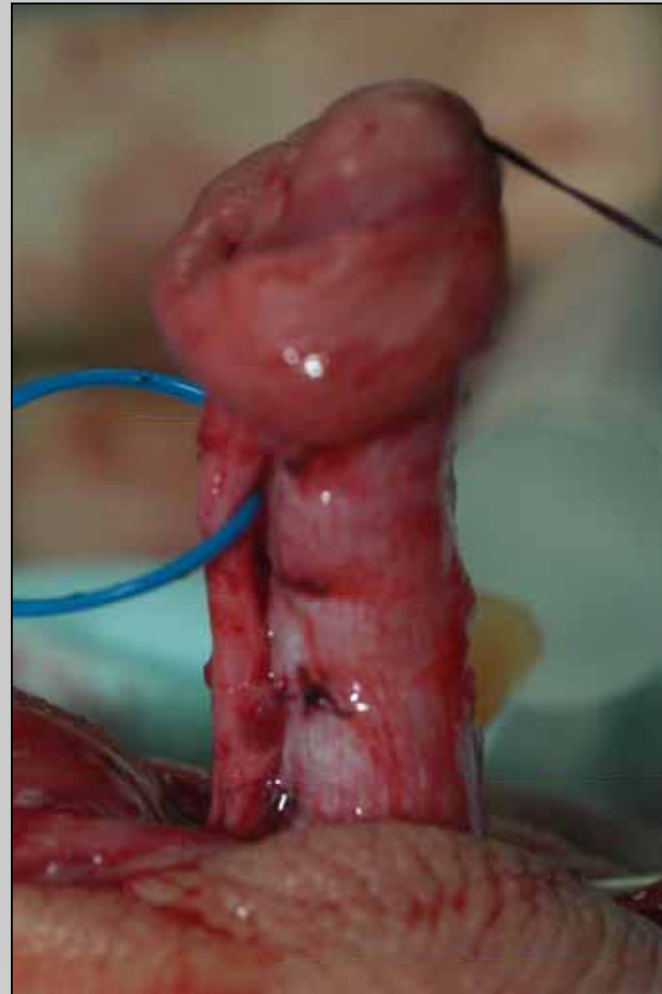
- **Intraoperative features of the stricture and genitalia.**
- **Surgeon preference (flap vs graft) (skin vs oral mucosa)
(one-stage vs two-stage).**
- **Surgeon background (pediatric vs adult) (plastic vs urologist).**

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%)

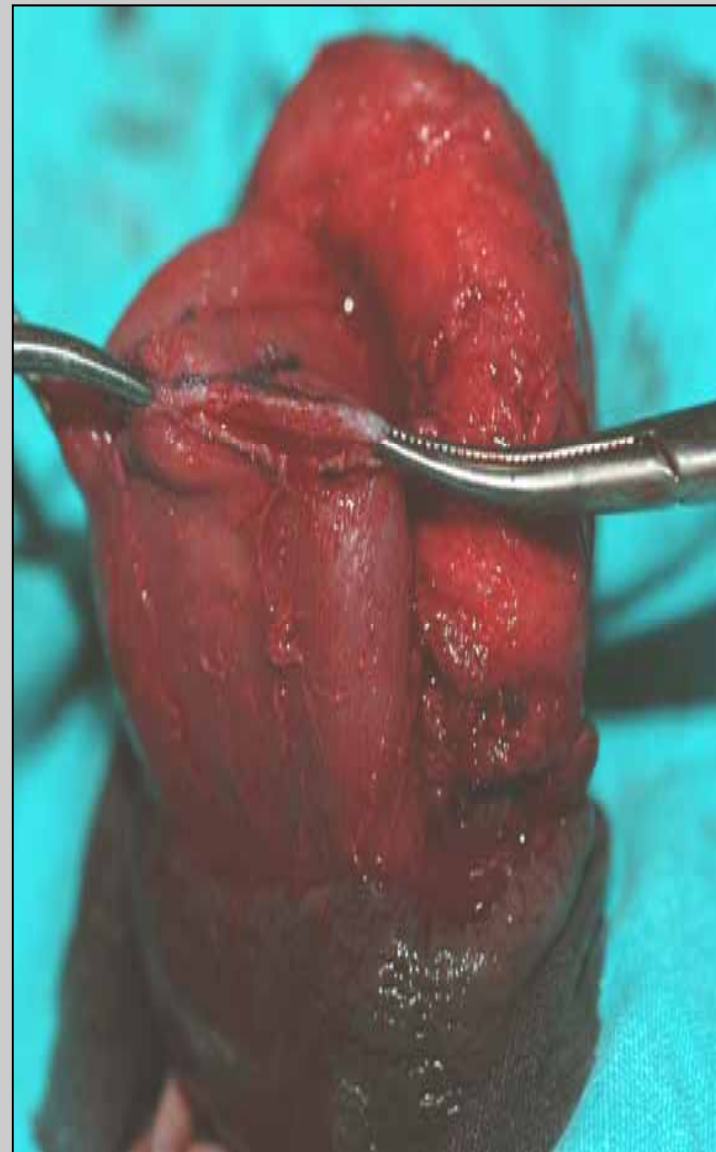
Urol Int 2010; 85: 427-435

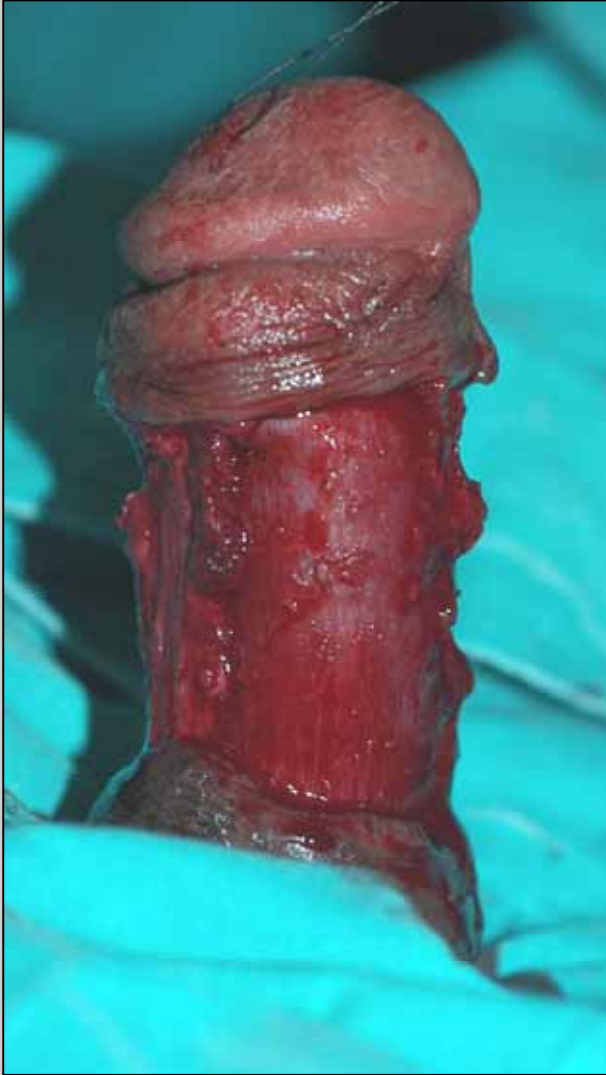
Shorthening technique using multiple small incision and suture



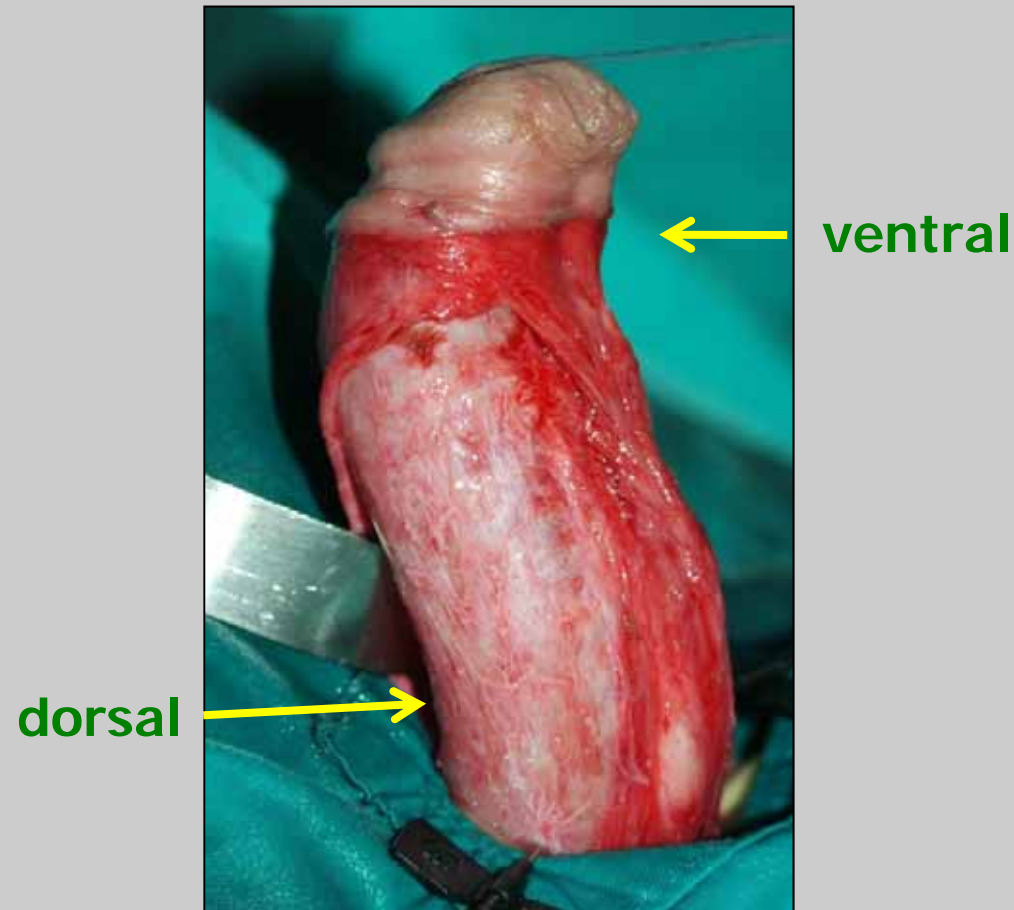
Shorthening technique using penile disassembly and incision corporoplasty

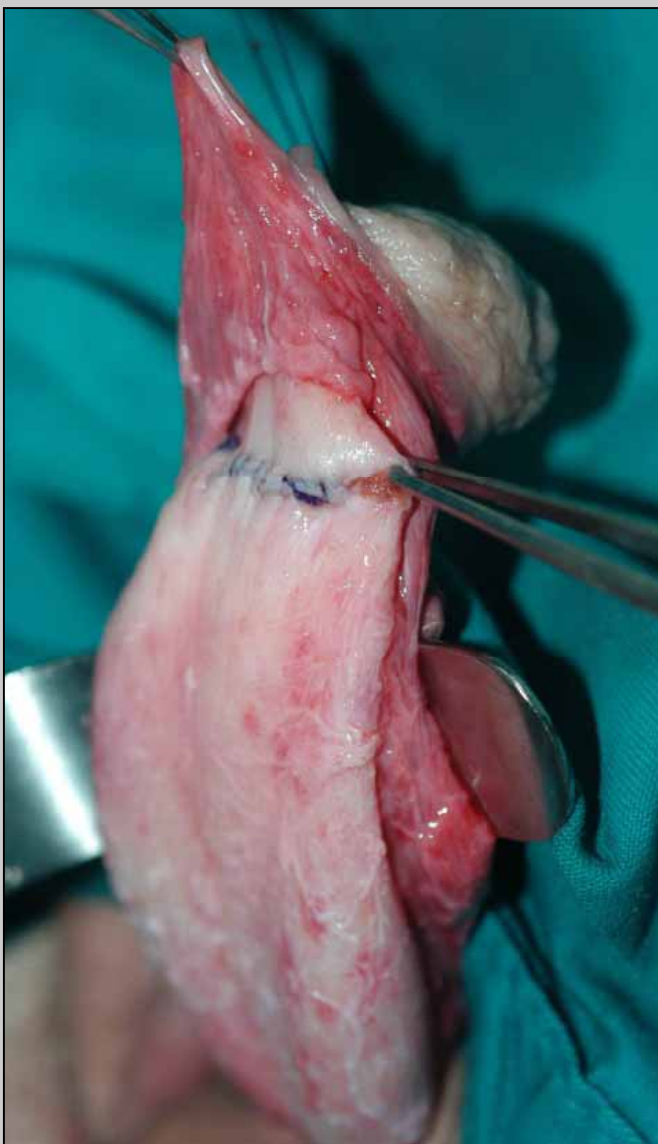


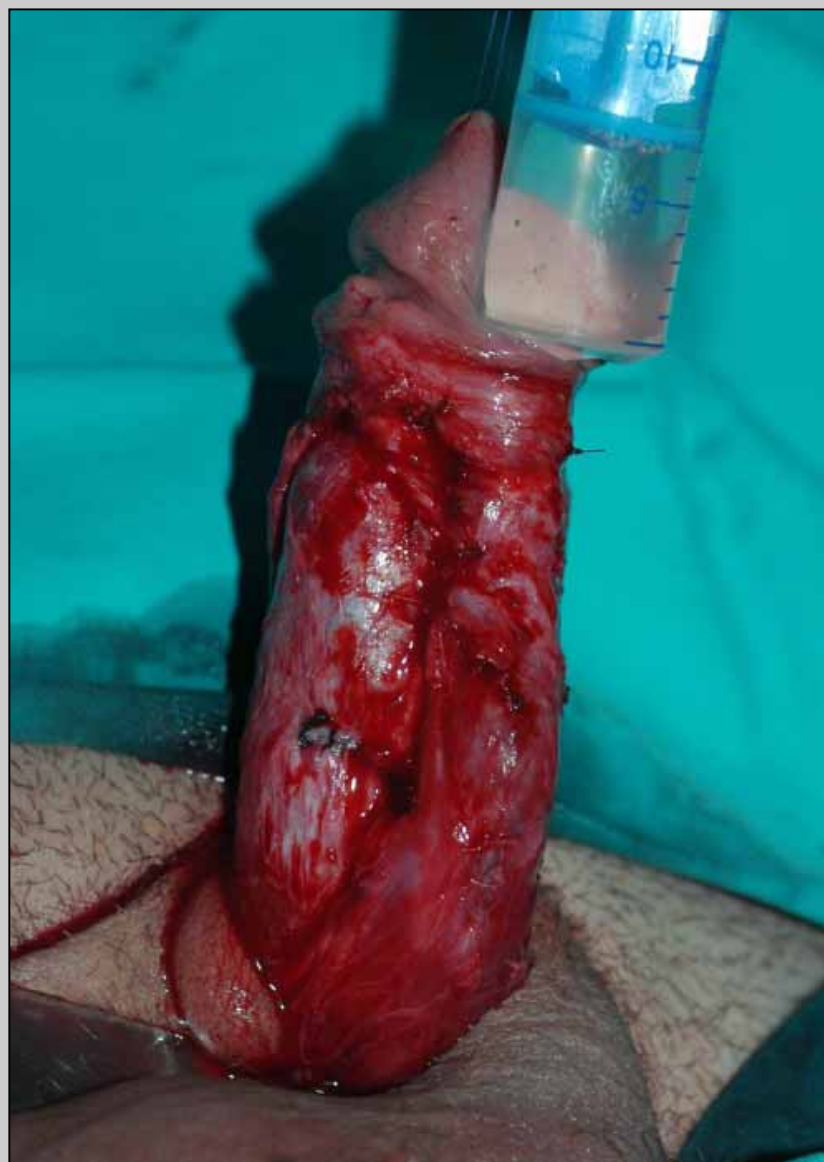




Double “S” curvature (arrows) modified using double incision and corporoplasty







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



Multiple incisions and suture corporoplasty



One-stage urethroplasty covered by dartos fascial flap

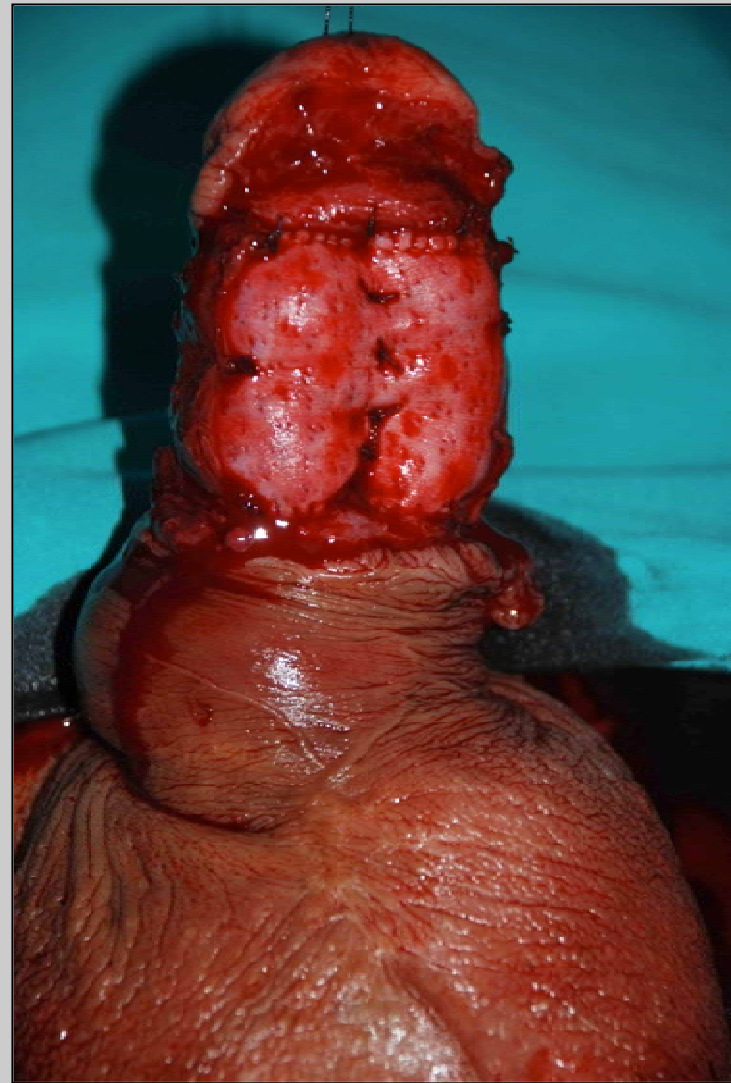




Short urethra, fistula and residual distal curvature

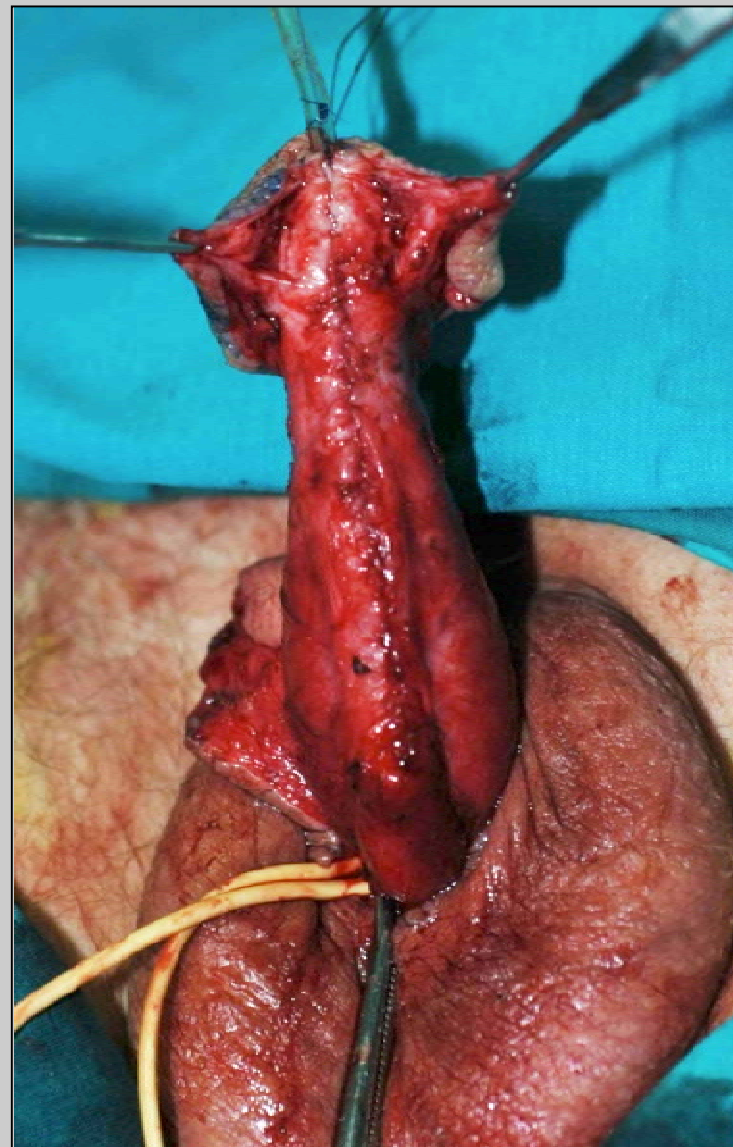


Ventral graft for penile lengthening



Two-stage urethroplasty using oral graft







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%)

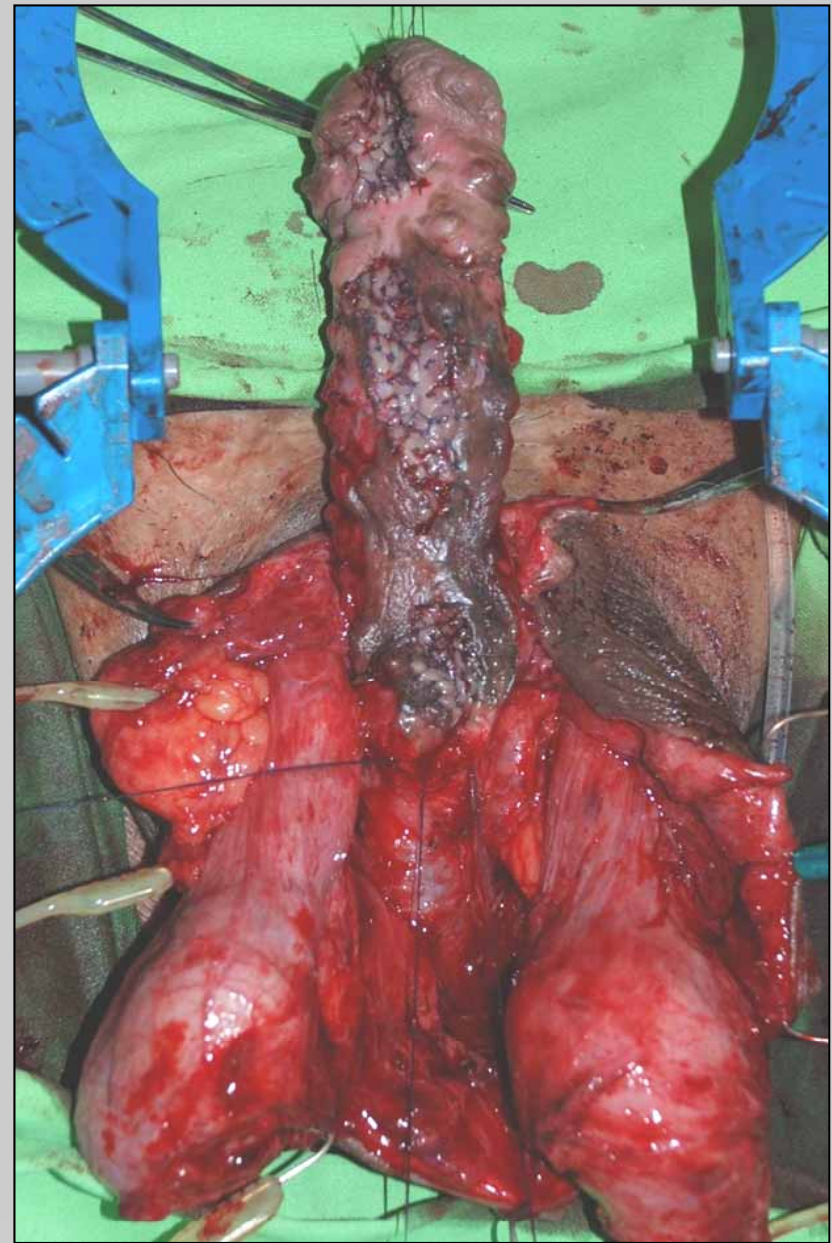
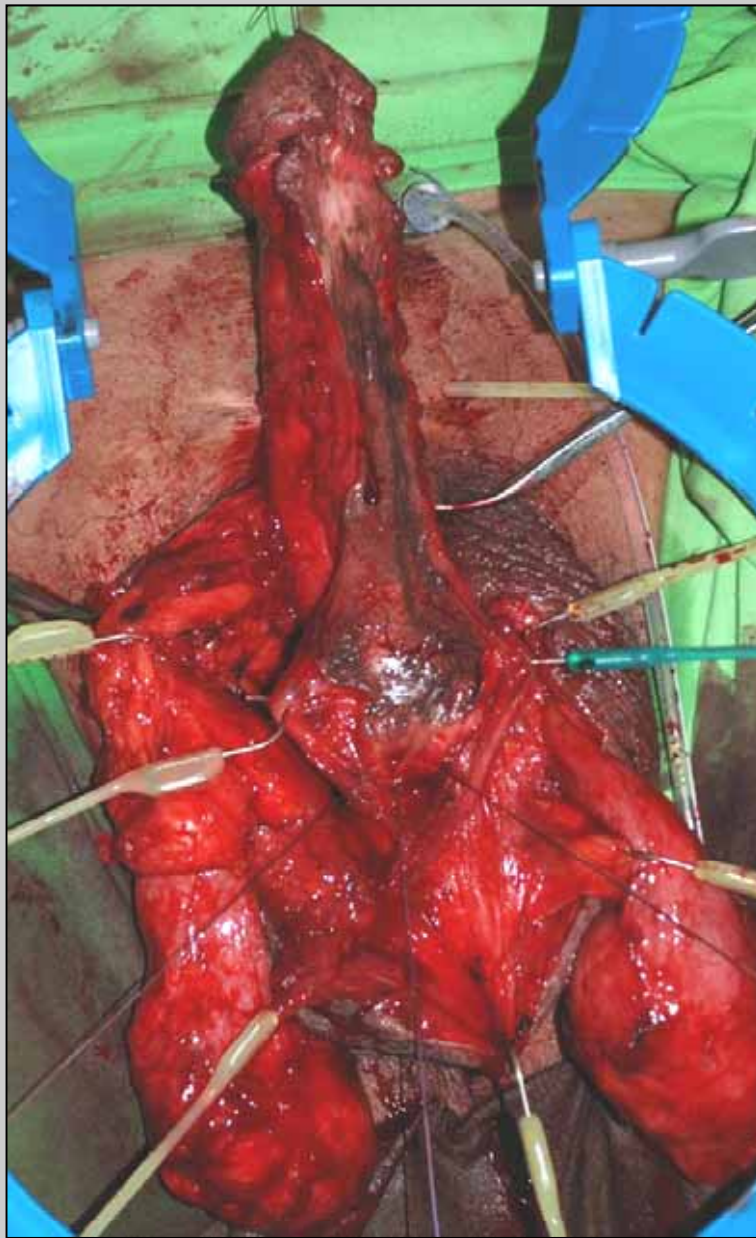
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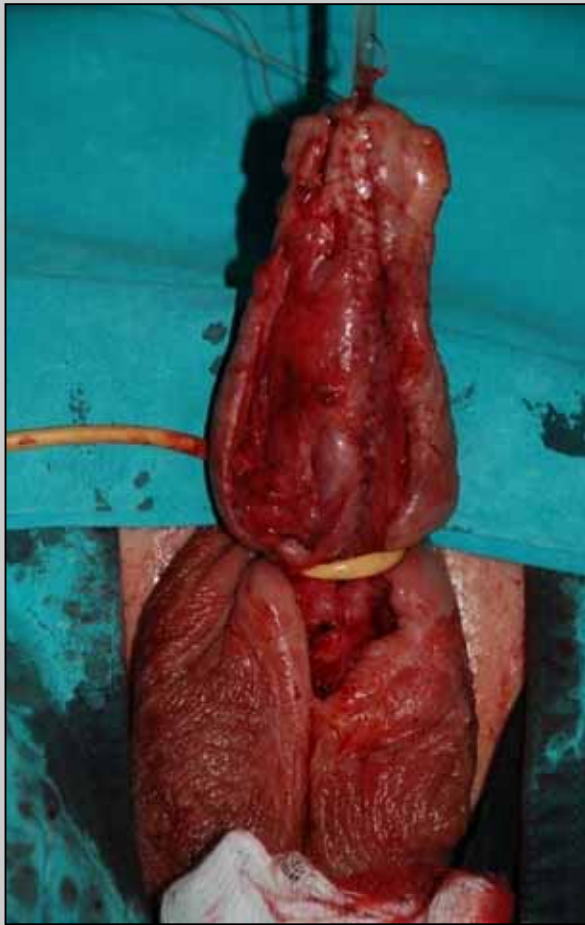








Completely straightened and lengthened penis

















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%)
total	1176	60.4 (12-237)	1036 (88.1%)	140 (11.9%)

Urol Int 2010; 85: 427-435

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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Center for Reconstructive Urethral Surgery



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