HPV e CANCRO DEL PENE

F. SASSO

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“ come ed in che modo noi percepiamo il nostro corpo, ma anche come ed in che modo gli altri ci percepiscono e quindi quale e quanta importanza abbiano, in questa costruzione, i fattori psicologici e sociali ”

Immagine corporea e tumore del pene: possiamo conservare la prima e trattare il secondo?

CARCINOMA DEL PENE

EPIDEMIOLOGIA

- Incidenza globale eterogenea 0,1 – 7,9 casi su 100000 maschi
- In Europa 0,1 – 0,9 su 100000
- In USA 0,7 – 0,9 su 100000
- In alcune aree di Asia, Sud America e Africa 19 casi su 100000 maschi

Il carcinoma del pene in questi paesi rappresenta circa il 20% dei tumori nel maschio

CARCINOMA DEL PENE

STORIA NATURALE

- 48% glande
- 21% prepuzio
- 9% glande e prepuzio
- 6% solco coronale
- 2% asta del pene

Sufrin G et al, *Benign and Malignant lesion of the penis*, 1991

CLASSIFICAZIONE PATOLOGICA

- Carcinoma squamocellulare (SCC) (> 95%)
- Melanomi maligni e carcinoma a cellule basali
- Tumori mesenchimali
- Localizzazioni secondarie di neoplasie renali, rettali, vescicali e prostatiche

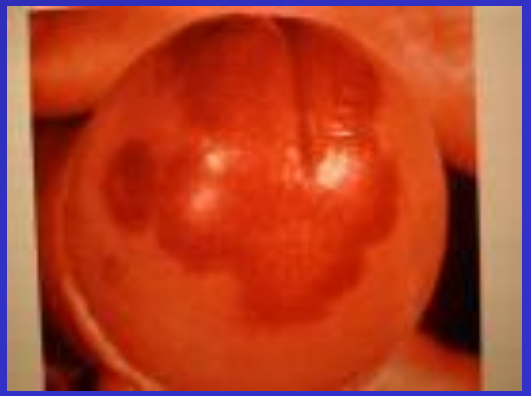
Varietà di presentazione di carcinoma squamocellulare

Types of SCC
• Classic
• Basaloid
• Verrucous and its varieties (24):
– Warty (condylomatous) carcinoma
– Verrucous carcinoma
– Papillary carcinoma
– Hybrid verrucous carcinoma
– Mixed carcinomas (warty-basaloid carcinoma, adeno-basaloid carcinoma)
• Sarcomatoid
• Adenosquamous
Growth patterns of SCC
• Superficial spread
• Nodular or vertical-phase growth
• Verrucous
Differentiation grading systems for SCC
• Broders system (25): traditionally used as a grading system
• Maiche system score (26): currently seems to be the most suitable grading system

LESIONI PRECANCEROSE

Lesions sporadically associated with SCC of the penis (3,24: Evidence level 2b)
• Cutaneous horn of the penis
• Bowenoid papulosis of the penis
Lesions at high risk of developing SCC of the penis (up to one-third transform to invasive SCC (24: Evidence level 2a)
• Penile intraepithelial neoplasia (consider carcinoma *in situ*) (erythroplasia of Queyrat, Bowen's disease)
• Balanitis xerotica obliterans

Ruolo della circoncisione nella prevenzione del carcinoma del pene



CIRCONCISIONE E CARCINOMA DEL PENE

- **Relazione tra smegma e sviluppo del ca pene**

Pratt-Thomas AR et al, *Cancer*, 1956

- **Nelle popolazioni in cui la circoncisione è una pratica costante, l'incidenza del ca pene è pressochè azzerata**

Ruolo protettivo limitato alla circoncisione neonatale

Incidenza in progressivo aumento a seconda dell'età di esecuzione della circoncisione

Lynch AT et al, *Nebr State Med J*, 1969

Gunsel EO et al, *Urology*, 1973

LESIONI PRECANCEROSE DEL PENE

Gruppo eterogeneo di condizioni cliniche, il cui grado di progressione e cancerizzazione tuttavia è ancora non completamente chiarito.

Alcuni studi indicano una percentuale di progressione verso il tumore invasivo superiore al 33%

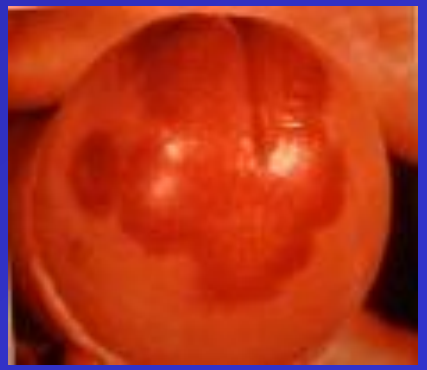
Poblet E et al. Am J Surg Pathol 1999

LESIONI PRECANCEROSE DEL PENE

La terminologia usata in passato per designare tali lesioni è eterogenea e comprende dizioni quali malattia di Bowen, eritroplasia di Queyrat, displasia di grado live, moderato e severo, neoplasia intraepiteliale (PIN 1,2,3).

La malattia di Bowen interessa la cute del pene e appare come una lesione ben circoscritta e squamosa.

L' eritroplasia di Queyrat interessa il glande, ed appare di forma irregolare, di colore rosso e dalla superficie vellutata.



LESIONI PRECANCEROSE DEL PENE

La dizione attualmente utilizzata, che comprende tutte le precedenti, è quella di lesione intraepiteliale squamosa (SIL).

La SIL può presentarsi come lesione singola o multipla, che può coinvolgere ogni compartimento del pene, ma più spesso interessa il glande, il solco balano-prepuziale o il prepuzio.

La malattia di Bowen e l'eritroplasia di Queyrat sono sinonimi di SIL di alto grado, o di carcinoma squamocellulare in situ.

LESIONI PRECANCEROSE DEL PENE

Esistono due distinti gruppi di SIL con caratteristiche morfologiche differenti: il tipo semplice o a differenziazione squamosa, ed il tipo basoloide-verrucoso.

Cubilla AL, et Al. Scand J Urol Nephrol Suppl. 2000; (205):2 15-9.

Entrambi i gruppi possono essere ad alto e a basso grado.

International Journal of Surgical Pathology 12(4):351–364, 2004

Epithelial Lesions Associated with Invasive Penile Squamous Cell Carcinoma: A Pathologic Study of 288 Cases

Antonio L. Cubilla, MD,* Elsa F. Velazquez, MD,†
and Robert H. Young, MD‡

Conclusions

The high frequency of squamous hyperplasia and low grade squamous intraepithelial lesions and preferential association with specific types of invasive carcinomas such as usual squamous cell carcinoma, papillary, and verrucous, plus the subtle morphologic differences of the 2 lesions, would suggest that squamous hyperplasia, despite its bland appearance, and LGSIL are precursor lesions of the aforementioned carcinomas. The association and histologic similarities between high-grade SIL of the basaloid, warty, or mixed forms with their invasive counterparts would indicate these lesions are their likely precursors.

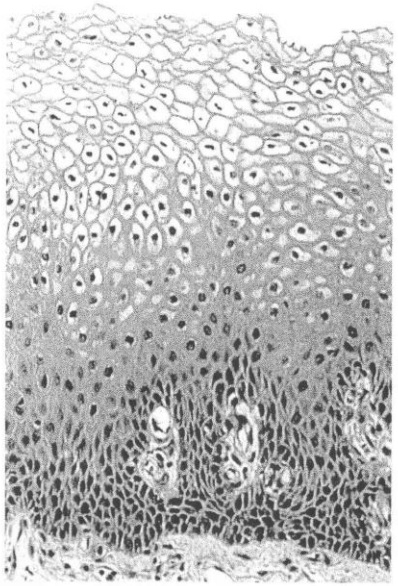


Fig. 7. Low-grade squamous intraepithelial lesion, warty. Mildly atypical flat lesion showing acanthosis and surface koilocytosis.

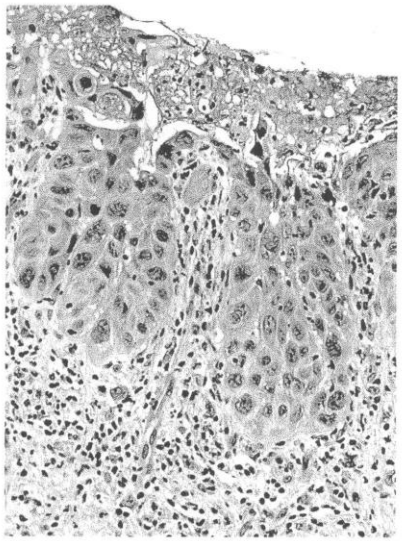


Fig. 8. High-grade squamous intraepithelial lesion, usual type. Atypical, large, and pleomorphic cells with hyperchromatic nuclei and abundant eosinophilic cytoplasm involving the entire epithelial thickness.

LESIONI PRECANCEROSE DEL PENE

Esiste una stretta corrispondenza fra la morfologia della lesione precancerosa e la neoplasia invasiva associata, che a sua volta è distinta in una forma tipica-squamosa (a larghe cellule cheratinizzante), e in una forma basaloide-verrucosa.

Questa stretta corrispondenza è in accordo con l'ipotesi bimodale dell'esistenza di un carcinoma non HPV-relato (tipo squamoso) e di un tumore HPV-relato (tipo basaloide e verrucoide).

Horenblas S et AL. Scand J Urol Nephrol Suppl. 2000;(205): 187-8.

Distinctive Association of p16^{INK4a} Overexpression With Penile Intraepithelial Neoplasia Depicting Warty and/or Basaloid Features: A Study of 141 Cases Evaluating a New Nomenclature

Alcides Chaux, MD, Rolf Pfannl, MD,† Belén Lloveras, MD, PhD,‡§ María Alejo, MD, PhD,§‖ Omar Clavero, MD,§ Cecilia Lezcano, MD,* Nubia Muñoz, MPh, MD, PhD,§ Silvia de Sanjosé, MD, PhD,§¶ Xavier Bosch, MPh, MD, PhD,§ Marier Hernández-Pérez, MD,# Elsa F. Velazquez, MD,** and Antonio L. Cubilla, MD**

It has been suggested that penile carcinogenesis follows a bimodal pathway, one associated with human papillomavirus (HPV) infection and the other related to nonviral factors such as phimosis, chronic inflammation, and lichen sclerosus (LS).[8,43] This hypothesis is based on the frequent association of HPV with basaloid and warty carcinomas and the low or even null HPV detection rate in other well-differentiated squamous cell carcinoma (SCC) subtypes.[10,17,43] HPV-related tumors are partly or entirely composed of small to intermediate basophilic, undifferentiated cells ("basaloid cells"), with more or less prominent koilocytic changes, whereas HPV-negative tumors are predominantly composed of highly keratinized, differentiated squamous cells.[10,27] We have ob-

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TABLE 1. Histologic Classification of Penile Intraepithelial Neoplasia (141 Cases)

Type of PeIN	No. Cases (%)
Differentiated	102 (72.3)
Basaloid	13 (9.2)
Warty-basaloid	10 (7.1)
Warty	6 (4.3)
Mixed	10 (7.1)

PeIN indicates penile intraepithelial neoplasia.

TABLE 6. Pattern of p16^{INK4a} Staining According to Subtypes of Penile Intraepithelial Neoplasia in 151 Lesions

	No. lesions	Differentiated PeIN (%)	Basaloid PeIN (%)	Warty PeIN (%)	Warty-Basaloid PeIN (%)
Pattern 0	94	90 (96)	0 (0)	1 (1)	3 (3)
Pattern 1	15	14 (93)	0 (0)	1 (7)	0 (0)
Pattern 2	10	8 (80)	0 (0)	2 (20)	0 (0)
Pattern 3	32	0 (0)	16 (50)	6 (19)	10 (31)
Total	151	112	16	10	13

Am J Surg Pathol • Volume 34, Number 3, March 2010

Review

Human papillomavirus prevalence and type distribution in penile carcinoma

C Miralles-Guri,[1] L Bruni,[1] A L Cubilla,[2] X Castellsagué,[1,3] F X Bosch,[1] S de Sanjosé[1,3]

Methods: A systematic and comprehensive literature review of the major penile cancer studies published from 1986 until June 2008 evaluating the HPV prevalence among the different histological types was carried out.
Results: 31 studies including 1466 penile carcinomas were reviewed. Global HPV prevalence was 46.9%. Relative contribution was: HPV-16 (60.23%), HPV-18 (13.35%), HPV-6/11 (8.13%), HPV-31 (1.16%), HPV-45 (1.16%), HPV-33 (0.97%), HPV-52 (0.58%), other types (2.47%). Assessment of multiple infections contribution is limited due to study design. Basaloid and warty squamous cell carcinomas were the most frequent HPV-related histological types, but keratinising and non-keratinising subtypes also showed prevalence rates of around 50%.

Conclusions: About half of the penile tumours were associated with HPV 16–18 with little presence of other genotypes. Research on the mechanisms behind penile carcinogenesis is warranted. Available HPV vaccines are likely to be effective in penile tumours.

Efficacy of the HPV prophylactic vaccine in men is still under investigation, but evidence to date suggests safety and immunogenicity.[58] Although penile carcinoma is a rare disease, around 7000 cases would be prevented annually by the eradication of HPV-16/18.[3] More studies regarding efficacy of the prophylactic vaccine on flat penile lesions (which show a higher HPV prevalence[59 60]) to prevent progression to penile carcinomas are needed.

J Clin Pathol 2009;**62**:870–878. doi:10.1136/jcp.2008.063149

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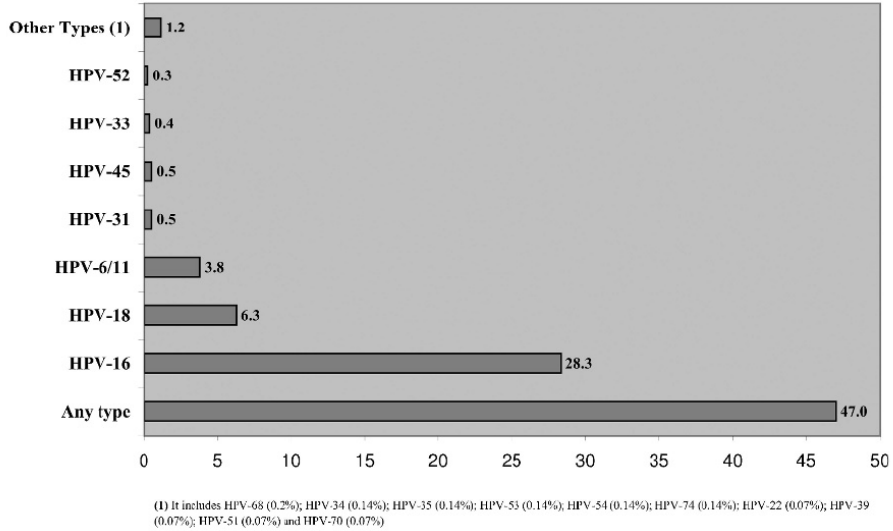
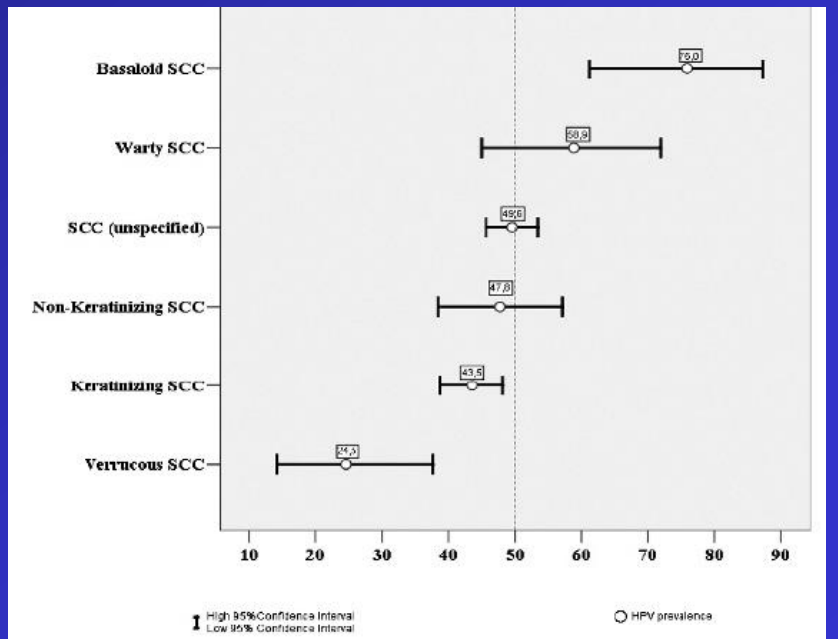


Figure 2 Human papillomavirus (HPV) type prevalence distribution in penile carcinomas.

J Clin Pathol 2009;**62**:870–878. doi:10.1136/jcp.2008.063149



The Basaloid Cell is the Best Tissue Marker for Human Papillomavirus in Invasive Penile Squamous Cell Carcinoma: A Study of 202 Cases From Paraguay

Antonio L. Cubilla, MD, Belén Lloveras, MD, PhD,†‡ María Alejo, MD, PhD,§ Omar Clavero, MD,† Alcides Chaux, MD,* Elena Kasamatsu, MD,* Elsa F. Velazquez, MD,‖ Cecilia Lezcano, MD,* Núria Monfulleda, MD,† Sara Tous, BSc,†¶ Laia Alemany, MD,†¶ Joellen Klaustermeier, BSc,†¶ Nubia Muñoz, MPh, MD, PhD,† Wim Quint, PhD,# Silvia de Sanjose, MD, PhD,†¶ and Francisco Xavier Bosch, MPh, MD, PhD†*

In summary, in this HPV survey of a large number of invasive penile carcinomas, we found evidence of HPV infection in 64 of 202 cases (32%). Genotypes preferentially found were of the high risk type whereas cases with exclusively low-risk genotypes were identified in 2% of the cases. The most common genotype found was HPV-16, present in 46 cases (72%). A significant association of the virus with basaloid, warty-basaloid and warty carcinomas, and with tumors of high histologic grade was identified. Our results also suggest that, in penile SCC, the presence of basaloid cells is the best tissue marker for oncogenic HPV infection.

Am J Surg Pathol • Volume 34, Number 1, January 2010

Lichen Sclerosus in 68 Patients With Squamous Cell Carcinoma of the Penis

Frequent Atypias and Correlation With Special Carcinoma Variants Suggests a Precancerous Role

Elsa F. Velazquez, MD, and Antonio L. Cubilla, MD

Clinical and pathologic data from 207 penectomy and circumcision specimens with squamous cell carcinomas and giant condylomas were evaluated, and 68 patients with lichen sclerosus were identified.

Patients having penile lichen sclerosus should be closely followed, and any suspicious lesion promptly biopsied to detect the development of SCC as early as possible. Circumcision is recommended in patients with lichen sclerosus exclusively located in foreskin because the treatment can be curative in these cases.

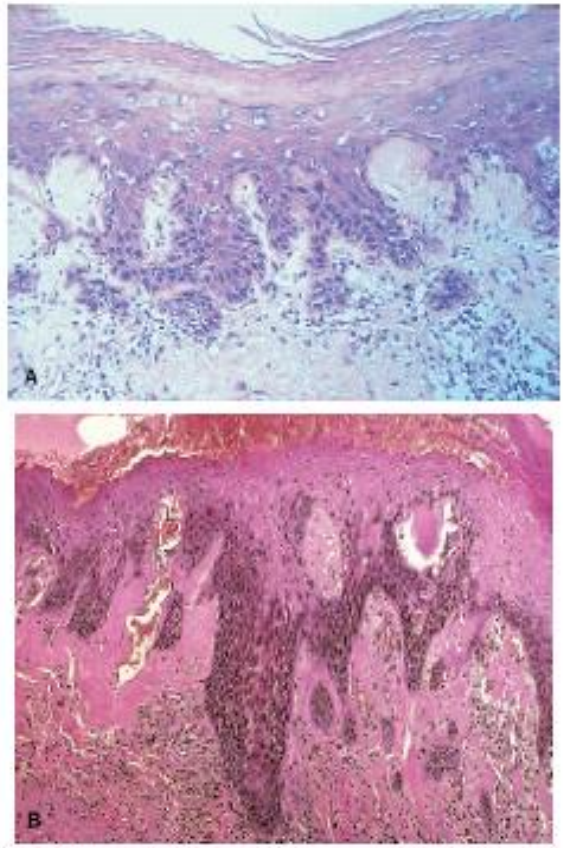


FIGURE 5. A and B, Low-grade SIL associated with lichen sclerosus.

TERAPIA

Terapie conservative non chirurgiche sono state utilizzate con buone percentuali di successo in caso di lesioni a stadiazione Ta-l, Gl-2, NO, M0 o in caso di carcinoma penieno intraepiteliale.

Questi trattamenti topici comprendono:

- laser-terapia (C02 laser; YAG laser)
- crioterapia
- terapia fotodinamica
- applicazioni topiche di imiquimod al 5%
- applicazioni topiche di crema al 5-fluorouracile

ELSEVIER

Urologic Oncology: Seminars and Original Investigations xx (2009) xxx

UROLOGIC ONCOLOGY

Original article

Fluorescence-guided laser therapy for penile carcinoma and precancerous lesions: Long-term follow-up

Boris Schlenker, M.D.[a,*], Christian Gratzke, M.D.[a], Michael Seitz, M.D.[a], Markus J. Bader, M.D.[a], Oliver Reich, M.D.[a], Peter Schneede, Prof.[b], Edwin Hungerhuber, M.D.[c], Christian G. Stief, Prof.[a], Derya Tilki, M.D.[a]

[a] *Department of Urology, University Hospital Grosshadern, Ludwig-Maximilians University Munich, Munich, Germany*
[b] *Department of Urology, Hospital Memmingen, Memmingen, Germany*
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Received 30 August 2009; received in revised form 1 October 2009; accepted 1 October 2009

5. Conclusions

Fluorescence-guided laser therapy for penile carcinoma and precancerous lesions facilitates low recurrence rates for penile preserving surgery. It is easy to use and cost-effective as many clinics already have the necessary equipment for PDD of bladder cancer available. Larger prospective studies should be performed to directly compare the long-term outcome of fluorescence-guided laser therapy against conventional white light laser therapy.

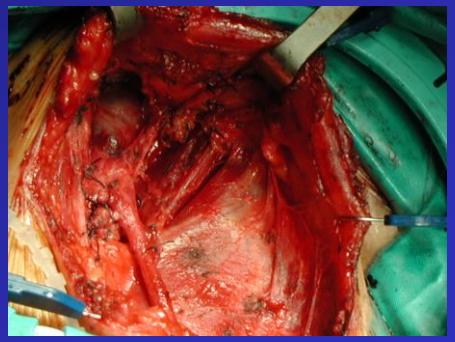
Table 2
Patients characteristics group 2 (carcinoma in situ)

Nr.	Age at diagnosis (year)	FU (month)	Local recurrence	Time until local recurrence (month)	TNM-stage
1	64	88	No	—	TisN0M0
2	42	52	No	—	TisN0M0
3	37	91	No	—	TisN0M0
4	83	87	No	—	TisN0M0
5	64	67	No	—	TisN0M0
6	43	97	No	—	TisN0M0
7	67	48	No	—	TisN0M0
8	41	42	No	—	TisN0M0
9	49	88	No	—	TisN0M0
10	22	41	No	—	TisN0M0
11	60	47	No	—	TisN0M0

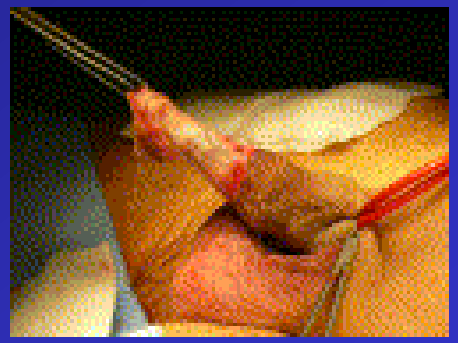
CARCINOMA DEL PENE

GESTIONE DEL RISCHIO ONCOLOGICO

HOT TOPICS



- LINFOADENECTOMIA: QUANDO E COME?

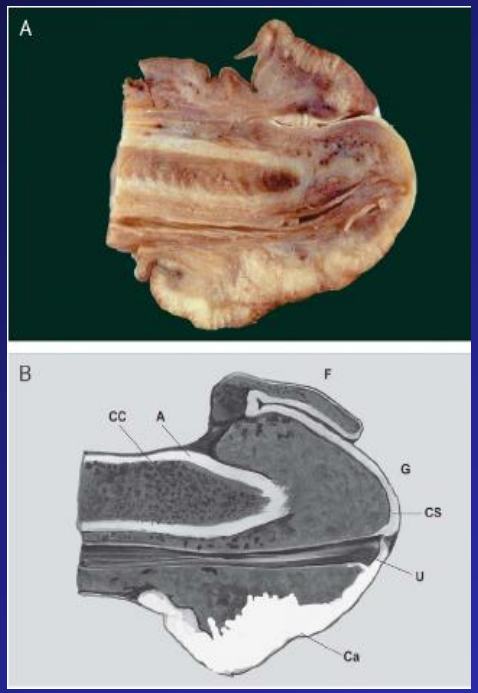


- CHIRURGIA CONSERVATIVA

- CHIRURGIA RICOSTRUTTIVA GENITALE

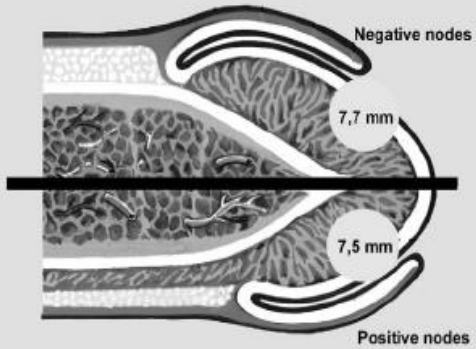
Histologic Grade and Perineural Invasion are More Important Than Tumor Thickness as Predictor of Nodal Metastasis in Penile Squamous Cell Carcinoma Invading 5 to 10 mm

Elsa F. Velazquez, MD, Gustavo Ayala, MD,† Hao Liu, PhD,† Alcides Chaux, MD,‡ Magali Zanotti, MD,‡ Jose Torres, MD,‡ Soung I. Cho, MD,‡ Jose E. Barreto, MD,‡ Fernando Soares, MD,§ and Antonio L. Cubilla, MD‡*



	Negative Nodes	%	Positive Nodes	%	*P*
Age (mean)	55		54		
Size (cm)	4.2		4.4		
Grade 1	23	92	2	8	
Grade 2	22	48	24	52	
Grade 3	23	37	40	63	0.0001
Thickness (mm)	7.7		7.5		
Inv LP	2	100	0	0	
Inv CS/DT	44	53	39	47	
Inv CC/SK	21	43	28	57	
Vascular invasion	14	39	22	61	
Perineural invasion	15	31	33	69	0.001

Inv indicates invasion.

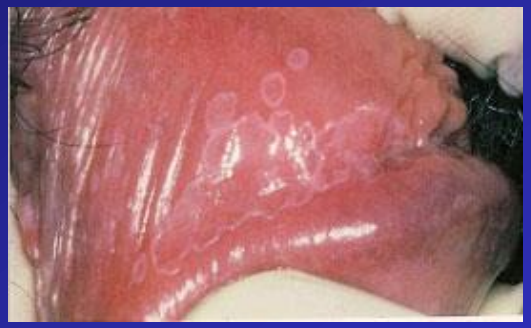


CARCINOMA DEL PENE

TRATTAMENTO LESIONE PRIMITIVA

TERAPIE CONSERVATIVE NON CHIRURGICHE

- **Laser terapia**
  - **CO2-laser**
  - **YAG laser**



- **Crioterapia**
- **Terapia fotodinamica**
- **Applicazioni topiche di imiquimod al 5%**
- **Applicazioni topiche di 5-fluorouracile crema**

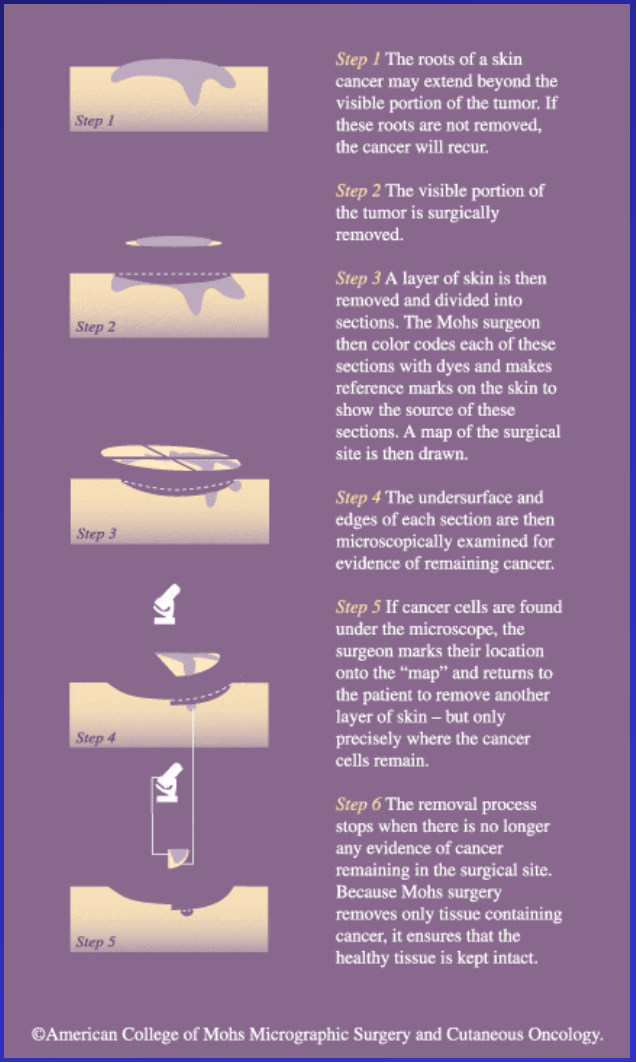
DA UTILIZZARSI IN LESIONI Ta-1, G1-2, N0M0 o nei SIL

CARCINOMA DEL PENE

TRATTAMENTO LESIONE PRIMITIVA

TERAPIE CONSERVATIVE CHIRURGICHE

- **Escissione locale**
- **Emiglandulectomia**
- **Chirurgia di Mohs**



Mohs FE et al, *Urol Clin North Am*, 1992

CARCINOMA DEL PENE

TRATTAMENTO LESIONE PRIMITIVA

TERAPIE CONSERVATIVE CHIRURGICHE

- **Escissione locale**

  ripresa di malattia pari al 30%

Agrawal A et al, *BJU Int*, 2000

- **Chirurgia di Mohs**

  Assenza di recidiva in caso di lesioni < 1 cm

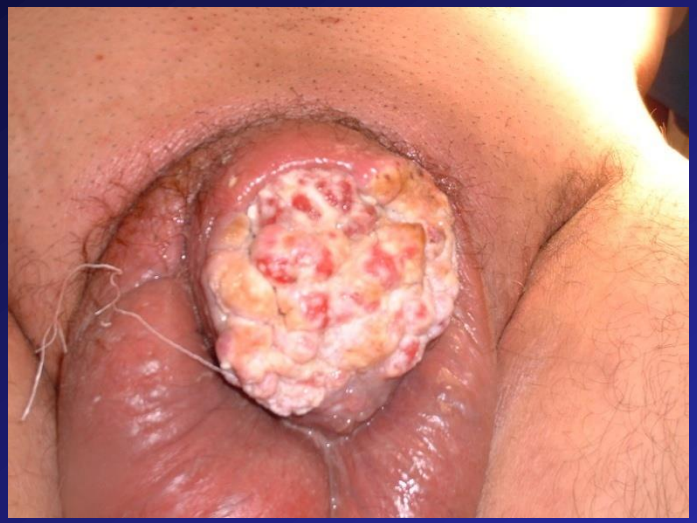
  50% recidive in lesioni > 3 cm

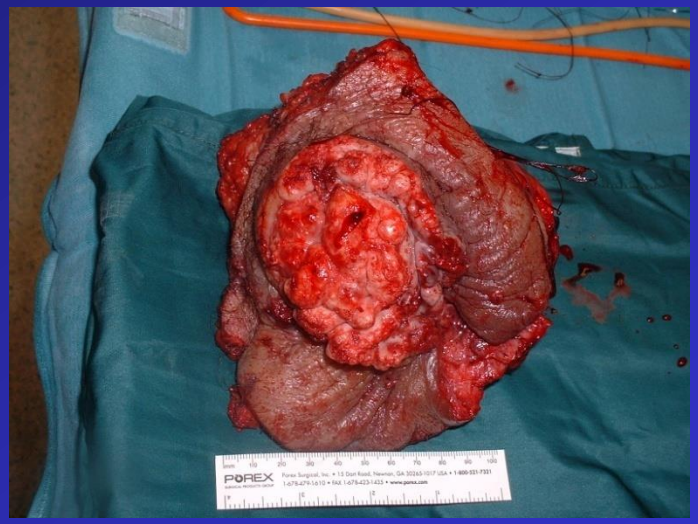
Mohs FE et al, *Urol Clin North Am*, 1992

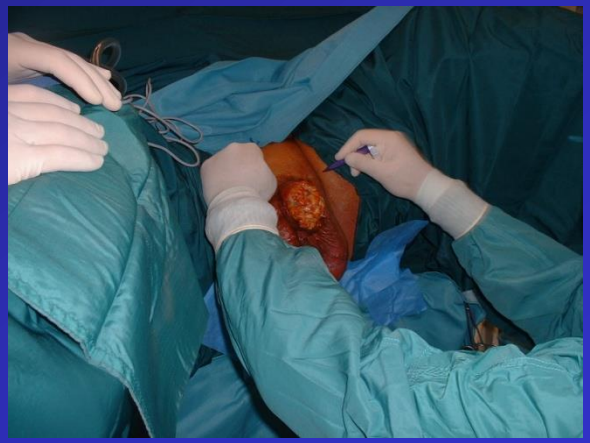
CARCINOMA DEL PENE

TRATTAMENTO LESIONE PRIMITIVA

TERAPIA DEMOLITIVA CHIRURGICA







CARCINOMA DEL PENE

NUOVE ACQUISIZIONI

- migliore conoscenza della storia naturale della malattia, dell'anatomia loco-regionale e delle tecniche ricostruttive
- diagnosi precoce
- necessità di tecniche meno demolitive
- *attenzione all'aspetto estetico-funzionale*
- *rispetto radicalità oncologica*
- linfadenectomia inguinale: quando e come

Sessualita' e K pene: ieri

British Journal of Urology (1994), 73, 554–560

Sexuality in patients treated for penile cancer: patients' experience and doctors' judgement

S. OPJORDSMOEN*, H. WAEHRE†, N. AASS‡ and S.D. FOSSA‡
*Department of Psychiatry A, Ullevål Hospital, Oslo, †Departments of Surgical Oncology and ‡Medical Oncology and Radiotherapy, The Norwegian Radium Hospital, Oslo, Norway

	Local excision/ laser beam	*Radiotherapy*	*Partial penectomy*	*Total penectomy*
Ability for coitus				
Severely reduced	3	6	12	
Slightly reduced	16	18	14	
Unchanged	7	3	1	
Unsure	1			
Erectile dysfunction				
Always			2	
Often	4	8	11	
Sometimes	9	12	10	
No problems	13	7	4	
Unsure	1			
Sexual interest				
Lacking				3
Severely reduced	2	5	12	20
Slightly reduced	17	17	13	3
Unchanged	7	5	2	1
Unsure	1			

excision or laser beam therapy. Patients in this sample who had undergone partial penectomy were dissatisfied and did not function sexually substantially better than the patients who had had a total penectomy.

CARCINOMA DEL PENE

NUOVI ORIENTAMENTI

- possibilità di ridurre i 2 cm dal margine di infiltrazione

  Hoffman M et al., *Cancer*, 1999

  Agrawal A et al, *BJU Int*, 2000

- proposta di tecniche "organ-sparing" non chirurgiche

- sviluppo delle tecniche "potency-sparing"

  glandulectomia con o senza resezione degli apici

  Davis JW et al, *Urology*, 1999

  Hatzichristou DG et al, *Urology*, 2001

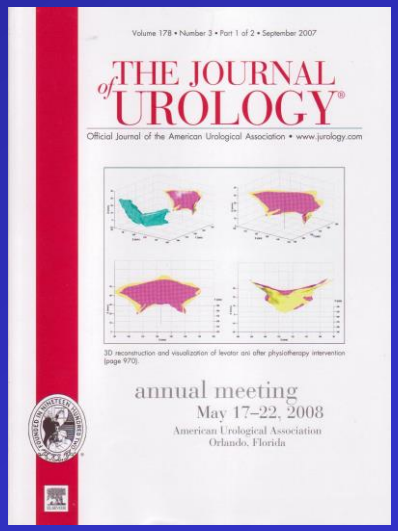
  emiglandulectomia

- chirurgia ricostruttiva

  cute peniena o della coscia

  mucosa buccale

  URETRA



Distal Urethral Reconstruction of the Glans for Penile Carcinoma: Results of a Novel Technique at 1-Year of Followup

F. Sasso, R. Falabella and P. F. Bassi

From the Department of Urology, Catholic University Medical School, Rome, Italy

VALUTAZIONE MARGINI CHIRURGICI

T classification	No. of patients	Mean microscopic margin (mm)
T2	5	10.8 (2–40)
T3	2	25 (0–50)
> T2	7	14.8 (0–50)

T classification	No. of patients	Mean microscopic margin (mm)
Tis	2	7.5 (4–11)
T1	2	3.5 (0–7)
T2	3	21.9 (3–40)
> T1	5	14.4 (0–40)

Distanza dalla lesione primitiva esente da infiltrazione per stadio

Hoffman M et al., *Cancer*, 1999

		Extent (mm)		
Grade	*N*	*5*	*10*	*15*
1	20	2	Nil	Nil
2	32	5*	Nil	Nil
3	12	2	3	Nil

*One of these showed only dysplasia.

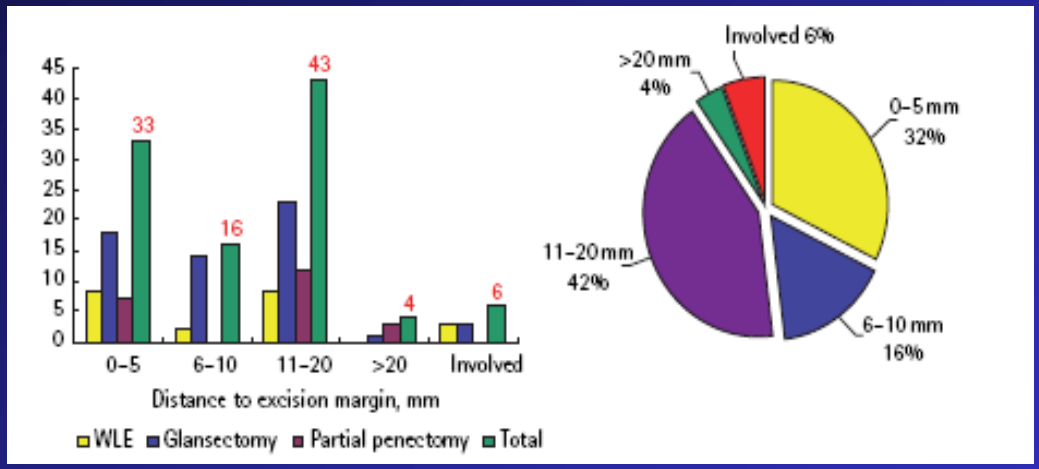
Valutazione istologica a 5 10 15 mm dal limite della neoplasia

Agrawal A et al, *BJU Int*, 2000

What surgical resection margins are required to achieve oncological control in men with primary penile cancer?

SUKS MINHAS*, OLIVER KAYES*†, PAUL HEGARTY*, PARDEEP KUMAR*, ALEX FREEMAN† and DAVID RALPH*
*Institute of Urology and Nephrology, and †Department of Histopathology, University College London, London, UK

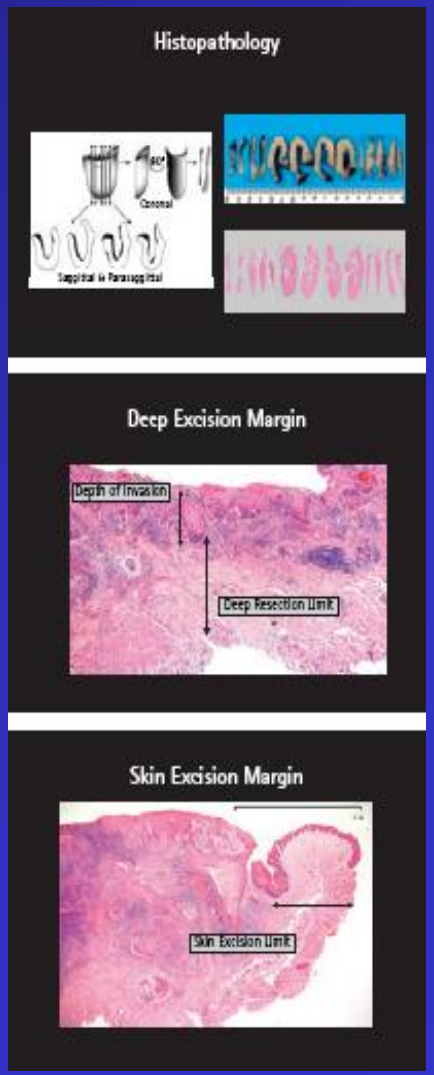
Accepted for publication 2 June 2005



and had further surgery. During follow-up two patients (4%) developed local tumour recurrence and were treated successfully with partial penectomy.

CONCLUSION

A traditional 2-cm excision margin is unnecessary for treating squamous cell carcinoma of the penis. Conservative techniques, involving excision margins of only a few millimetres, appear to offer excellent oncological control.



CARCINOMA DEL PENE

CHIRURGIA RICOSTRUTTIVA

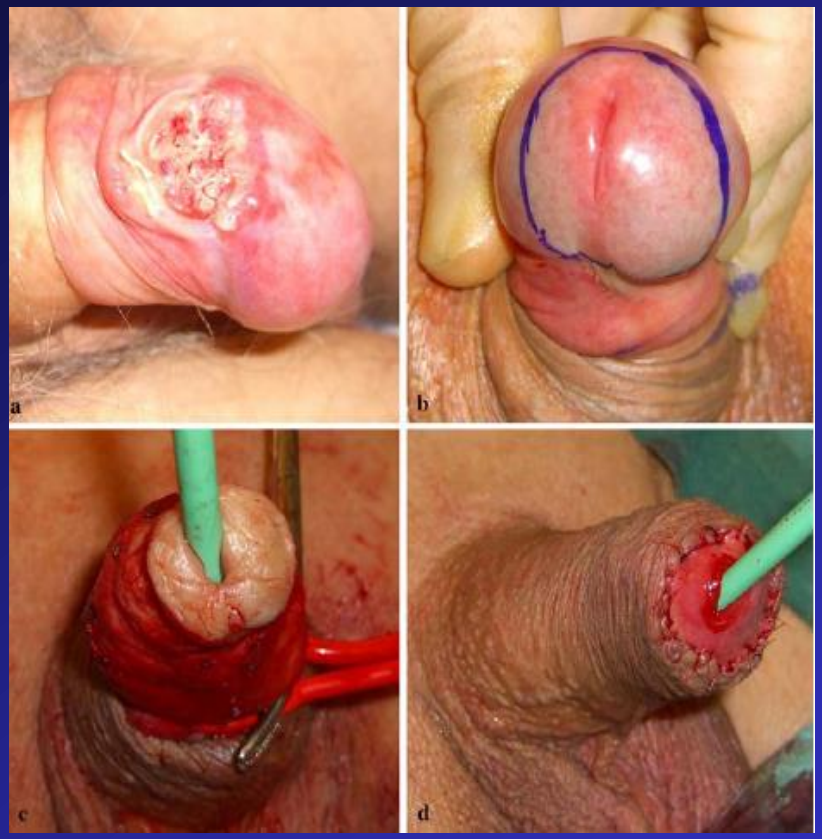
- esecuzione di chirurgia peniena “potency-sparing”
- chirurgia ricostruttiva con confezione di neoglande
- valutazione dell’aspetto sia estetico sia funzionale
- valutazione radicalità oncologica al follow-up

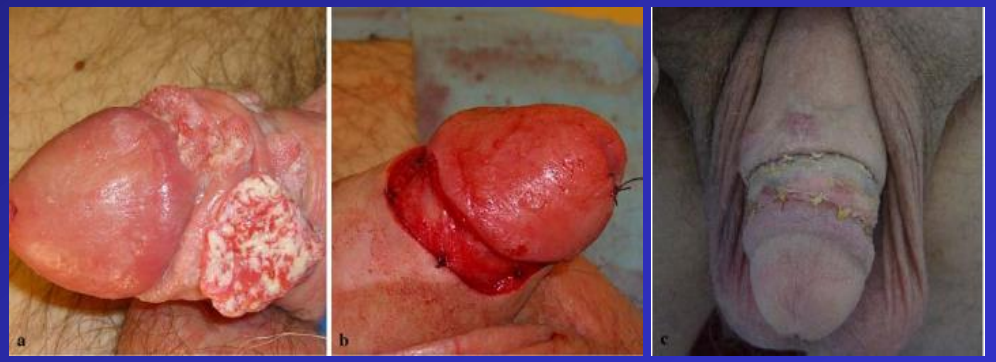
World J Urol
DOI 10.1007/s00345-008-0312-x

TOPIC PAPER

Penile preserving surgery and surgical strategies to maximize penile form and function in penile cancer: recommendations from the United Kingdom experience

Paul K. Hegarty · Majid Shabbir · Ben Hughes · Suks Minhas · Matthew Perry · Nicholas Watkin · David J. Ralph



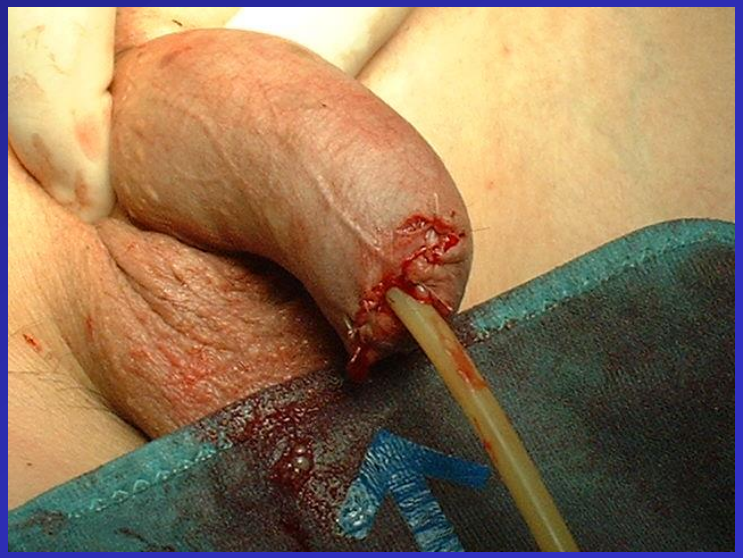


The increased use of penile preserving techniques has resulted in a fall in the need to perform conventional radical surgery. However, the selection of the most appropriate technique depends primarily on the stage and location of the disease.

CARCINOMA DEL PENE

CHIRURGIA RICOSTRUTTIVA

- Ricostruzione con mucosa buccale
- Ricostruzione con derma
- Ricostruzione con flap prepuziale



- Creazione di neofallo

IMPLANTOLOGIA PROTESICA

CARCINOMA DEL PENE

CHIRURGIA RICOSTRUTTIVA

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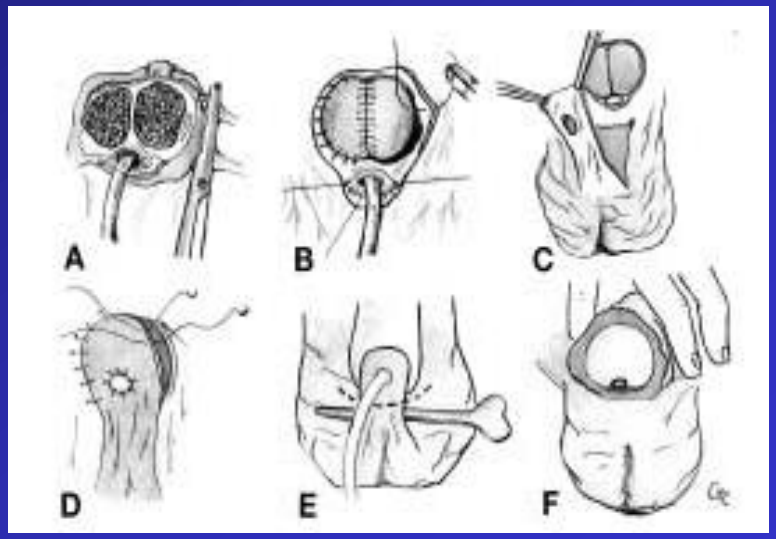
GLANULOPLASTY WITH SCROTAL FLAP FOR PARTIAL PENECTOMY

OSVALDO N. MAZZA AND GERMÁN M. J. CHELIZ

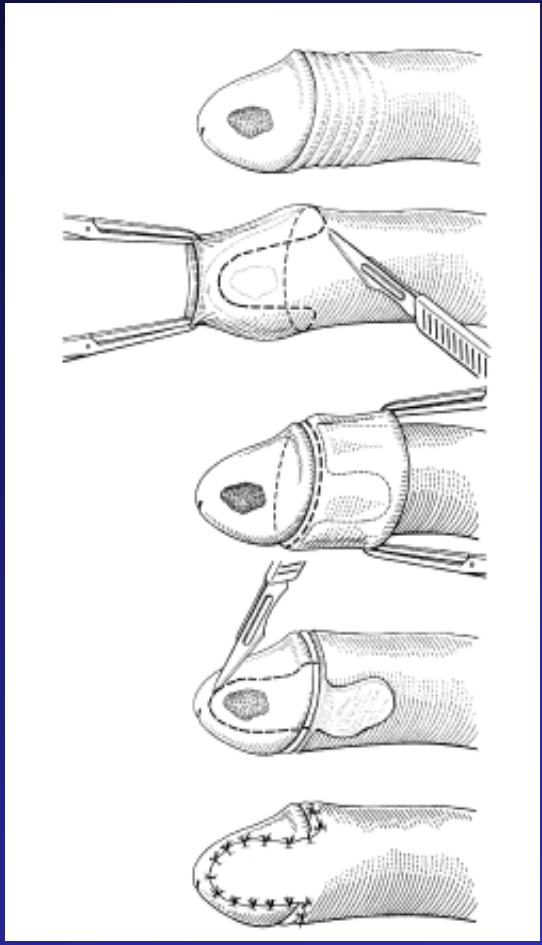
From the Cátedra de Urología at Universidad de Buenos Aires, Hospital Alemán and Hospital Durand, Buenos Aires, Argentina

Ricostruzione con flap scrotale



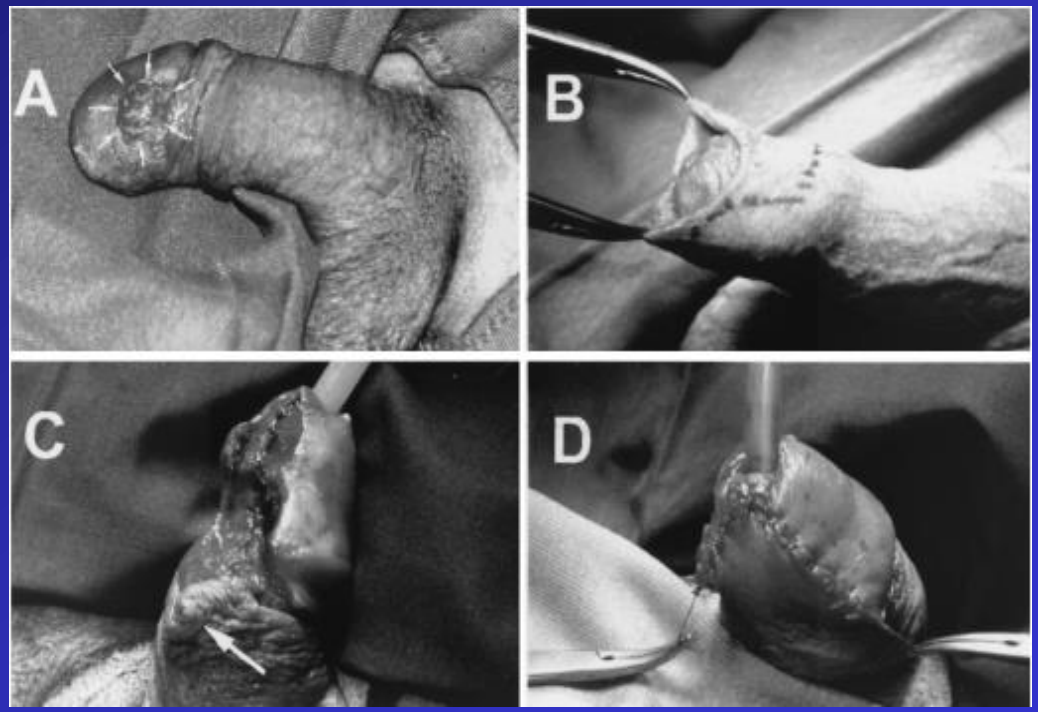
CHIRURGIA RICOSTRUTTIVA DEL PENE

Ricostruzione con flap prepuziale



PREPUTIAL FLAP FOR PRIMARY CLOSURE AFTER EXCISION OF TUMORS ON THE GLANS PENIS

BURKHARD UBRIG, MICHAEL WALDNER, MERHDAD FALLAHI, AND STEPHAN ROTH



INTERVENTO CHIRURGICO

Distal Urethral Reconstruction of the Glans for Penile Carcinoma: Results of a Novel Technique at 1-Year of Followup

F. Sasso, R. Falabella and P. F. Bassi

From the Department of Urology, Catholic University Medical School, Rome, Italy

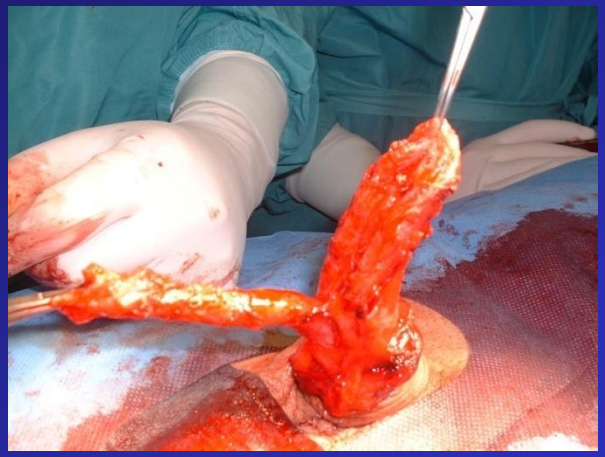
Purpose: No satisfactory techniques are available to replace the anatomy and function of the penile glans after radical surgery for penile carcinoma. We report a new technique of glans reconstruction using distal urethra. We evaluated anatomical, physiological and esthetic features as well as short-term and long-term clinical outcomes.

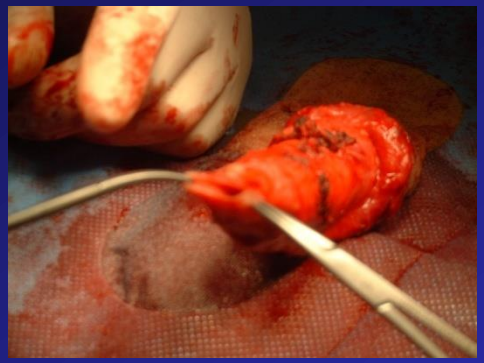
Materials and Methods: A total of 14 patients with a mean age of 54 who had squamous penile carcinoma underwent glans reconstruction after simple glansectomy in 8 and after amputation of the distal third of the shaft in 6. Glans sensibility, erectile function, ejaculation, orgasm, penile length, local recurrence, patient and partner satisfaction, and quality of life were evaluated before and after the operation. Mean followup was 13 months.

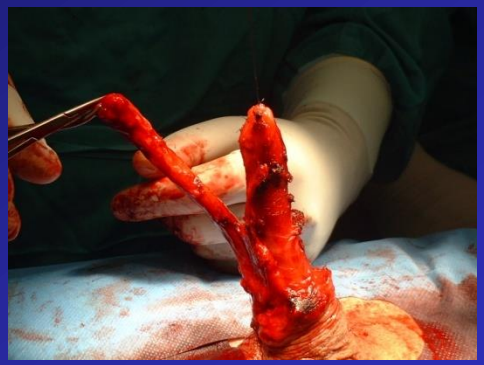
Results: All patients noticed subjective and objective thermal and tactile epicritic sensibility in the area of the neoglans. Ten of 14 patients (71%) noticed spontaneous and/or induced rigid erections. Interestingly International Index of Erectile Function scores in the ejaculation and orgasm domains did not significantly change in the period before and after surgery. No local disease recurrence or penile retraction were reported at long-term followup.

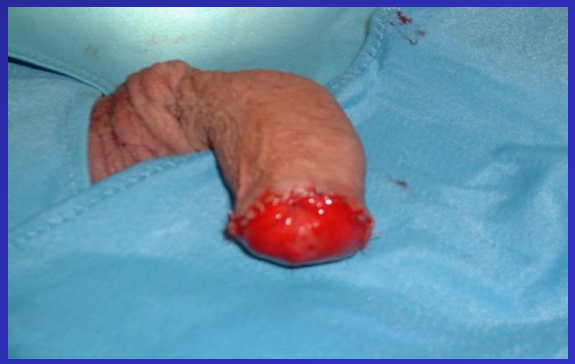
Conclusions: Reconstructive glanuloplasty with distal urethra in penile tumor surgery is an innovative, easy and rapid surgical technique with appreciable functional and esthetical results.

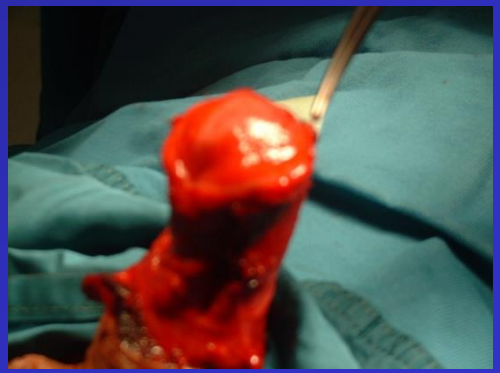
Key Words: penis, penile neoplasms, reconstructive surgical procedures, carcinoma, urethra



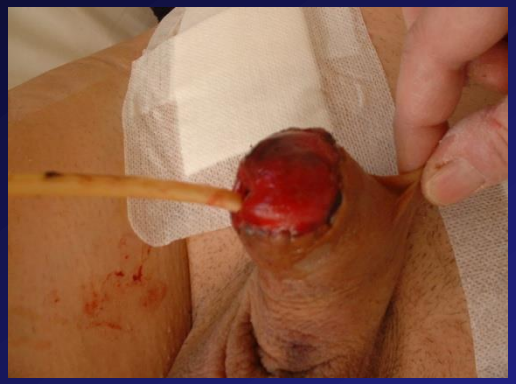


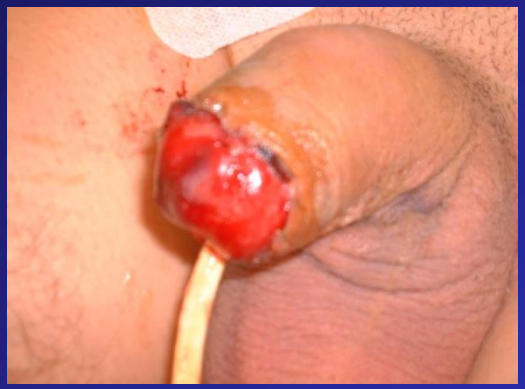




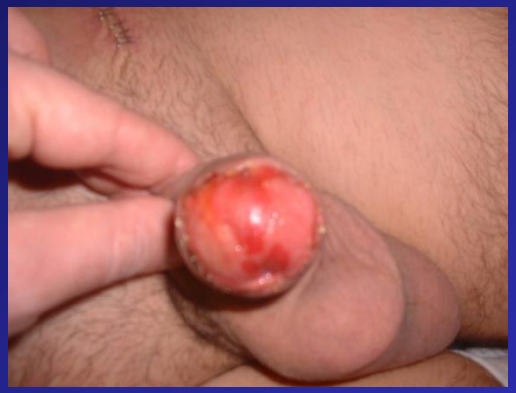


CHIRURGIA RICOSTRUTTIVA





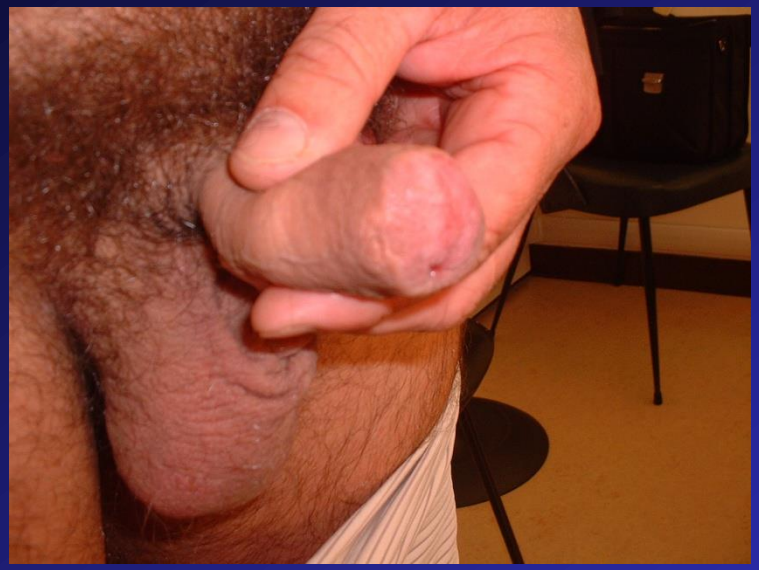
Risultato a 7 giorni

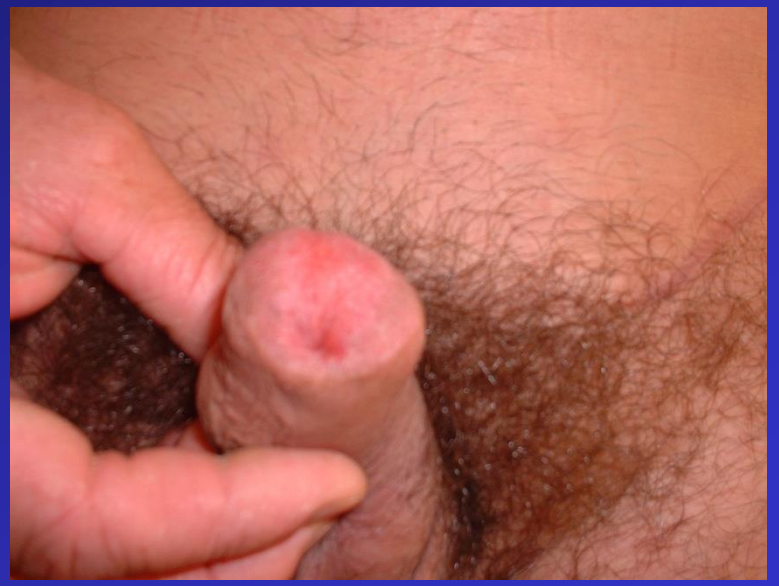


Risultato a 15 giorni

Sasso F et al, *J Urol*, 2007

CHIRURGIA RICOSTRUTTIVA





RISULTATO A TRE MESI

Pz di 43 aa lesione T2 G3 N0 M0

CASISTICA PERSONALE

42 pazienti 2004-2009

Outcome sessuologico

	6 mesi dopo l' intervento
Sensibilità termica (no. of pazienti)	39/42
Sensibilità tattile ed epicritica del neoglande (no. di pazienti)	39/42
Discriminazione statica di 2 punti < 10 mm * (no. di pazienti)	35/42
Lunghezza peniena media (in cm, sotto stiramento, in flaccidità)	9,3
Recidive locali (n. pazienti)	2/42

42 pazienti 2004-2009

Outcome sessuologico

IIEF

DOMINI IIEF	*Prima della malattia Punteggio medio /punteggio massimo*	*6 mesi dopo l' intervento Punteggio medio / Punteggio massimo*
Erezione	22/25	20/25
Attività coitale	8/15	7/15
Eiaculazione	8/15	6/15
Orgasmo	9/15	7/15
Libido	9/10	8/10

42 pazienti 2004-2009

Outcome sessuologico

Bigelow Young

QUESITI	*Intervallo di punteggio (min-max)*	*Punteggio medio durante la malattia*	*Punteggio medio post-operatorio (6mesi dopo l' intervento)*
P.D.-Sensazioni spiacevoli	12-36	31	16
PW-Sensazioni piacevoli	10-40	30	37
S.R.- Relazioni con la famiglia ed il partner	4-18	6	16
I.I.- Relazioni sociali e con gli altri	6-26	14	22
W.J.- Qualità del lavoro	8-32	15	21

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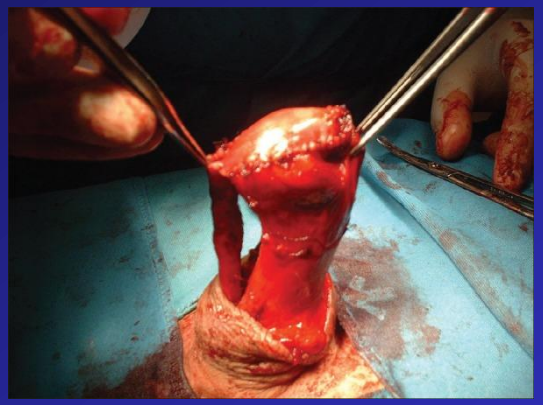

Sexual outcomes after organ potency-sparing surgery and glans reconstruction in patients with penile carcinoma.

Gulino G, Sasso F, Palermo G, D'Onofrio A, Racioppi M, Sacco E, Pinto F, Antonucci M, D'Addessi A, Bassi P.
Department of Urology, Catholic University of Rome, Italy.

Introduction:

Radical surgery is the "gold standard" for treatment of invasive penile carcinoma but very poor aesthetic, functional and psychological outcomes have been reported. Our purpose was to assess the impact of organ potency-sparing surgery in locally confined carcinoma of the penis.

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Quality of life questionnaire scores evaluated before and during disease and six months after surgery. (*p<0.05)

Question issues	Score range (min-max)	Mean score before the disease	Mean score during the disease	Mean score after the disease
Unpleasant feelings	12-36	14	30	16*
Pleasant feelings	10-40	35	18	37*
Relationships with family and partner	4-18	18	4	16*
Social and friends relationships	6-26	24	20	22
Quality of job	8-32	25	18	21

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IIEF-15 score assessed before penile cancer disease and six months after surgical treatment

IIEF-15 Domains	Before disease	6 months after surgery	6 months after surgery
	Mean score/ maximum score	Mean score/ maximum score	Status of sexual functions no. of patients (%)
Erections	21/25	20/25	31/42 (73)
Ejaculation	5/5	5/5	19/25 (76)
Orgasm	13/15	11/15	19/25 (76)
Libido	8/10	9/10	30/42 (713)

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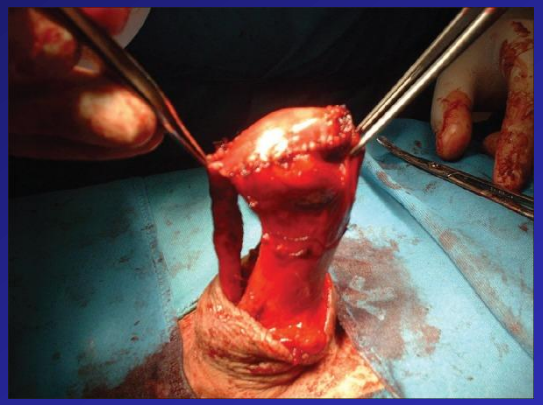


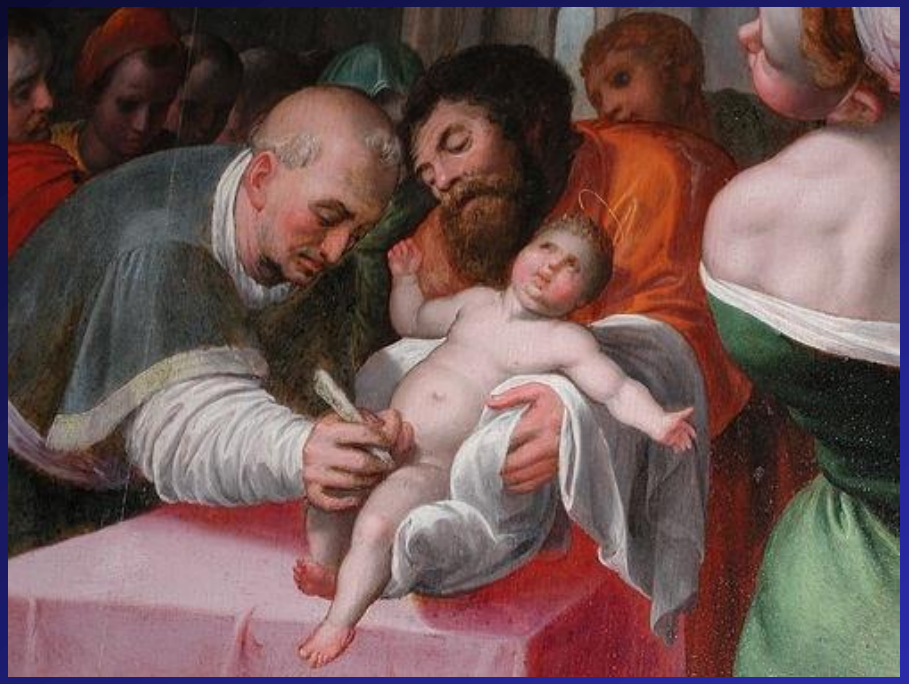
CONCLUSIONS

Our study indicates that sexual-sparing surgical treatments have a positive impact in a multitude of ways on a patient's life including familial relationships, and social and working conditions. These treatments allow the patient to obtain both cancer eradication and anatomical-psychological integrity, to preserve body image and to restore complex mechanisms such as erection and ejaculation.

A rehabilitation program incorporating psycho-sexual counseling is also needed. The role of women and the centrality of wives in supporting men's health in general, and in penile cancer in particular, is also very important. Furthermore it is necessary to identify adequate tools to measure and identify psychological and sexual dysfunction in this group of patients.

Well designed multicentre studies are therefore needed to improve the global management of patients with penile cancer.

GESTIONE DEL RISCHIO ONCOLOGICO NELLA CHIRURGIA DEI TUMORI DEL PENE



Il rischio oncologico è strettamente legato alla storia naturale della malattia, all' inquadramento diagnostico ed alla nuova interpretazione della strategia chirurgica, conservativa vs demolitiva.