Recurrence Patterns in Organ Preserving Treatment of Penile Squamous Cell Carcinoma

Introduction and Objective: In treatment of penile squamous cell carcinoma (pSCC) laser therapy causes less loss of substance than surgical local resection and partial penectomy and favors cosmetic results. We investigated recurrence patterns in patients with no more than stage T1 pSCC to assess the impact of organ preserving treatment on oncological outcome.
Materials and Methods: From 1990 to 2009, 79 patients with pSCC with a maximum invasion of subepithelial connective tissue (stage CIS, T1) and no palpable inguinal lymph node metastases (stage cN0) were treated with laser, circumcision, local resection or partial penectomy at our hospital. Negative pathologic nodal status (pN0 stage, sentinel node procedure) was available for 39 patients with stage T1 (71%). There were 16 patients excluded because of positive pathologic nodal status, so that 63 patients were included. Data on recurrence, progression and death were collected from records.

Table 1	n(%)	Cis	T1G1	T1G2	T1G3
Laser therapy	13	3 (23)	5 (39)	3 (23)	2(15)
Local resection	25	4 (16)	15 (60)	4 (16)	2 (8)
Partial penectomy	15	1 (7)	11 (73)	3 (20)	0
Circumcision	10	0	4 (40)	4 (40)	2 (20)

Results: There were no local recurrences in 15 partial penectomy patients. Twenty of 48 patients (42%) undergoing organ preserving treatment had local recurrence. Local T-stage progression was observed in 5 cases (10%). Six of 63 patients (10%) developed metastases. Five of 63 patients (8%), died of pSCC.

Table 2 n(%)	No recurrence	local rec. no progr	loc. rec.w. progr. T2+	mets.;pN0	mets.; pNx	pSCC rel. death
Laser therapy	3 (23)	8 (62)	2 (15)	1 (8)	1 (8)	1 (8)
Local resection	13 (52)	9 (36)	3 (12)	1 (4)	0	2 (8)
Partial penectomy	15 (100)	0	0	0	1 (7)	0
Circumcision	8 (80)	2 (20)	0	0	2	2 (20)

Conclusions: Partial penectomy is a safe procedure in treatment of pT1N0 pSCC and has a good prognosis. When offered penis preserving treatment the patient should be carefully informed that there is a higher risk of local recurrence, local progression and cancer related mortality. Close outpatient follow-up and patient education is essential to detect and treat recurrence in time.