MP48-02 POSITIVE SURGICAL MARGINS PREDICT PROGRESSION-FREE SURVIVAL AFTER NEPHRON SPARING SURGERY FOR RENAL CELL CARCINOMA: RESULTS FROM A SINGLE CENTRE COHORT OF ALMOST 500 CASES WITH A MINIMUM FOLLOW-UP OF 5 YEARS

Tellini Riccardo[1], Antonelli Alessandro[1], Palumbo Carlotta[1], Veccia Alessandro[1], Furlan Maria[1], Tardanico Regina[2], Fisogni Simona[2], Simeone Claudio[1]

1. Department of Urology. ASST Spedali Civili Hospital of Brescia. University of Brescia. Brescia, Italy
2. Department of Pathology. ASST Spedali Civili Hospital of Brescia. University of Brescia. Brescia, Italy

UNIVERSITÀ DEGLI STUDI DI BRESCIA

INTRODUCTION

The real role of positive surgical margins (PSM) after nephron sparing surgery (NSS) on progression and relapse of disease is still debated because strong evidences are lacking, especially at a long term horizon.
The aim of this study was to **evaluate the oncologic impact of PSM in a large contemporary single centre cohort of NSS followed for a long time.**

MATERIALS AND METHODS

Retrospective analysis of our prospectively maintained institutional database on renal surgery since 1983.
The indication to radical versus partial nephrectomy (PN) followed the contemporary international guidelines; the surgical strategy for PN was generally an enucleoresection.
All surgical specimens were examined by **two expert uro-pathologists.**

For the present study, **all patients who underwent PN for non metastatic RCC with at least 5 years of follow-up, if uneventful, were included**; the patients died from non cancer causes within the minimum time of follow-up required were excluded.
A **PSM** was defined as the **presence of cancer cells at the inked surface of the final specimen.**

The **primary endpoint** was **progression free survival (PFS),** considering as events of **progression all recurrences of disease at any site.** A Cox regression model estimated the role of PSM on survival, after adjustment for influent covariates.

RESULTS

Out of 490 patients submitted to NSS for RCC, **459 patients** fulfilled inclusion criteria and **were evaluated for the purpose of this study**.

PSM were observed in 27 (5.9%) cases.
No differences in terms of preoperative and pathological features of patients with positive and negative surgical margins (NSM) were found (table 1).

At a mean **follow-up of 110 (±51.9) months**, **progression was diagnosed in 36 (7.8%) patients** overall.
- **6 patients with PSM** (6 out 27, **22.2%**) *p=0.013*
- **30 patients with NSM** (30 out of 432, **6.9%**)

The sites of progression were distant organs in 18 cases and the operated kidney in 21.
No differences were found in terms of incidence of distant metastasis between PSM and NSM groups.
There was a **significant difference in the incidence of relapses on the operated kidney** (14.8% versus 3.9%; p= 0.029).

At multivariable Cox regression analysis, a **PSM** was confirmed as an **independent predictor of survival** [OR: 3.127 (IQR 1.272 – 7.688); p=0.013] (table 2)

CONCLUSIONS

A **PSM is an independent predictor of PFS** in patients submitted to NSS for RCC and followed for a long time, **mainly due to a higher rate of local relapses of disease**. In these patients, a tailored follow-up is mandatory.

Variable	PSM 27 patients	NSM 432 patients	p value
Sex			0.982
Male, number (%)	18 (66.7%)	310 (66.9%)	
Female, number (%)	9 (33.3%)	153 (33.1%)	
Age at surgery, mean (±SD)	62.2 (±10,2)	60.7 (±12,7)	0.719
Clinical diameter (cm), mean (±SD)	3.2 (±1.3)	3.1 (±1.3)	0.832
pT stage, num (%)			0.221
pT1a	21 (77.7%)	349 (80.8%)	
pT1b	3 (11.1%)	61 (14.1%)	
pT2	1 (3.8%)	6 (1.4%)	
pT3a	2 (7.4%)	16 (3.7%)	
RCC subtype			0.361
Clear Cell (cc-RCC), num (%)	18 (66.7%)	319 (73.8%)	
Papillary (p-RCC), num (%)	5 (18.5%)	74 (17.1%)	
Chromofobe (ch-RCC) num (%)	3 (11.1%)	28 (6.5%)	
Other RCC subtypes, num (%)	1 (3.7%)	11 (2.6%)	

	Univariate		Multivariable	
Variable	OR (95% IC)	p value	OR (95% IC)	p value
Tumor diameter (cm)	1.340 (1.145-1.567)	<0.001	1.269 (1.065-1.511)	<0.001
Pathological stage		<0.001		<0.001
pT1a	Referent		Referent	
pT1b		ns		ns
pT2		ns		ns
pT3a	6.213 (2.541-15-193)	<0.001	5.734 (2.356-13.958)	<0.001
High Grading	5.399 (1.653-17.632)	0.005	5.346 (1.629-17.550)	0.006
Histological Subtype		ns		
Necrosis		ns		
Microvascular Invasion		ns		
PSM	3.608 (1.499-8.683)	0.004	3.127 (1.272-7.688)	0.013