NDP008: THE CLINICAL PRESENTATION OF RENAL CELL CARCINOMA WITH SIMULTANEOUS DIFFERENT HISTOLOGIC TYPE. A 15-YEAR DATABASE ANALYSIS IN TAIPEI VETERANS GENERAL HOSPITAL

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Purpose: Most of the current studies were aimed at single histologic type renal cell carcinoma (RCC). The simultaneous different histologic RCC were barely discussed. This study was aimed to these patient with special clinical features and outcome.

Materials and Methods: We retrospectively reviewed patient in the last 15 years who received operation for renal tumor in Taipei Veterans General Hospital, and the pathology report revealed RCC with simultaneous two different cell type on the same kidney. The demographic data including age at surgery, sex, body weight index (BMI), comorbidities, and the pre-operative CT image findings were collected, as well as the operative method, pathologic outcome, and further outcome while follow-up.

Results: Total 15 patients were included. The mean age at surgery was 59.9±13.2 years and mean BMI was 25.3±4.8 kg/m2. Fourteen patients were male (86.7%) and 8 (53.3%) had their tumor on the left side. Among the comorbidities, hypertension accounts for the highest incidence (46.6%), followed by chronic kidney disease (end-stage renal disease or polycystic kidney disease, 40%), coronary artery disease (26.7%), type 2 diabetes mellitus (20%) and malignant disease of other organ (20%). There were only 2 patients (13.3%) having distinct 2 tumors from initial CT image, and the pathology reported different cell type. Other patient (26.7%) had incidental the other small tumor in the specimen or there were mixed histologic features in single tumor. The average diameter of the main tumor was 5.1±2.9 cm and the smaller one 1.4±1.0 cm. There were 4 patients (26.7%) having lymph node and distant metastasis at the meanwhile of diagnosis. According to the AJCC cancer staging (2010), T1a tumor represented for 20%, T1b tumor 20%, T2a tumor 26.7% and T3a tumor 6.7%. The other smaller tumor were all of T1a stage. Most of tumor were classified as Fuhrman grade 2 (66.7%), followed by grade 4 (20%) and grade 3 (13.3%). The operative method were mainly open radical nephrectomy (40%), followed by laparoscopic radical nephrectomy (26.7%), open partial nephrectomy (13.3%), robotic-assisted partial nephrectomy (13.3%) and robotic-assisted radical nephrectomy (6.7%). The two different pathologic cell type of each patient were clear cell with papillary RCC (20%), clear cell with chromophobe RCC (20%), clear cell with mucinous tubular and spindle carcinoma (13.3%), and clear cell with clear cell papillary RCC (13.3%), clear cell and collecting duct carcinoma (6.7%), papillary and mucinous tubular and spindle carcinoma (6.7%), papillary and acquired cystic renal disease related carcinoma (6.7%), clear cell and acquired cystic renal disease related carcinoma (6.7%), and clear cell, papillary and mucinous tubular and spindle carcinoma (6.7%). The average follow-up interval was 29.1±21.1 months. The recurrence were found in 2 patients, one with clear cell and mucinous tubular and spindle carcinoma at the 55th month post-OP and the other with papillary cell and acquired cystic renal disease related carcinoma at the 30th month, respectively. Three patients with initial distant metastasis expired about 6 months after the surgery, in average.

Conclusion: Simultaneous two histological cell types RCC on the same kidney was relatively rare. Our 15-year data showed various combinations of two histologic cell type. However, it is difficult to correlate the prognosis and clinical outcome with the combination of cell types due to the limited data of recurrence and 5-year cancer specific mortality rate.

NDP009: THE SAFETY AND EFFICACY OF LOW DOSE BCG INTRAVESICAL INSTILLATION FOR THE TREATMENT OF UREMIC OR KIDNEY TRANSPLANT PATIENTS WITH RECURRENT UROTHELIAL CARCINOMA OF THE BLADDER

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Purpose: Theoretically, immunosuppression is a relative contraindication for intravesical BCG therapy because of the risk of severe morbidity and sepsis. We present our experience with intravesical BCG therapy in uremia/renal transplant patients with recurrent urothelial carcinoma of Bladder.

Materials and Methods: A total of 34 patients with recurrent superficial bladder cancer (pTa or pT1) were enrolled. Ten patients are uremic and the other 14 were renal transplantation patient. Intravesical instillation with low dose (1/2 or 1/3 of 81mg) of BCG was administered weekly for 6 weeks, postoperatively. Boost dose was given at 3 months interval and then every 6 months until 2 years postoperatively. Cystoscopic examination was performed every 3 months for the first year and semiannually for 2 years and then annually.

Results: Low dose BCG intravesical instillation was completed in 30 patients. Tumor recurrence was recognized in 2 patients during followup, who restarted second BCG induction therapy without recurrence. BCG therapy was withdrawn in 4 patients due to BCG-related local toxicity. No major complication or systemic dissemination of TB bacilli was noted. Transient dysuria and hematuria are the most common adverse events.

Conclusion: Uremia/renal transplantation patients were traditionally considered as immuno-compromised and high risk for tumor recurrence. Low dose BCG intravesical instillation in such patients seems to be a safe prophylaxis with similar efficacy on tumor control.

NDP010: THE SERUM MICRORNA IN PROSTATE CANCER PATIENTS AS A BIOMARKER FOR EARLY DETECTION

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Purpose: Prostate cancer is the 6th most cancer death in Taiwan. There are no significant symptoms and signs in early prostate cancer. MicroRNA is stable in the cell or tissue and not easily to be degraded. To identify whether microRNA a potential biomarker for early detection of prostate cancer, we conducted this study.

Materials and Methods: We collected serum from two different prostate cancer patients. Serum from other four non-prostate cancer patients was collected as control group. The QRT-PCR array (782 micro RNAs) was used to select high specific expressed microRNAs from serum of prostate cancer patient. We used above specific microRNAs to detect serum from 20 prostate cancer patients and 40 non-prostate cancer subjects.

Results: There were 13 microRNAs highly expressed in serum of prostate cancer patients than control group. After amplification, there were only 2 microRNAs highly correlation with prostate cancer. We overexpressed these 2 microRNAs in LNCaP, increased carcinogenesis in LNCaP was noted.

Conclusion: The microRNA is a potential biomarker in early detection of prostate cancer.

NDP011: THE MOLECULAR MECHANISM OF THE INHIBITORY EFFECT ON PROSTATE CANCER CELL GROWTH THROUGH THE DIRECT ACTION OF ESTROGEN ON ESTROGEN RECEPTOR

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Purpose: Hormone replacement therapy is one of treatment choice of prostate cancer. Estrogen has inhibition of prostate cancer by affect pituitary gland. This negative feedback is lowering level of testosterone not directly act on prostate cancer cell. To determine whether estrogen has direct effect on prostate cancer cell, we conducted this study.

Materials and Methods: Choice of two prostate cancer research as the main material, the first detection of estrogen receptors, to see the estrogen receptor (ER) expression in the case of prostate cells to clarify the
involvement of the ER. This mechanism of action or a different ER performance. Clarify the ER estrogen stimulation of prostate cancer will be as before this laboratory study in renal cancer cells by inhibiting AKT pathway to inhibit tumor role.

**Results:** We found prostate cancer growth was inhibited by a certain level of Estrone. The survival of prostate cancer was reduced up to 30%. Besides, migration and invasion of prostate cancer cell were also inhibited by Estrone. Estrone also stimulates VEGFR signal of prostate cancer cell.

**Conclusion:** Estrone has direct inhibitory effect on prostate cancer cell growth. Further studies to identify the mechanism of Estrone, androgen receptor, RAS, EGFR pathway are needed.

**NDP012: EVALUATION OF FLUORODEOXYGLUCOSE POSITRON EMISSION TOMOGRAPHY/COMPUTED TOMOGRAPHY FOR DIAGNOSIS AND STAGING OF UPPER URINARY TRACT UROTHELIAL CARCINOMA**

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**Purpose:** To evaluate the ability of Fluorodeoxyglucose positron emission tomography (18F-FDG PET-CT) in primary diagnosis and detection of upper urinary tract urothelial carcinoma by comparing with final pathological result.

**Materials and Methods:** We retrospectively evaluated clinicopathological records of patients in our institute. All patients suspicious to have upper urinary tracts malignancies were received 18F-FDG PET-CT, which was followed by pathological-proved procedures such as uroteroscopic biopsy, CT-guide biopsy, Nephroureterectomy or Hand-assisted Retropereitoneoscopic Nephroureterectomy (HARN). 21 patients were included in this study. There were 12 women and 9 men with a median age of 76 years old (range 34–89y/o).

**Results:** Of 21 patients in study group, 12 patients received HARN, 3 had URS biopsy, 1 CT-guide biopsy and 5 open Nephroureterectomy. There were 5, 3, 5, 7 patients with pTa, pT1, pT2, pT3 respectively. 3 patients were diagnosed with lymph nodes metastasis by PET-CT, and 2 patients with tissue proved lymph node metastasis. 20 showed definite FDG uptake in initial or delay phase. Positive predictive rate was 95%.

**Conclusion:** These preliminary results of this study with small number of patients showed that FDG-PET/CT is another effective diagnosis in detection of UTUC.

**NDP013: THE PROGNOSTIC IMPACT OF MULTIFOCALITY FOR UPPER TRACT UROTHELIAL CARCINOMA PATIENTS AFTER RADICAL NEPHROURETERECTOMY**

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**Purpose:** To evaluate the association between tumor multifocality of upper urinary tract urothelial carcinoma (UTUC) patients underwent radical nephroureterectomy and validate the impact on oncologic outcomes in those patients.

**Materials and Methods:** Patients who underwent nephroureterectomy between November 2003 and November 2013 were identified from National Cheng Kung University Hospital (NCKUH). Outcomes were obtained via prospective analysis of notes and electronic records. Overall survival (OS), bladder recurrence-free survival (BRRS) were estimated using Kaplan-Meier method and grade-stratified differences were analyzed using the log-rank test. Tumor multifocality of UTUC was defined as the synchronous presence of multiple tumors in the renal pelvis or ureter.

**Results:** Between November 2003 and November 2013, 269 patients underwent nephroureterectomy of UTUC with a median age at diagnosis of 68 years. Median (range; mean) follow-up was 29 (2–120; 35.3) months. In total, 34.3% (n = 96) of the patients had multifocal disease. The estimated OS in multifocal tumor group and single tumor group were 58.8% and 77.6%, respectively, at 5 years, and 44.1% and 59.7%, respectively, at 10 years (p = 0.0225). The estimated mean BRRS in multifocal tumor patients and single tumor patients was 50.7% and 79.5%, respectively at 2 years and 47.8% and 74.5%, respectively, at 5 years (p < 0.0001).

**Conclusion:** In this present single center cohort study, tumor multifocality is an independent prognostic indicator of overall survival and bladder recurrence-free survival in patients with UTUC treated with nephroureterectomy.

**NDP014: CLINICAL FEATURES OF PATIENTS WITH NON-MALIGNANT UPPER TRACT LESIONS MIMICKING UROTHELIAL CANCER**

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**Purpose:** The aim of this retrospective study was to evaluate the incidence and clinical features of patients undergone nephroureterectomy with non-malignant upper tract lesions presumed to be urothelial carcinoma. The clinicopathologic characteristics of these lesions were also determined.

**Material and methods:** Between Oct 2004 and Oct 2015, 350 patients underwent retroperitoneoscopic nephroureterectomy for possible upper urinary tract urothelial carcinoma without routinely uroteroscopic biopsy of lesions at our institute. Twenty-three (6.6%) had non-malignant benign lesions at the final pathologic examination. The preoperative features of these patients were investigated, including imaging findings, urine cytology results, and renal function status and previous history.

**Results:** The 23 patients comprised 9 men and 14 women. Initial symptoms included gross hematuria, hydronephrosis or repeated pyelonephritis. Urine cytology were also collected for evaluation. We also reviewed available abdomen computed tomography and retrograde pyelogram. Three patients underwent preoperative uroteroscopy. 11 patients (including 2 patient was post kidney transplantation status) had non-functional kidney. We divided patient into two groups by renal function status. The most common pathologic feature of ESRD group is atrophic and non-malignant pathology was detected in twenty-three (6.6%) patients who had undergone retroperitoneoscopic nephroureterectomy without preoperative uroteroscopic biopsies of uppertract lesions.

**NDP015: CLINICAL AND THERAPEUTIC IMPLICATIONS OF NEUROENDOCRINE PROSTATE CANCER: A LONG WINDING ROAD TO CURE**

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**Purpose:** Primary neuroendocrine cancer of prostate is an extremely rare variant of prostate cancer, comprising 0.5% to 2% of prostate malignancies. This entity encompasses various clinical contexts, ranging from the de novo small cell carcinoma (SCC) to a treatment-emergent transformed phenotype that arising from typical adenocarcinoma (Ad) of the prostate. The rarity of these neoplasms poses a diagnostic and therapeutic challenge. Little is known about neuroendocrine prostate cancer and the current knowledge of this disease is based on case reports or small series. Our purpose was to characterize the cases treated at a tertiary academic center and to evaluate patient outcomes with the available treatment modalities.

**Materials and Methods:** This was a single-institute retrospective observational cohort study of patients with neuroendocrine prostate cancer followed at E-DA Hospital, Kaohsiung city, Taiwan between January 1, 2008 and October 1, 2013. Patient and tumor data were analyzed using descriptive statistical methods.

**Results:** Among 826 prostate cancers, six patients were identified with primary neuroendocrine prostate cancer, comprising 3 from de novo mixed variety (SCC and Ad) and 3 from transformed phenotype (pure SCC). The median age at diagnosis was 73.5 years. The most common presenting symptoms were obstructive symptoms (weak stream, incomplete empty and urine retention). The morphological appearance of the tumor cells and their immunohistochemical reactivity for neuroendocrine markers, and