

URINARY/KIDNEY DISORDERS – Clinical Outcomes Studies**INCIDENCE AND COST OF ADVERSE EVENTS (AES) IN PATIENTS WITH RENAL CELL CARCINOMA (RCC) TREATED WITH ANGIOGENESIS INHIBITORS (AIs)**

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OBJECTIVES: The incidence of AEs and the costs associated with the management of those AEs have not been widely studied in patients with RCC receiving bevacizumab, sorafenib, or sunitinib. This study evaluates these outcomes using a large claims database. **METHODS:** Patients with ≥ 2 RCC claims (ICD-9 189.0, 198.0) were identified in a large US commercial insurance claims database from 1/02 through 12/08. Patients were observed and analyzed during the time of their first AI treatment with bevacizumab, sorafenib, or sunitinib. AEs were defined as diagnoses that were treatment-emergent (i.e., diagnoses not present in the 6 months prior to initiation of AI treatment). The incidence rate (IR) and mean cost per visit for each AE were calculated in the outpatient, inpatient and ER settings. Cost data represented actual payments made by insurers. **RESULTS:** The inclusion criteria identified 269 bevacizumab, 375 sorafenib, and 672 sunitinib patients. The three most frequent AEs experienced by patients in each treatment group were identified based on the overall IR. The setting-specific IRs and costs per visit for these AEs are: bevacizumab: outpatient = 20.3/\$1,522, 16.1/\$652, 11.6/\$91; inpatient = 3.9/\$8,222, 1.5/\$15,848, 1.4/\$4,808; ER = 3.8/\$643, 0.7/\$24, 0.8/\$176 for anemia, lung diseases, and hypertension, respectively; sorafenib: outpatient = 24.1/\$525, 19.2/\$226, 11.0/\$288; inpatient = 1.1/\$8,205, 3.7/\$6,104, 1.6/\$18,001; ER = 0/0, 2.3/\$218, 10.3/\$294 for lung diseases, hypertension, and abdominal pain, respectively; sunitinib: outpatient = 31.1/\$176, 26.5/\$990, 23.3/\$1,183; inpatient = 3.7/\$13,183, 0.4/\$30,843, 2.7/\$13,727; ER = 7.6/\$409, 0/0, 2.0/\$606 for hypertension, lung diseases, and anemia, respectively. For outpatient treatment, there was a trend for IRs for each of the AEs to be the highest for sunitinib. **CONCLUSIONS:** Bevacizumab, sorafenib, and sunitinib were associated with frequent AEs, in particular abdominal pain, anemia, hypertension, and lung diseases. Management of these and other AEs resulted in significant medical treatment costs. These results can be used in economic evaluations of various currently available targeted therapies for RCC.

PUKI

RETROSPECTIVE DATABASE EVALUATION OF PATIENT CHARACTERISTICS AND HEALTH CARE UTILIZATION OF MEMBERS WITH STAGE 3 CHRONIC KIDNEY DISEASE WITH ANEMIA

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OBJECTIVES: Chronic Kidney Disease (CKD) is a significant health care problem in the United States; iron deficiency anemia can greatly impact resource utilization. We compared patient and health characteristics and health care utilization of members with stage 3 CKD with anemia versus without anemia in a regional integrated health care system. **METHODS:** Patients 18 and older were identified with a calculated GFR between 30 and 59 ml/min/1.73m² (stage 3) using the MDRD equation or ICD-9 diagnosis code of 585.3 between July 1, 2004 and June 30, 2007. Patients were required to be continuously enrolled for 6 months pre- and 24 months post-index dates. Anemia patients were identified with ICD-9 codes (280.0–280.9, 285.21, 285.29, or 285.9) or hemoglobin values (<13, male; <12, female). Dialysis patients were excluded. Descriptive and inferential statistics were utilized. **RESULTS:** 2,739 patients met inclusion criteria; 24% (n = 648) had anemia. 8.4% (n = 231) of patients were identified by ICD-9, while 17% (n = 113) of anemia patients had the above ICD-9 codes. Mean age was 73.3 and 71.5 years (p < 0.001) for with anemia and without anemia groups, respectively. 58% and 27% of anemia patients had comorbid hypertension and diabetes, respectively, versus 50% and 19% in the without anemia group. Per patient visit to nephrology, inpatient, and ED were as follows: 0.52, 4.33, and 0.53 for anemia, 0.19, 1.74, and 0.28 for without anemia (p < 0.001). Average health care costs during the post-index period was 59% higher (p < 0.001) for anemia patients versus patients without anemia. 8% of anemia patients progressed to stage 4 versus 4.5% for without anemia patients. 20.1% (n = 130) of anemia patients were treated with either an erythropoietin stimulating agent (14.5%) or intravenous iron therapy (5.6%); 3.9% (n = 25) were treated with both. **CONCLUSIONS:** CKD remains under-diagnosed and patients with anemia utilize more resources compared to CKD patients without anemia; however, anemia remains under-treated.

PUK2

PUK3

EVALUATION OF SIMULTANEOUS LIVER KIDNEY TRANSPLANTATION VERSUS LIVER TRANSPLANTATION ALONE FOR END-STAGE LIVER DISEASE PATIENTS WITH IMPAIRED RENAL FUNCTION – A COMPARATIVE EFFECTIVENESS ANALYSIS

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OBJECTIVES: Simultaneous liver kidney (SLK) transplant improves the survival of liver transplant candidates with renal insufficiency. The indication for SLK transplant remains controversial due to potential renal recovery after liver transplant alone (LTA). This study aims to (1) investigate the difference in survival between SLK and LTA recipients and (2) estimate the additional number of kidney grafts utilized for

SLK transplant. **METHODS:** The Markov decision model was constructed to simulate a hypothetical cohort of liver transplant candidates with impaired renal function to receive either (1) LTA or (2) SLK transplant strategy. Transplant candidates in each strategy were categorized into 4 groups, based on the Model for End-Stage Liver Disease (MELD) score. LTA recipients without recovering renal function within three months post-transplant were subsequently placed on the kidney transplant waiting list. Liver re-transplant and kidney re-transplant were considered in the model for acute and chronic graft failure post-transplant. The simulation period was 10 years. Microsimulations were conducted to estimate survival by averaging outcomes of 10,000 trials for each transplant strategy. The values and ranges of parameters in the model were obtained from the United Network for Organ Sharing (UNOS) and the Scientific Registry of Transplant Recipients (SRTR) data and published literature. **RESULTS:** The model demonstrates a mean survival of 67.6 months and 61.6 months for SLK and LTA recipients, respectively. Of the 10,000 trials, 4,181 isolated kidney transplants were performed when using the LTA strategy. The SLK transplant recipient survival was 6.1 months longer than LTA recipient survival. However, this SLK survival benefit occurred at the expense of an additional 69.3 kidney grafts per 100 SLK transplants performed when compared with LTA. **CONCLUSIONS:** An additional 69.3 kidney grafts per 100 SLK transplants are required to achieve a 6.1 month improvement in survival for SLK transplant recipients.

EFFECT OF ATYPICAL ANTIPSYCHOTICS ON URINARY INCONTINENCE IN US NURSING HOME RESIDENTS USING PSYCHOTROPIC MEDICATIONS

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OBJECTIVES: Psychotropics have been widely used in nursing homes. Case reports and review articles have implicated that atypical antipsychotics may enhance the risk of urinary incontinence (UI); a condition prevalent in more than half the nursing home residents (NHR). With antipsychotics being the most extensively prescribed psychotropic medication in nursing homes, the objective of this study was to investigate the effect of atypical antipsychotics on UI in NHR using psychotropic medications. **METHODS:** The 2004 National Nursing Home Survey (NNHS) was used as the data source. Logistic regression was performed to determine relationship between UI and use of atypical antipsychotics, in presence of other covariates. Sample data was weighted and data analysis was performed using SAS 9.1. **RESULTS:** From the original 13507 NNHS residents, 64.57% (n = 8722) used psychotropic medications; of which 27.22% (n = 2366) used atypical antipsychotics and 57.58% (n = 5005) were incontinent. Among those using psychotropics, incontinent residents were older than their continent counterparts (81.48 \pm 12.0 years versus 77.45 \pm 13.67 years, p < .0001). Regression analysis shows that residents on atypical antipsychotics had 81.5% increased risk of being incontinent (OR = 1.815, p < 0.0001). Concomitant use of other medications which may increase incontinence risk was not significantly associated with UI (p = 0.1016). Presence of comorbidities enhanced UI risk by 58.9% (OR = 1.589, p < .0001). Residents who were ADL dependent (OR = 1.224, p < .0001) or used bedrails (OR = 1.264, p < 0.0157), chairs (OR = 1.708, p < 0.0118) or truncal restraints (OR = 1.501, p < 0.0238) also had higher risks of being incontinent. Advancing age (OR = 1.022, p < 0.0001) and female gender (OR = 1.160, p = 0.0353) were also found to be other risk factors. **CONCLUSIONS:** The study results indicate that use of atypical antipsychotics leads to increased UI risk. Since coping with UI continues to be a challenge in elderly population, newer antipsychotic medications should be developed to ensure safer treatments. In addition, closely monitoring the resident's functional status and use of physical restraints would also help minimize incontinence episodes.

PUK4

PUK5

DOES RACIAL VARIATION IN RISK FACTORS HAVE A ROLE TO PLAY IN THE INCIDENCE OF CHRONIC KIDNEY DISEASE IN THE US POPULATION

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OBJECTIVES: To compare racial variations in risk factors associated with incidence of Chronic Kidney Disease (CKD) in a sample population (age >11 years) and look for possible early indicators. **METHODS:** A retrospective study was conducted using the NHANES 2003–2004 database comprising of a nationally representative sample containing nutritional and health records. Patients were screened on the basis of their Glomerular filtration rates and a sample with an estimated Glomerular Filtration Rate (eGFR) <60 ml/min/1.73m² was included in the study. The eGFR was calculated using the 6-variable MDRD equation. Demographics and laboratory records such as Blood Pressure, cholesterol, glucose, albumin, serum creatinine and Vitamin D levels were recorded. **RESULTS:** An eGFR <60 ml/min/1.73m² was observed in 413 (5.6%) of 7344 NHANES participants; of which 71.16% were Non-Hispanic Whites, 10.89% were African-Americans and 11.13% were Mexican Americans. Lower prevalence amongst African-Americans and Mexican-Americans was not seen to be uniform in higher stages of CKD. Vitamin D deficiency was noticeable in African-Americans and Mexican Americans compared to Non-Hispanic Whites at 15.28 ng/ml (95% CI 12.82–17.74), 17.17 ng/ml (95% CI 14.87–19.47) and 24.46 ng/ml (95% CI 23.46–25.47) respectively. Serum Creatinine levels were recorded as 1.717 mg/dl (95% CI 1.287–2.147), 2.351 mg/dl (95% CI 1.565–3.136) and 1.355 mg/dl (95% CI 1.303–1.406) for Mexican-Americans, African-Americans and Non-Hispanic Whites respectively. **CONCLUSIONS:** Higher prevalence of African-Americans and Mexican-