

What is success and what is failure after hypospadias repair?

Nicolaas Lumen, M.D., Ph.D.

Ghent University Hospital

Flanders (Belgium)



Definition of “failed hypospadias repair”

- ➔ **Necessary, but not evident!**
- ➔ **evaluation and comparison of the outcome of different types of hypospadias repair**
- ➔ **No international accepted definition**
- ➔ **Who defines success and failure?**
 - Surgeon
 - Patient
 - Surgeon AND patient

Analogy: definition of “stricture recurrence after urethroplasty”

- ➔ **No international accepted definition**
- ➔ **How to define stricture recurrence?**
 - Symptomatic need for further endoscopic or reconstructive surgery (77%), and/or dilation (53%)
- ➔ **Functional outcome: rarely included**
 - Erectile/ejaculatory function
 - Cosmetic result
- ➔ **Patient’s satisfaction ≠ success defined by surgeon**

Current situation: what is defined “failed hypospadias repair”?

	Urethral stricture	fistula	Meatal regression	chordee	Cosmetic abnormalities	Diverticulum (post-void dribbling)	Hair/stone in urethra
Barbagli et al. (J Urol 2010)	+	+	+	+	+		
Barbagli et al. (Eur Urol 2006)	+	+	+	+		+	+
Zhang et al (Chin Med J 2008)	+	+					
Al-Sayyad et al (CUAJ 2007)	+		+				
Snodgrass et al. (J Urol 2009)	+	+	+		+	+	
Lumen et al. (J Pediatr Urol 2010)	+	+	+	+	+		

Current situation: what is defined “failed hypospadias repair”

- **Complications after hypospadias repair requiring surgery**
- **Surgeon’s point of view “paternalistic medicine”**
- **Surgeon’s definition of failure**
- **Rather easy and objective way to define failure**

Dissatisfied patient without
need for surgery



SUCCESS???

Goals of hypospadias repair

1. **Normal forward-directed urinary stream**
2. **Straight, normal looking penis**
3. **Slitlike meatus at the top of the glans**
4. **Normal coitus (genital sensitivity, erection, ejaculation)**
5. **Normal social, psychological and sexual behaviour**

Strict definition of failure: one or more goals not achieved

How to evaluate?

- ➔ **Objective**
- ~~➔ **Subjective** → validated questionnaires~~
- ➔ **By the surgeon**
- ➔ **By the patient**

Objective parameters to evaluate

1. Normal forward-directed urinary stream

- Uroflowmetry
- Imaging
- IPSS, BUT: post-void dribbling!

2. Straight, normal looking penis

- SPL
- Home photographs
- Office artificial erection

3. Slitlike meatus at the top of the glans

- Clinical evaluation

4. Normal coitus

- Erection: IIEF
- Ejaculation: MSHQ-EjD

5. Normal social, psychological and sexual behaviour

- ?

Goal 2 and 3: penile appearance

- Scoring of penile appearance (8 questions)
- Patient vs surgeon
- Patients are less satisfied
- Hardly any agreement between patient and surgeon
- Patients view must be included in evaluation!
- Ask for the patients satisfaction!

	Mean Values \pm SD		No. Pairs	z Value	P Value
	Pts.	Urologist			
Satisfaction with:*					
Flaccid penile size	3.1 \pm 1.1	3.9 \pm 0.4	35	-3.34	0.0008
Penile thickness	3.1 \pm 0.9	3.9 \pm 0.3	35	-4.01	0.0001
Glanular size	3.1 \pm 1.0	3.9 \pm 0.3	35	-3.64	0.0003
Glanular shape	3.1 \pm 0.9	3.5 \pm 0.6	35	-2.31	0.0207
Position of meatus	3.6 \pm 0.7	3.4 \pm 0.7	35	-1.27	0.2049
Scars	2.8 \pm 1.3	3.2 \pm 0.7	33	-1.82	0.0680
Serotum/testes	3.3 \pm 0.8	3.9 \pm 0.2	35	-3.70	0.0002
General penile appearance	3.0 \pm 1.0	3.4 \pm 0.6	35	-1.72	0.0853
Genital perception score†	25.1 \pm 6.1	29.1 \pm 2.5	33	-3.26	0.0011

* 1—Very dissatisfied to 4—very satisfied.

† 8—Very negative to 32—very positive overall genital perception.

Sexual and psychosexual functioning

	hypospadias	control	P-value
Ejaculation problems			
Moriya K et al. J Urol 2006	13.6	0	NN
Bubanj T et al. J Urol 2004	35.2	0	NN
Aho M et al. Eur Urol 2000	12.8	0	NN
Inhibition seeking sexual contact			
Mureau M et al. J Urol 1995	32.8	12.8	0.015
Bubanj T et al. J Urol 2004	10.2	12.8	NS
Inhibition undressing publicly			
Mureau M et al. J Urol 1995	32.9	22	0.189
Satisfied with sexual life			
Mureau M et al. J Urol 1995	76.4	73.5	0.947
Bubanj T et al. J Urol 2004	51.4	76.9	0.0367
Aho M et al. Eur Urol 2000	67.4	69	NS

psychosexual functioning

- **BUT, no differences in :**
 - **sexual milestones**
 - first masturbation
 - first intercourse
 - **sexual desire**
 - **sexual function**
 - ability to have a partner
 - sexual intercourse
- **Sexual milestones and function as scoring for psychosexual functioning?**

Mureau MA et al. J Urol 1995

Moriya K et al. J Urol 2006

Conclusions

- **Definition is a scientific priority**

- **Minimalistic definition:**
 - *“Complication(s) requiring surgery”*
 - Surgeon’s view

- **Maximalistic definition:**
 - *“Not all goals of hypospadias surgery are obtained”*
 - Surgeon’s and patient’s view
 - Need for validated questionnaires and scoring systems

- **Other definitions in between?**



Thank You

Questions?