AB87. Evaluating the impact of preoperative anemia on the prognosis of upper tract urothelial carcinoma following radical nephroureterectomy

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Objectives: To identify prognostic predictors of upper tract urothelial carcinoma (UTUC) following radical nephroureterectomy (RNU), we tested the hypothesis that preoperative anemia could be a potential predictor of the prognosis of UTUC.

Patients and methods: Clinical and pathological data on 686 patients with UTUC who underwent RNU at Peking University First Hospital, Beijing, China, between 1990 and 2012 were retrospectively analyzed. The chi-square test was used to analyze the associations with preoperative anemia, and the Kaplan-Meier test and Cox proportional hazards regression models were used to perform survival analysis.

Results: Preoperative anemia was associated with gender, lymph node metastasis, increased tumor grade, concomitant CIS, tumor necrosis, renal function and age. Preoperative anemia was an independent risk factor for overall mortality (HR =1.861) and cancer-specific mortality (HR =1.688).

Conclusions: The preoperative anemia is an independent risk factor for cancer-specific mortality and overall mortality. Therefore, hemoglobin levels should be considered during patient counseling and decision-making for further therapy.

Keywords: Preoperative anemia; upper tract urothelial carcinoma (UTUC); radical nephroureterectomy (RNU)

AB88. Natural history of renal cell carcinoma: an immunohistochemical analysis of growth rate in patients with delayed treatment

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Objectives: To investigate the natural history of renal cell carcinoma (RCC) with delayed treatment, and immunohistochemically analyzed the correlation between some biomarkers and the growth rate of RCC.

Patients and methods: We reviewed our institutional databases to identify renal tumors which were confirmed RCC by delayed surgical treatment after at least 12 months of active surveillance (AS). Growth rate was defined as average growth rate of the maximal diameter on CT or MRI. The clinicopathological characteristics, and immunohistochemical biomarkers (Ki-67, p53, bcl-2, and VEGF) were analyzed the correlation with the growth rate of RCC.

Results: We identified 45 RCCs from 45 patients. The mean patient age was 54 years (range, 26-78 years). The mean tumors size increased from 2.39 cm (range, 0.10-6.70 cm) at presentation to 4.54 cm (range, 1.40-11.80 cm) after a mean 45.4 months (range, 12-155 months) of AS. The mean growth rate was 0.71 cm/year (range, 0.07-4.44 cm/year), 36 (80.0%) tumors presented a growth rate ≤1.00 cm/year. Clear cell RCC (ccRCC) had a trend of growing faster than other histological subtypes. Pathological grade was significantly correlated with the growth rate of ccRCC (P=0.043). The Ki-67 labeling index (R=0.359, P=0.016) and p53 expression (P=0.019) were significantly correlated to the growth rate of RCC.

Conclusions: In general, RCCs under AS have a slow growing with a wide variation of growth rate, a portion of RCCs present rapid growth kinetics. Histological type, grade, Ki-67 and p53 are the potential predictors of growth rate of RCC during AS.

Keywords: Renal cell carcinoma (RCC); immunohistochemical analysis; growth rate; patients with delayed treatment

AB89. Transperitoneal subcostal access for urologic laparoscopy: experience of a large Chinese center

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Introduction: To present our experience of using transperitonealsubcostal access (Palmer's point and the right corresponding site) in urologic laparoscopy.
Material and methods: We used Palmer's point and the right corresponding site for initial access in 302 urologic surgeries (48 cases with prior surgeries). The record of these cases was reviewed.
Results: Success rate of initial access is 99.4%, complication rate of puncturing is only 3.4% and no serious complication. In the cases with prior surgeries, there were only two cases with access complication (minor laceration of liver). For people with BMI more than 30 kg/m (6, 3.4%), the success rate was also 100 percent.
Conclusions: Palmer's point and the corresponding right location are feasible, effective and safe for initial access in urologic laparoscopic surgeries. This entry technique should be used routinely in urologic laparoscopic surgeries.
Keywords: Urologic laparoscopy; transperitoneal subcostal access; Palmer's point; large Chinese center

AB90. Contralateral upper tract urothelial carcinoma after nephroureterectomy: the predictive role of methylation status

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Background: Aberrant methylation of cytosine-guanine dinucleotide (CpG) islands is one of the most common epigenetic modifications involved in the development of urothelial carcinoma. However, it is unknown that the predictive role of methylation to contralateral new upper tract urothelial carcinoma (UTUC) after radical nephroureterectomy (RNU).
Objective: To evaluate the role of methylation of ten genes in predicting contralateral UTUC recurrence after RNU.
Design, setting, and participants: In a retrospective design, methylation of ten genes was analyzed on tumor specimens belonging to 664 consecutive patients treated by RNU. Median follow-up was 48 mo (range, 3-144 mo).
Outcome measurements statistical analysis: Gene methylation was accessed by methylation-sensitive polymerase chain reaction, and we calculated the methylation index (MI), a reflection of the extent of methylation in the ten genes. The log-rank test and Cox regression were used to identify the predictor of contralateral UTUC recurrence after RNU.
Results and limitations: Thirty (4.5%) patients developed a subsequent contralateral UTUC after a median follow-up time of 27.5 (range, 2-139) months. Promoter methylation was present in 88.9% of UTUC. Fewer methylation and lower MI were seen in the tumors with contralateral UTUC recurrence than the tumors without contralateral recurrence. Methylation for several genes was correlated with age, gender, architecture, tumor size, multifocal disease, stage, and grade. High MI was significantly correlated with poor prognostic parameters (advanced grade, increased stage, positive lymph nodes and sessile architecture) and poor cancer-specific survival. Multivariate analysis indicated that unmethylated RASSF1A, lack of bladder recurrence prior to contralateral UTUC, history of renal transplantation, and preoperative renal insufficiency are independent risk factors for contralateral UTUC