TUMORES DO PÉNIS:

Cirurgia Minimamente Invasiva

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INTRODUÇÃO

- Tumor do pénis é raro.
- Variabilidade geográfica.
- 95% são carcinomas espinho-celulares.
- Ausência de estudos randomizados.
- Linhas de orientação permanecem controversas.
- Baseadas em estudos retrospectivos individuais com amostras de pequenas dimensões.

INTRODUÇÃO

- Cirurgia radical: tratamento de eleição.
- Excelente controlo loco-regional.
- Morbilidade psicológica, disfunção urinária e sexual.
- Tendência para intervenções menos radicais.
- Localização predominantemente distal – maior susceptibilidade a tratamento preservador de órgão.
- Estadiamento inicial é importante: no UK apenas 15% dos tumores invade corpo cavernoso.

ESTRATÉGIAS DE PRESERVAÇÃO PENIANA

- **Cirúrgicas**

- Preservação da glande (circuncisão, laser, *glans resurfacing*).
- Não preservação da glande (glandectomia com reconstrução e corporectomia distal com reconstrução).

- **Não cirúrgicas**

- Radioterapia
- Quimioterapia
- Imunoterapia

CIRURGIA PRESERVADORA DO PÉNIS

- Alteração da necessidade dos 2 cm de margem de ressecção.

- *Agrawal et al, 2000:*

- 62 peças de penectomia parcial e total.
- Avaliação de tumor dentro da margem convencional 2 cm.
- 52 tumores grau 1 e 2.
- Destes, 7 com margem + a 5 mm do tumor.
- 25% dos grau 3 tinham extensão > 10 mm do tumor.

CIRURGIA PRESERVADORA DO PÉNIS

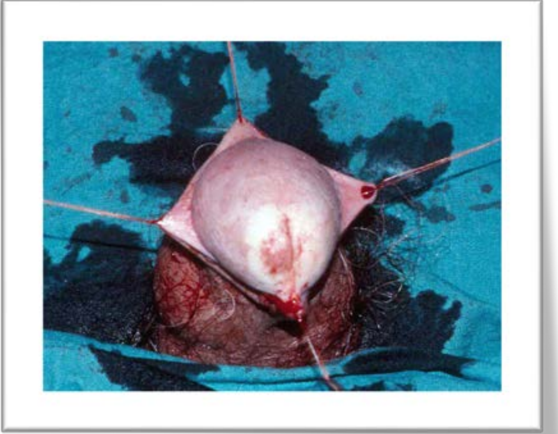
- *Hoffman et al, 1999:*

- 14 doentes após cirurgia convencional.
- 7 doentes com margem < 10 mm.
- 33 meses de follow-up: nenhuma recorrência.
- Sobrevivência não parece estar comprometida com recorrência local → cirurgia de salvação.

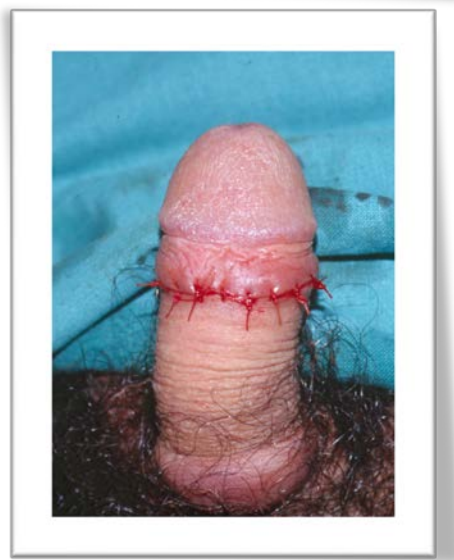
1-TÉCNICAS PRESERVADORAS DA GLANDE

1

1- Circuncisão



- Tratamento curativo: tumor prepucial de baixo estadio.



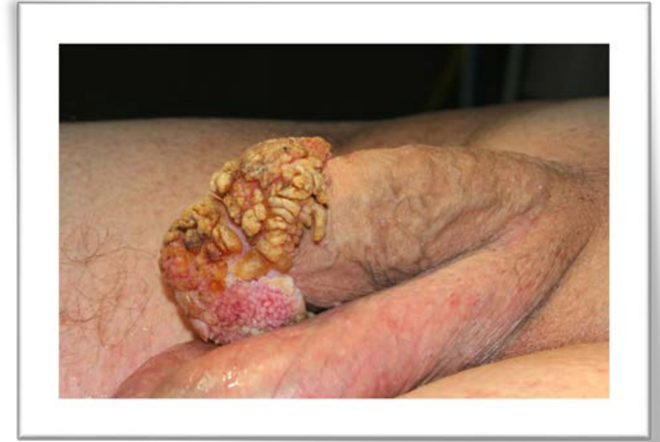
- Excisão mais alargada se extensão para sulco coronal.

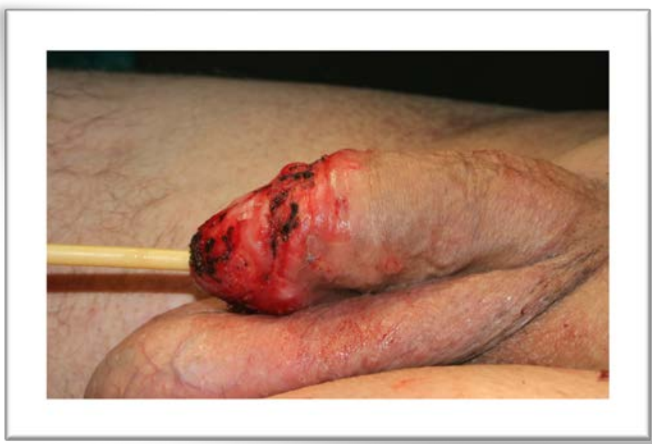
- Recomendada antes de RT.

- Recorrência > 30% (maioria ocorre nos primeiros 2 anos).

- Cirurgia de salvação tem alta taxa de sucesso e não parece afectar sobrevivência.

2- Ablação por laser





- Vantagem cosmética e funcional sobre cirurgia.
- Laser CO_2 vs laser *Nd:YAG*.
- Taxa de recorrências elevada.
- Seguimento cuidadoso.
- Selecção dos doentes é importante.
- Invasão em profundidade é crucial: limite de 6 mm para laser *(Shirahana,1998).*

Penile Cancer

Peniscopically Controlled CO_2 Laser Excision for Conservative Treatment of In Situ and T1 Penile Carcinoma: Report on 224 Patients

Gaetano Bandieramonte[a], *Maurizio Colecchia*[b], *Luigi Mariani*[c,*], *Salvatore Lo Vullo*[c], *Giorgio Pizzocaro*[d], *Luigi Piva*[d], *Nicola Nicolai*[d], *Roberto Salvioni*[d], *Valentina Lezzi*[e], *Bernardina Stefanon*[e], *Giuseppe De Palo*[e]

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Keywords:
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Penis
Peniscopy

Abstract

Objective: To evaluate the outcome of peniscopically controlled laser excision of early-stage penile carcinoma.
Methods: Patients treated from 1982 to 2006 were investigated. The primary treatment was excisional surgery alone for in situ or initially invasive flat tumors, and reductive chemotherapy followed by surgery for the exophytic lesions. All excisional procedures were conducted by CO_2 laser under peniscopic control.
Results: Of a total of 224 patients, 111 underwent partial excision of the glans and/or coronal sulcus surface, and 113 total surface excision. Forty patients underwent reductive chemotherapy. Complete excision was obtained in 221 cases (98.7%) at lateral margins and in 217 cases (96.9%) at deep margin. Postoperative complications were negligible. Overall, the 10-yr recurrence rate was 17.5% (95% confidence interval, 16.4–18.6%), and apparently was not affected by the in situ or invasive nature of the lesion. Amputation was required in nine patients, for a 10-yr amputation rate of 5.5% (range, 5.2–5.7%). In the remaining cases, organ form and curvature were preserved, with satisfactory cosmetic and functional results.
Conclusions: Early-stage penile carcinomas can be effectively treated with the organ-sparing strategy described here. Because local recurrences occur in a minority of patients and can be safely treated, organ preservation is compatible with local disease control. Reductive systemic chemotherapy in selected exophytic cases broadens the indication for our conservative approach.

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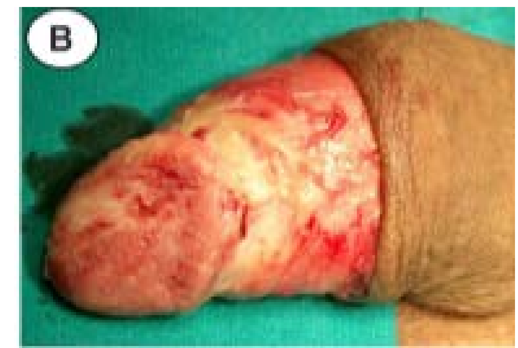
3- *Glans resurfacing*

- Técnica cirúrgica recente.
- Inicialmente para BXO.
- CIS e Ta/T1 *(Bracka).*
- Remoção do epitélio balânico e tecido sub-epitelial.
- Estudo extemporâneo do corpo esponjoso.
- Enxerto cutâneo.



Reconstructive Urology

Resurfacing and Reconstruction of the Glans Penis

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Lichen sclerosus
Glans reconstruction

Abstract

Objectives: To describe the techniques and results of surgical reconstruction of glans penis lesions.
Methods: Seventeen patients (mean age: 53.2 yr) were treated by resurfacing or reconstruction of the glans penis for benign, premalignant and malignant penile lesions. The aetiology of the lesions was one Zoon's balanitis, four lichen sclerosus, one carcinoma *in situ*, five squamous cell carcinomas, and six squamous cell carcinomas associated with lichen sclerosus. Five cases were treated by glans skinning and resurfacing; five cases by glans amputation and reconstruction of the neoglans, and seven cases by partial penile amputation and reconstruction of the neoglans. Glans resurfacing and reconstruction were performed with the use of a skin graft harvested from the thigh.
Results: The mean follow-up was 32 mo. All patients were free of local premalignant/malignant recurrence. Patients who underwent glans resurfacing reported glandular sensory restoration and complete sexual ability. Patients who underwent glansectomy or partial penectomy with neoglans reconstruction maintained sexual function and activity, although sensitivity was reduced as a consequence of glans/penile amputation.
Conclusions: In selected cases of benign, premalignant or malignant penile lesions, glans resurfacing or reconstruction can ensure a normal appearing and functional penis, without jeopardizing cancer control.

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4- Cirurgia de Mohs

Mohs Micrographic Surgery for Penile Cancer: Management and Long-Term Followup

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From the Division of Urology, Department of Surgery (AWS, RYL, SBB) and Division of Dermatology, Department of Medicine (MWM, RS, JP), Washington University School of Medicine, Saint Louis and Laser and Dermatologic Surgery Center (GJH), Town and Country, Missouri

Purpose: Mohs micrographic surgery is efficacious for the primary treatment and local recurrence control of nongenital and cutaneous squamous and basal cell cancers. The efficacy of this procedure for squamous cell carcinoma of the penis was reviewed.

Materials and Methods: We retrospectively reviewed the charts of all patients treated with Mohs micrographic surgery for penile cancer at our institution from 1988 to 2006.

Results: We identified 33 patients who underwent a total of 41 Mohs procedures. Average ± SD lesion size was 509 ± 699 mm^2. An average of 2.6 ± 1.4 stages were done using Mohs micrographic surgery. Five procedures were terminated with positive margins, including 3 due to urethral involvement and 2 due to defect size. Of the tumors 26 were stage Tis, 4 were T1, 7 were T2 and 4 were T3. A total of 13 defects were reconstructed by primary repair or granulation, 4 were reconstructed by skin grafts and 25 were reconstructed by tissue flaps and urethroplasty. Followup data were available on 25 patients at a mean of 58 ± 63 months. Eight patients (32%) had recurrence, which was managed by repeat Mohs micrographic surgery in 7 and by penectomy in 1. There were 2 cases of tumor progression, including 1 from T1 to T3 disease (meatal involvement) and 1 from T1 to inguinal lymph node involvement. Two patients died, of whom 1 had no evidence of penile cancer and 1 had metastatic disease.

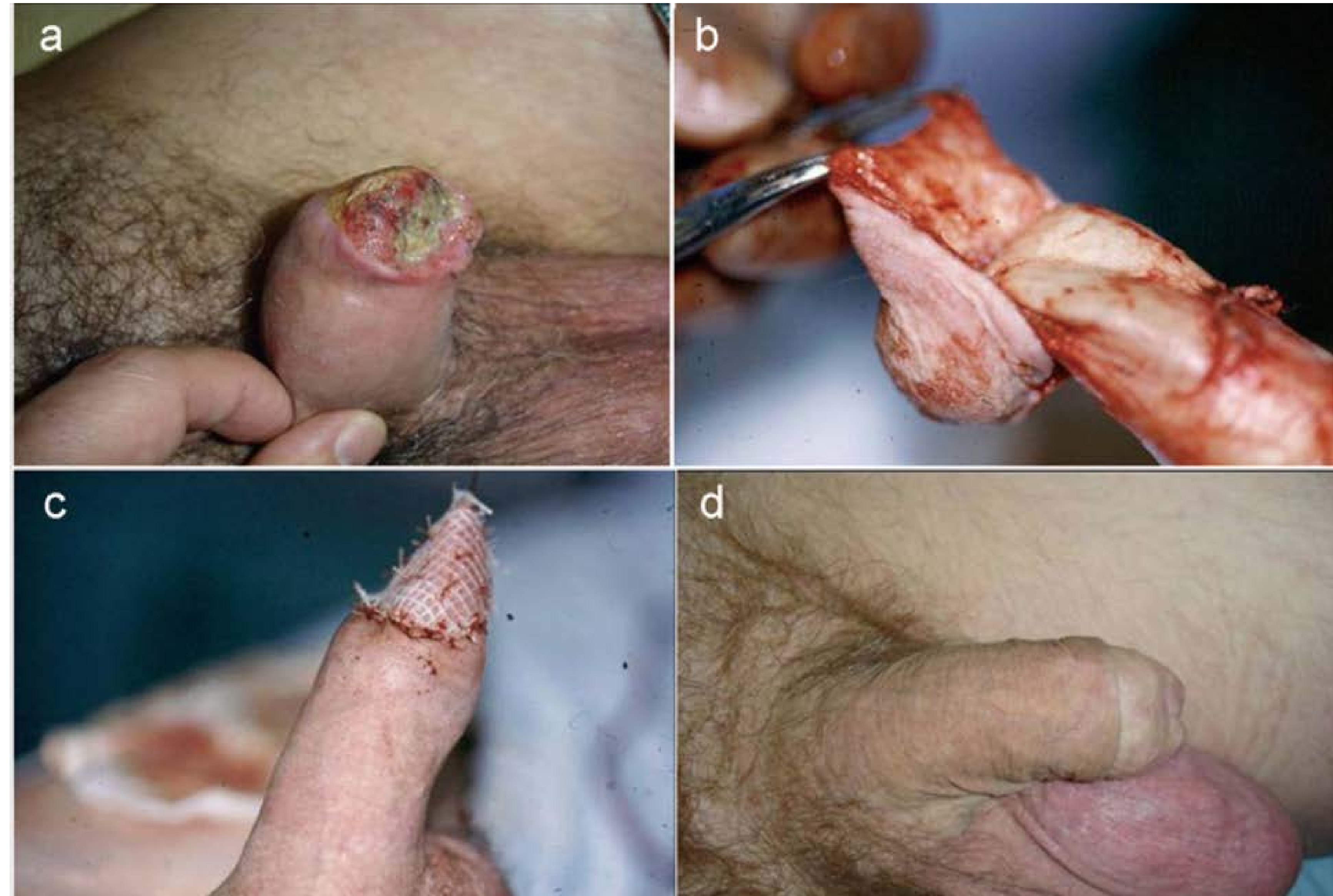
Conclusions: Mohs micrographic surgery for low stage penile cancer results in a relatively high local recurrence rate. However, with repeat procedures and vigilant followup cancer specific and overall survival rates are excellent and progression rates are low.

1-TÉCNICAS NÃO PRESERVADORAS DA GLANDE

1

1- Glandectomia e reconstrução

- Tumores limitados à glande e prepúcio.
- Formação de neoglande.
- 80% de todos os tumores invasivos são enquadráveis nesta técnica recente.
- Séries publicadas amostras pequenas.
- *Watkin,* 2004: 39 doentes submetidos a glandectomia, nenhuma recorrência aos 2 anos de follow-up.
- Bom resultado cosmético, preservação da função urinária e sexual.


a
b
c
d

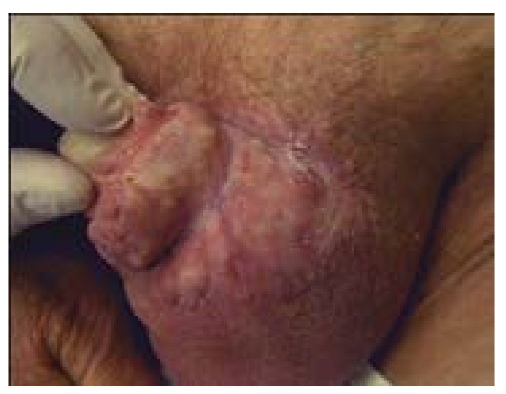
2- Corporectomia distal e reconstrução

- Evidência de invasão do corpo cavernoso.
- Corte do ligamento suspensor: 4 cm extra!
- Construção de neoglande e retalhos cutâneos.
- Resultado estético melhor comparado com cirurgia convencional.
- Pode ser usada em recorrências após RT ou penectomia parcial.

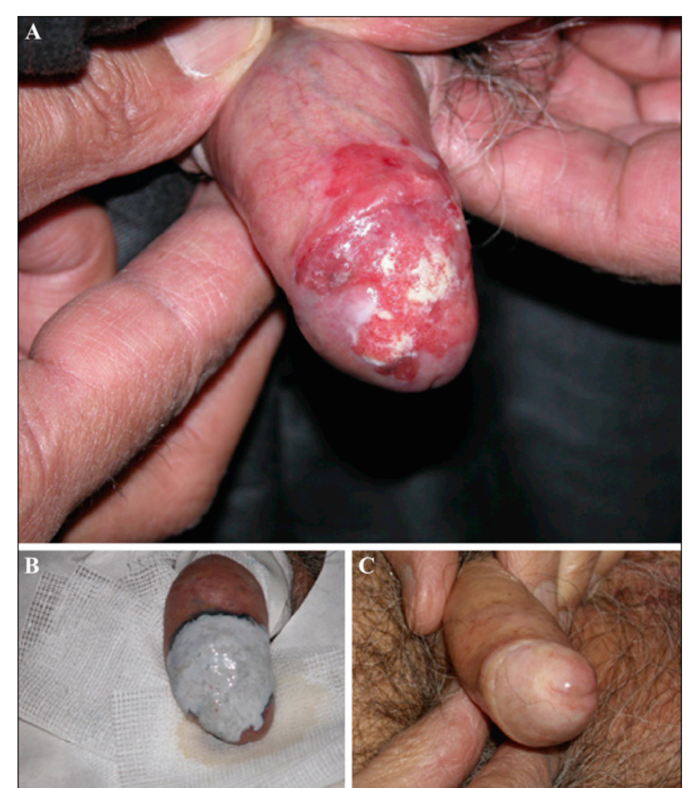
2-TÉCNICAS NÃO CIRÚRGICAS

1- Radioterapia

- Tratamento 1ª linha no carcinoma do pénis.
- RT externa / Braquiterapia.
- RT externa + comum.
- Dose total 50-70 Gy, em 15-30 sessões.
- Todo o pénis irradiado.
- Desvantagens: duração tratamento e reacções cutâneas agudas.



- Braquiterapia intersticial.
- Sementes de Iridium-192.
- Dose total de 50-70 Gy em tratamento de 5-7 dias.
- Vantagem: dosagem + dirigida com menos efeitos 2ários; tratamento mais curto.



- Efeitos 2^ários da Radioterapia:

- Reacções agudas locais: mucosite, dermatite, edema.
- Complicações tardias: até 40% dos doentes.
- Estenose da uretra: 15-40% dos doentes.
- Deterioração estética e funcional.
- Ausência de estudos randomizados a comparar RT com outros tratamentos.
- Estudos retrospectivos têm consistência reprodutível.
- Taxa de recorrências: 15-40%.

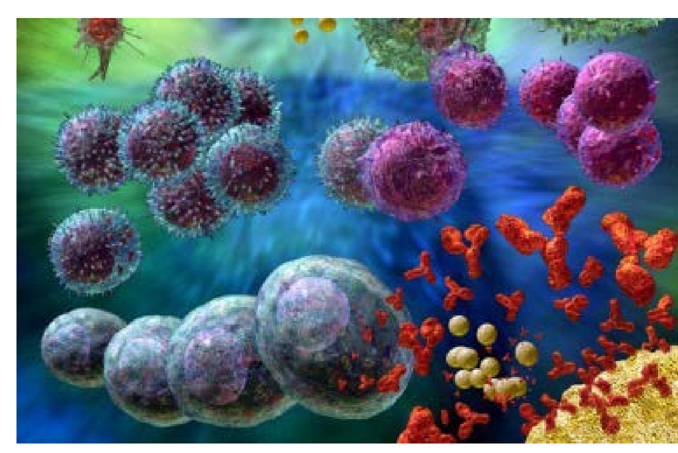
2- Quimioterapia

- Intuito paliativo.
- Doença metastática e localmente avançada.
- Down-staging de doença localmente avançada.
- Bleomicina, cisplatina, 5-FU, metotrexato e vinblastina são os agentes + comuns.
- Resposta maioritariamente parcial e curta duração.

- *Cotsadze, 2000*:

- Intenção curativa (preservação de órgão).
- 33 doentes com 4 regimes de QT diferentes.
- Resposta completa: 48,5% após 1 ciclo.
- Preservação de órgão até 60,6% com crioterapia nas respostas parciais.
- Nenhum T3 teve resposta completa.
- Taxa de recorrência local: 18,7%.
- Sobrevivência aos 5 e 10 anos: 78% e 73%.
- Sem vantagem nos regimes de combinação.

3- Imunoterapia



- Experiência limitada ao carcinoma verrucoso.
- Não metastizam e têm bom prognóstico.
- Apenas 2 estudos em monoterapia.
- Doentes que recusaram cirurgia.
- Monoterapia pode diminuir o crescimento tumoral, não prevenindo necessidade de cirurgia ou morte.

RECOMENDAÇÕES

P Hadway, N Watkin; Penile preserving strategies for penile carcinoma. Evidence-based Urology, 2005.

- Cirurgia convencional está associada a disfunção sexual, urinária e psicológica.
- Necessidade de 2 cm de margem de ressecção tem sido contestada.
- Maioria das recorrências após cirurgia ou RT surgem nos 1ºs 2 anos. Seguimento cuidadoso.
- Glandectomia e *glans resurfacing* são técnicas novas. Resultados iniciais sugerem melhor função e estética. Estudos comparativos são necessários **(III/B).**

RECOMENDAÇÕES

P Hadway, N Watkin; Penile preserving strategies for penile carcinoma. Evidence-based Urology, 2005.

- Cirurgia de salvação tem alta taxa de sucesso e sobrevivência não parece ser afectada na detecção precoce **(III/B).**

- RT é uma opção válida. Associa-se a alta taxa de complicações precoces e tardias. É necessário estudo randomizado a comparar com outras modalidades terapêuticas **(III/B).**

- Experiência com imunoterapia é muito limitada. Poderá ser opção em doentes que recusam cirurgia. Estudos adicionais são necessários para validar esta conclusão **(III/B).**

RECOMENDAÇÕES EAU

Table 6: Treatment strategies for penile cancer

Primary tumour	**Conservative treatment is to be considered whenever possible**	**LE**	**GR**
Category Tis, Ta, T1a (G1, G2)	CO_2 or Nd:YAG laser surgery, wide local excision, glans resurfacing, or glans resection, depending on size and location of the tumour.	2b	C
	Mohs' micrographic surgery or photodynamic therapy for well differentiated superficial lesions (Tis, G1 Ta).	3	C
Category: T1b (G3) and T2 (glans only)	Glansectomy, with or without tips amputation or reconstruction.	2b	B
Category T2 (invasion of the corpora)	Partial amputation.	2b	B

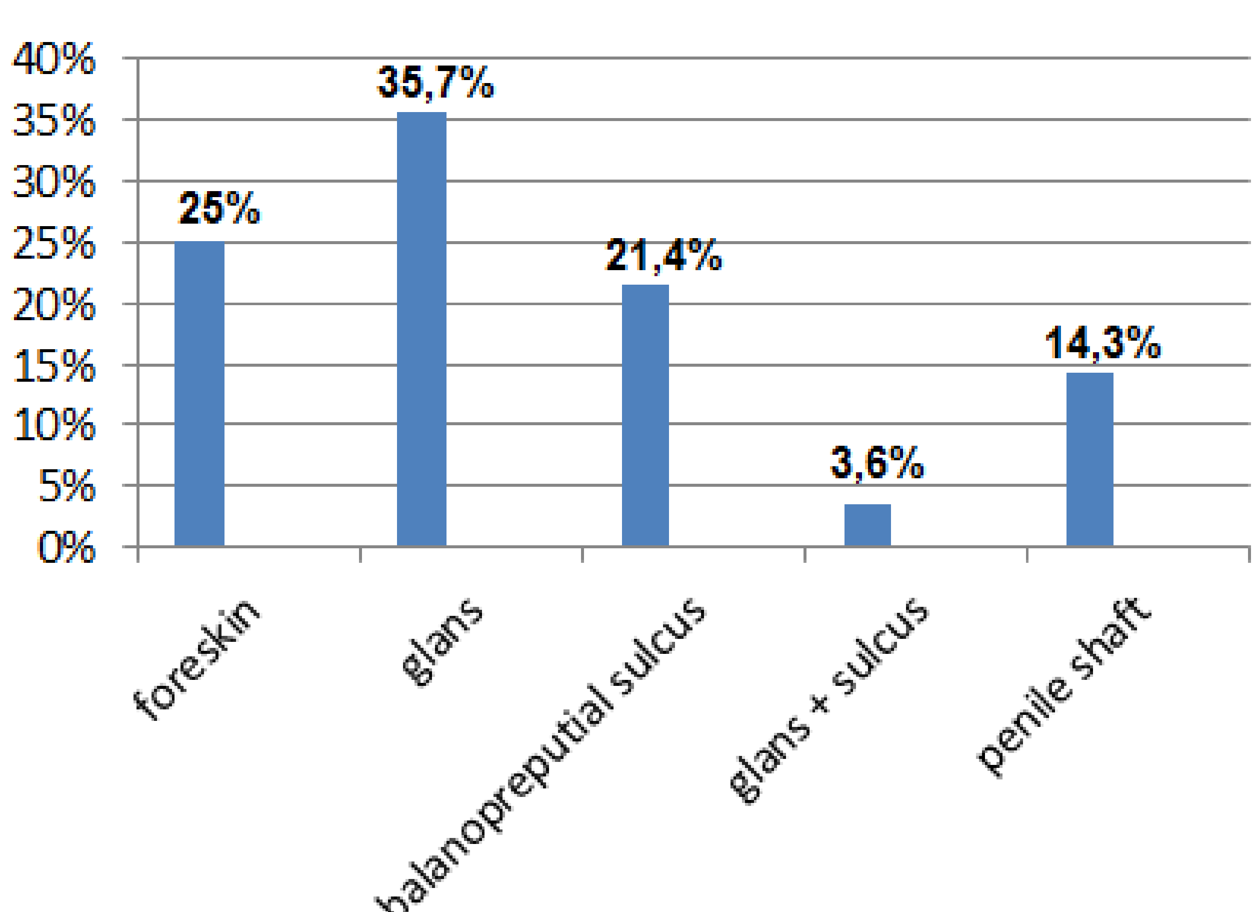
EXPERIÊNCIA DE UM CENTRO (HUC)

- Estudo retrospectivo de Janeiro 2005 a Dezembro 2010.
- 28 cirurgias minimamente invasivas em tumores do pénis.
- Todos os doentes foram submetidos previamente a biópsia das lesões.
- Incluiram-se lesões pré-malignas com alta probabilidade de evolução para tumores invasivos.

EXPERIÊNCIA DE UM CENTRO (HUC)

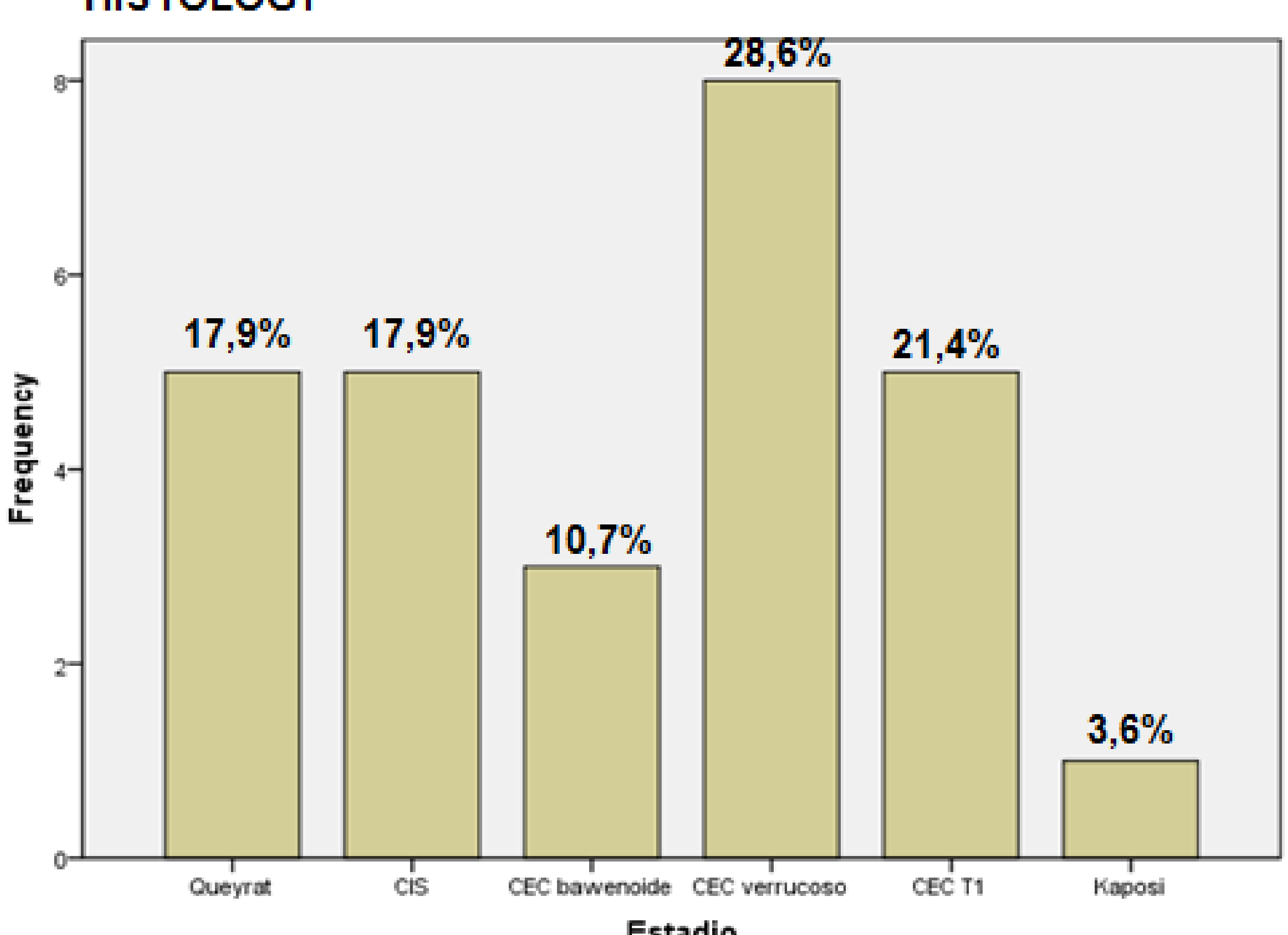
- Também se consideraram lesões malignas superficiais (T1).
- Serviços de Urologia e de Dermatologia.
- Idade média: 58,7 ± 14,8 anos (33-86).
- Tempo de seguimento médio: 33,26 ± 19,36 meses (5-60).

RESULTS

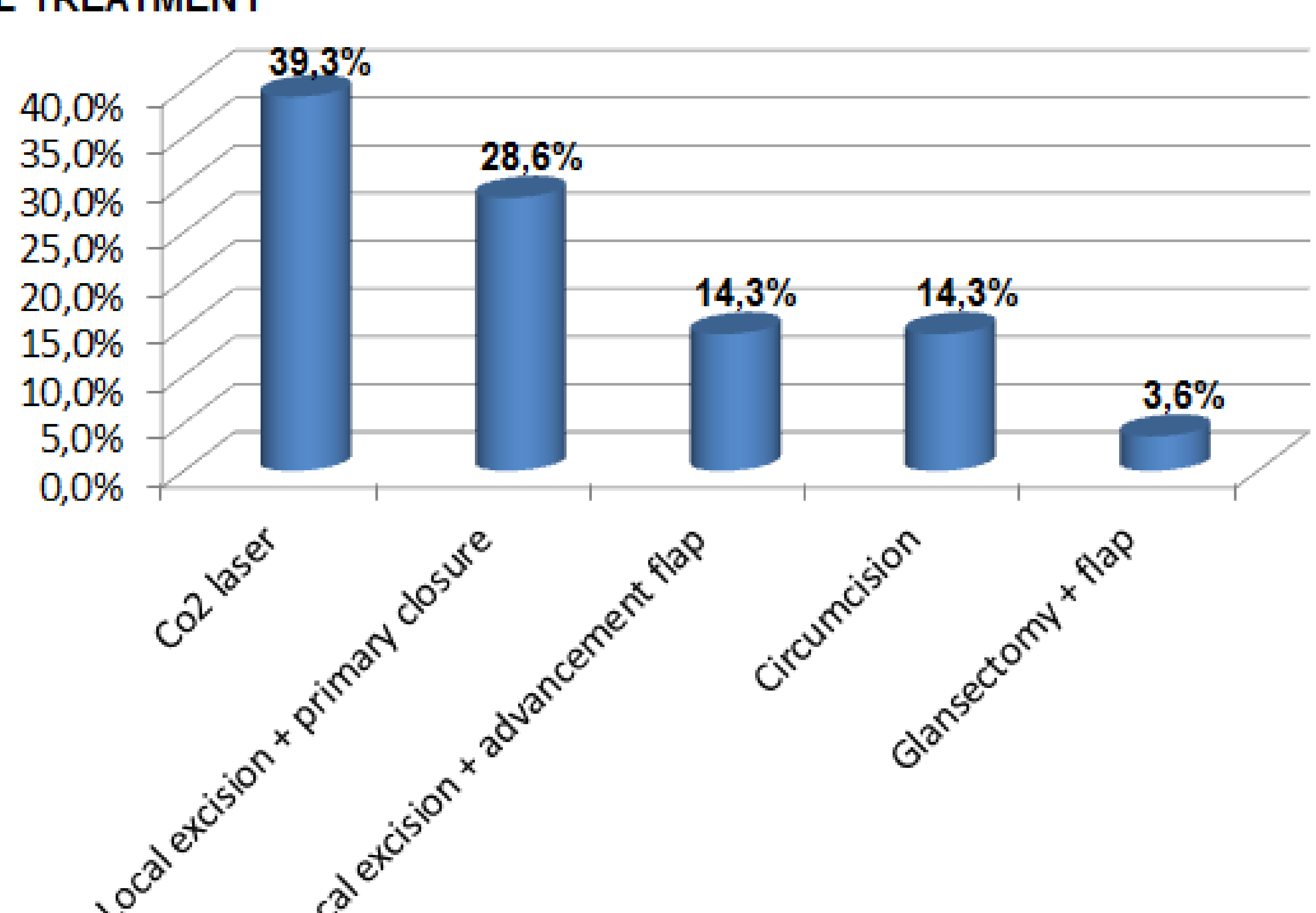


RESULTS

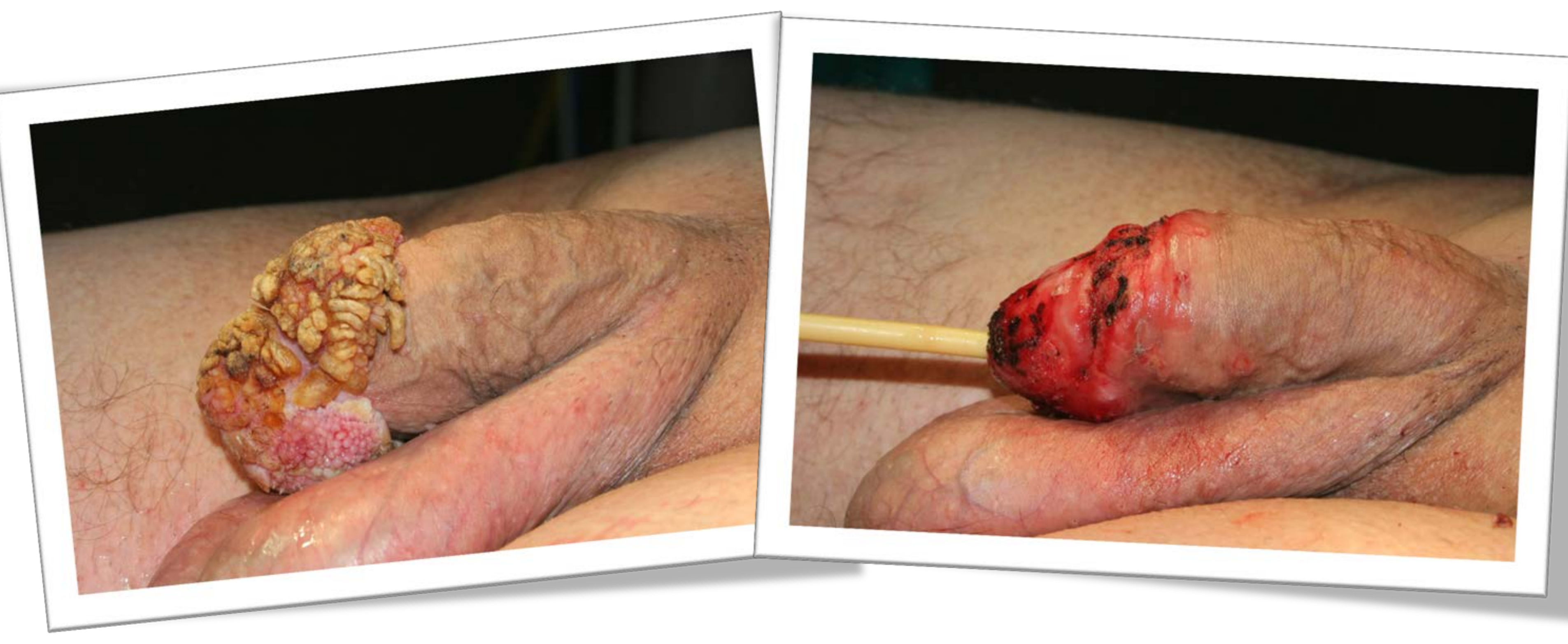
HISTOLOGY



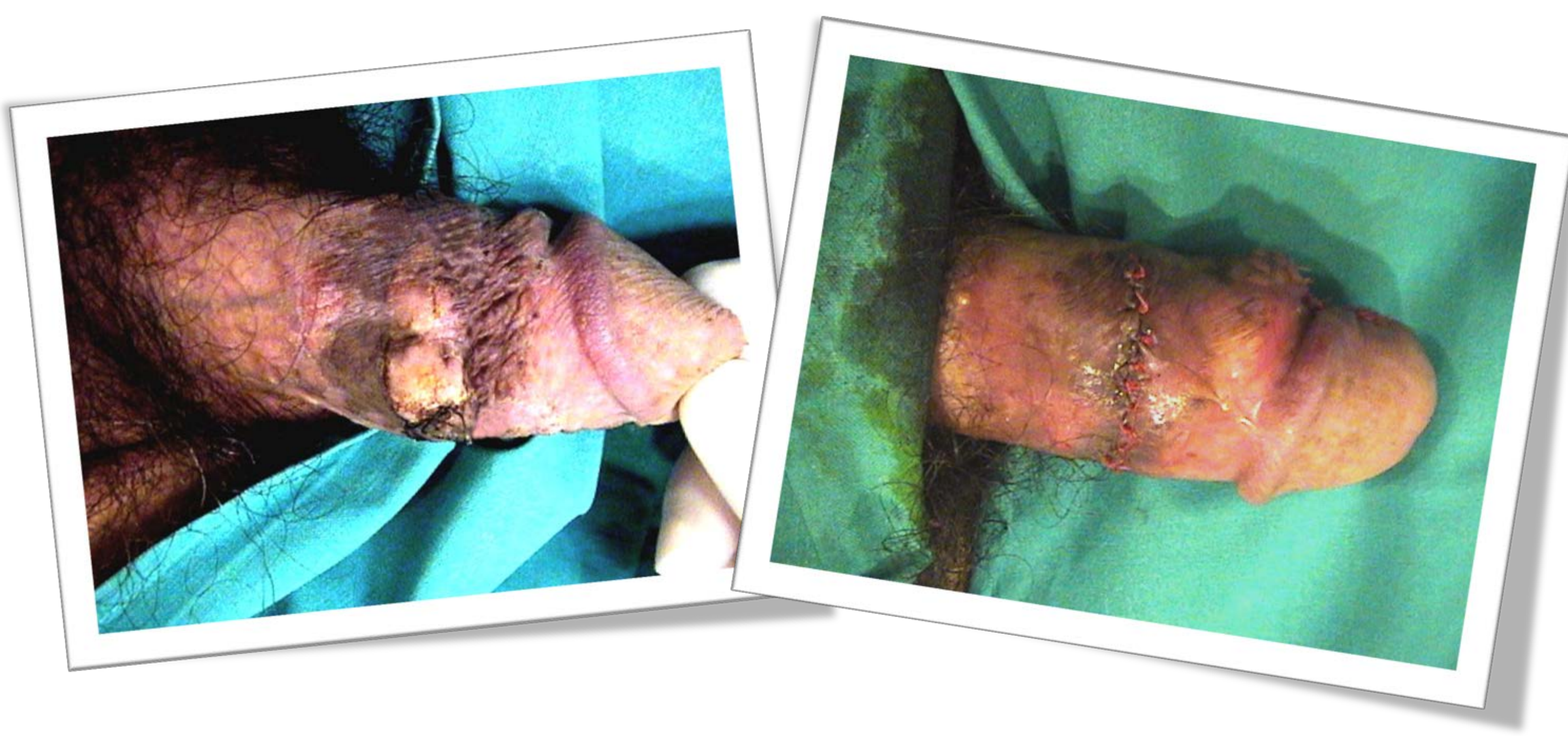
RESULTS



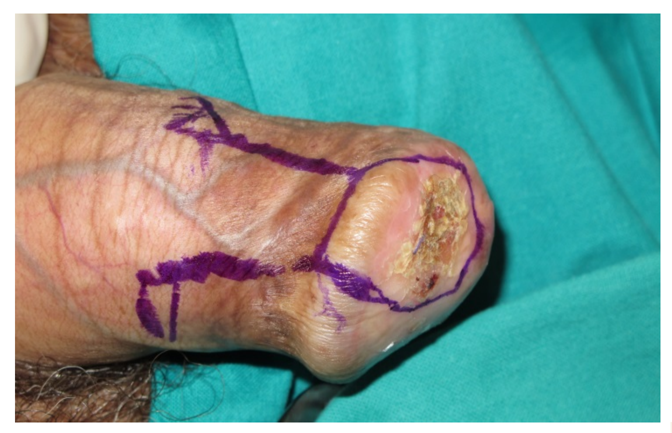
Laser CO2

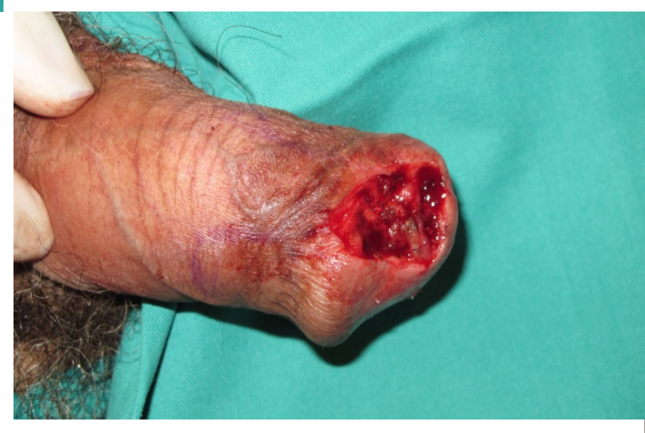


Excisão local com encerramento primário

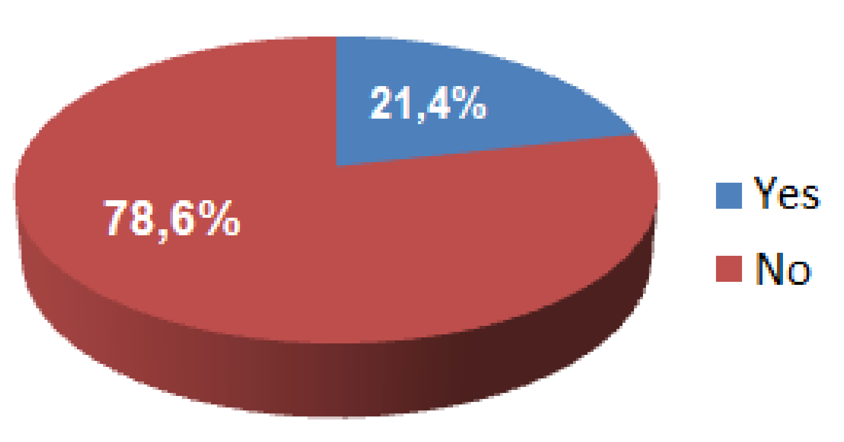


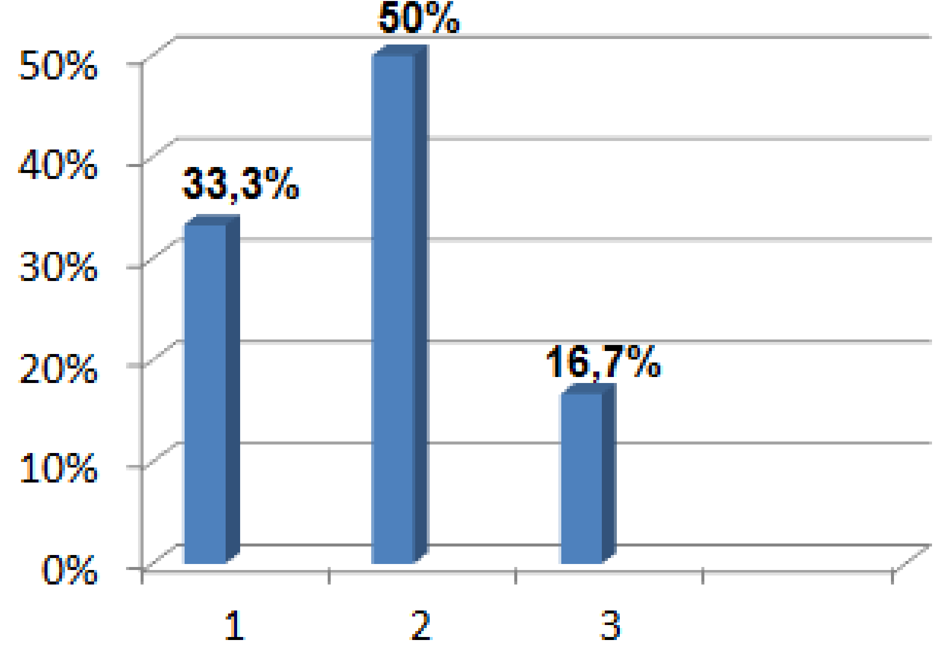
Excisão local com retalho de deslizamento





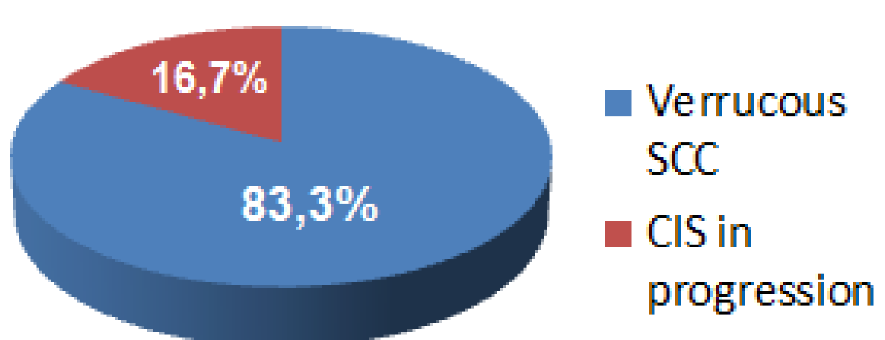
RESULTS

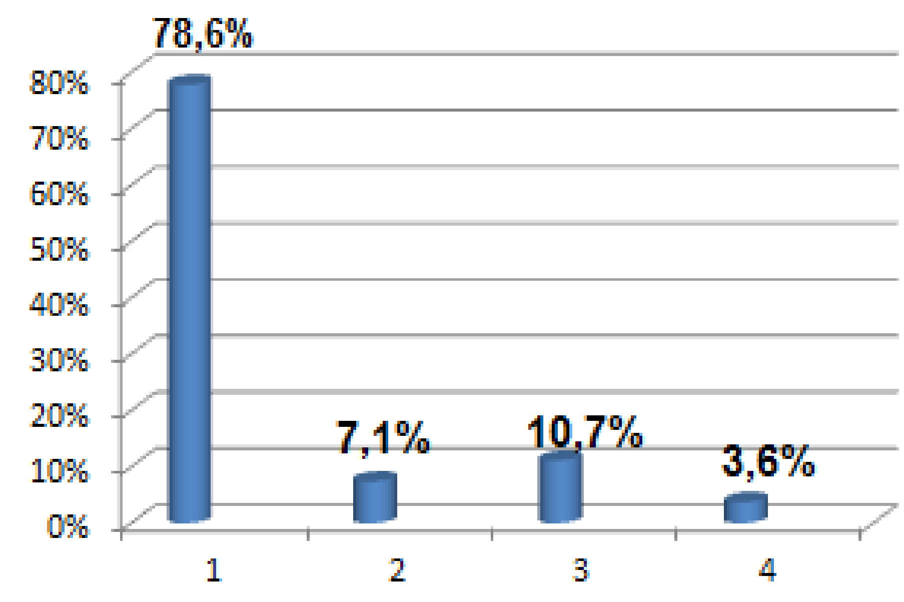




RESULTS

RECURRENCES HISTOLOGY

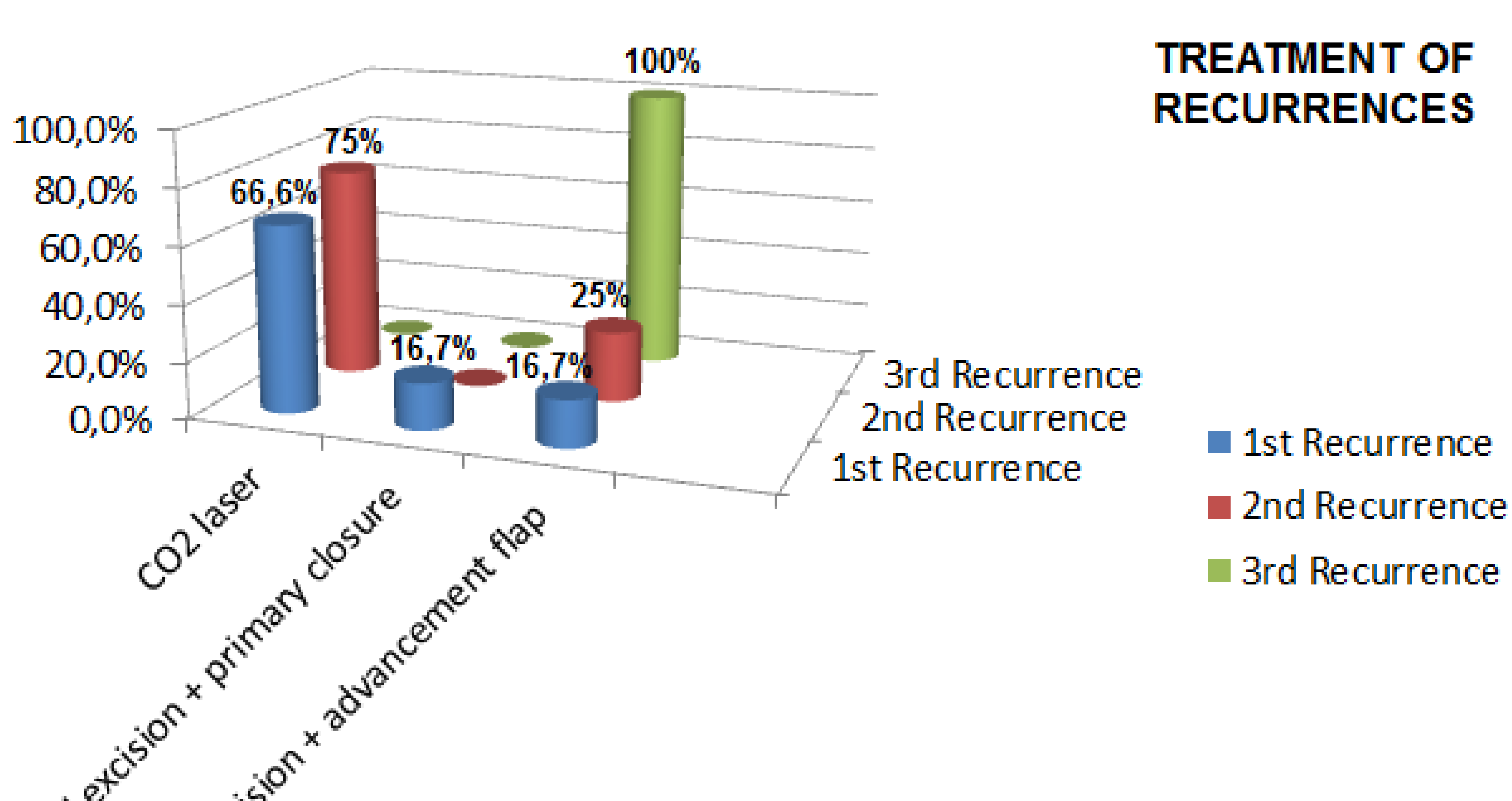




Tratamento prévio à 1ª recidiva:

→ Laser CO2: 33,3%
→ Excisão local + encerramento primário: 50%
→ Circuncisão: 16,7%

RESULTS



RESULTS

→ 1 case of partial penectomy due to disease progression (3,6%).

→ Disease-specific survival: 100% at 5 years.

→ Progression-free survival: 93,8% at 5 years.

CONCLUSÕES

New Developments in the Treatment of Localized Penile Cancer

Eduardo Solsona, Amit Bahl, Steven B. Brandes, David Dickerson, Antonio Puras-Baez, Hendrik van Poppel, and Nick A. Watkin

OBJECTIVES To analyze the current trends in local therapy approaches in patients with penile carcinoma.

METHODS The relevant published data since 2000 were reviewed; important series published before 2000 were also included. The reports were classified according to the level of evidence. Review studies and others indirectly related to the topic were also included but not classified.

RESULTS New information has suggested that surgical margins of only a few millimeters might be adequate for most localized tumors. A trend toward the use of more conservative therapies instead of amputative surgery has been observed, especially in developed countries. Although the local recurrence rate has been greater after conservative therapies than after amputative surgery, this increased rate does not seemed to have had a negative effect on cancer-specific survival. The quality of life has been superior after conservative procedures with preservation of the penis that seems to give the best results with regard to sexual function. Reconstructive surgery can be performed in selected patients after amputative surgery.

CONCLUSIONS Although the level of evidence is low, conservative therapies can be recommended for selected patients with penile carcinoma. Despite the trend for conservative approaches, these patients need psychological support. UROLOGY 76 (Suppl 2A): S36–S42, 2010. © 2010 Elsevier Inc.