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1739 THE ASSOCIATION OF SUICIDAL IDEATION, DEPRESSION AND LOWER URINARY TRACT SYMPTOMS, DATA FROM THE NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY (NHANES), 2005-2006 AND 2007-2008

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| Predictors of Initial | Treatment Method | - Multinomial | Logistic | Regression |
|-----------------------|------------------|---------------|----------|------------|
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| Predictors of Initial Treatment Method - Multinomial Logistic Regression | | | | | | |
|--|-----------|-------|----------------|----------|--|--|
| Patient Initial | | Odds | 95% Confidence | | | |
| Treatment Group* | Variable | Ratio | Interval | p-value | | |
| MEDICAL | | | | | | |
| THERAPY | Age | 1.00 | 1.00-1.00 | <0.0001 | | |
| Race** | Black | 0.99 | 0.97 - 1.01 | 0.4 | | |
| | Other | 0.95 | 0.93 - 0.97 | <0.0001 | | |
| Socioeconomic | Service | | | | | |
| Status*** | Connected | 0.90 | 0.88 - 0.91 | <0.0001 | | |
| | Other | 0.76 | 0.74 - 0.77 | < 0.0001 | | |
| Region**** | Northeast | 0.71 | 0.69 - 0.73 | <0.0001 | | |
| | South | 1.10 | 1.08 - 1.12 | <0.0001 | | |
| | West | 1.01 | 0.98 - 1.03 | 0.6 | | |
| Comorbidities (n) | | 1.01 | 1.01 - 1.02 | <0.0001 | | |
| Initial | | | | | | |
| Provider**** | Urologist | 0.48 | 0.47 - 0.50 | <0.0001 | | |
| PSA | | 0.97 | 0.97 - 0.97 | <0.0001 | | |
| SURGERY | Age | 1.03 | 1.02 - 1.04 | <0.0001 | | |
| Race** | Black | 0.78 | 0.56 - 1.08 | 0.1 | | |
| | Other | 0.56 | 0.40 - 0.78 | < 0.001 | | |
| Socioeconomic | Service | | | | | |
| Status*** | Connected | 0.75 | 0.60 - 0.94 | 0.01 | | |
| | Other | 0.56 | 0.40 - 0.78 | < 0.001 | | |
| Region**** | Northeast | 0.60 | 0.43 - 0.85 | < 0.01 | | |
| | South | 0.68 | 0.53 - 0.87 | < 0.01 | | |
| | West | 1.08 | 0.83 - 1.42 | 0.6 | | |
| Comorbidities (n) | | 1.07 | 1.02 - 1.11 | < 0.01 | | |
| Initial | | | | | | |
| Provider**** | Urologist | 1.73 | 1.32 - 2.27 | <0.0001 | | |
| | | | | < 0.0001 | | |
| PSA | | 1.03 | 1.02 - 1.04 | | | |

Reference Categories: * = WW; ** = White; ***= Low Income; ****=Midwest; *****=Primary Care

Source of Funding: None

1738

PATIENT WITH SMALL RESECTED PROSTATE WEIGHT IN TRANSURETHRAL RESECTION OF THE PROSTATE IS ASSOCIATED WITH A HIGHER INCIDENCE OF NEUROLOGICAL COMORBIDITIES IV A NATION-WIDE STUDY

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INTRODUCTION AND OBJECTIVES: Transurethral resection of the prostate (TURP) is a standard procedure for relieving prostate obstruction to improve lower urinary tract symptom (LUTS). However, some patients have persistent LUTS following TURP and we suspect some neurological co-morbidities might contribute to LUTS. We conducted this study to investigate the prevalence of some neurological disorders in patients receiving TURP.

METHODS: The subset of the National Health Insurance Research Database (NHIRD) of Taiwan contains data of all medical benefit claims and covers most Taiwan populations. According to ICD codes-9, all patients received TURP from 2006 to 2009, with diagnostic codes, 600.X-602.X. All patients with diagnosis of genitourinary cancer before TURP were excluded. The patients were also excluded if the diagnosis of prostate cancer was recorded in one month after operation. Different benefit claims were submitted to National Health Insurance according to different resected prostate weight. Therefore we could subdivide patients into three groups, small group (< 15 grams), medium group (15~50 grams), large group (>50 grams). We determined the incidence of neurological diagnostic codes of cerebrovascular event (CVA) (430,431,432.X,433, 434.X,436-438), Parkinsonías disease (332.X), spinal stenosis (724.0X, 723.0), herniation of intervertebral disc (HIVD) (722.0X-722.2X,722.4X-722.7X), which were claimed within one year before TURP. The difference between these three groups was analyzed.

RESULTS: Among the total population of 22.8 millions, 33905 patients received TURP for BPH from 2006 to 2009. The patientias number of each subgroups were 14511 (42.8%) in small group, 16487 (48.6%) in medium group, and 2907 (8.6%) in large group. The number of patients with CVA, Parkinson disease, spinal stenosis, and HIVD diagnosed before TURP in each subgroup was shown in the Table 1. The incidence of every neurological disorder is significantly higher in smaller resected weight group than in medium and large group.

CONCLUSIONS: This study found that the incidence of neurological comorbidity is significantly higher in patients with smaller weight resected by TURP. It implies that neurological comorbidity significantly contribute to male LUTS.

Table 1. Incidence rate of neurological co-morbidities before TURP

| | Small gram, n (%) | Medium gram, n (%) | Large gram, n (%) | p value* |
|----------------------|-------------------------|-----------------------|-------------------------|----------|
| Total TURP No. | 14511 | 16487 | 2907 | |
| CVA stroke | 1253 (8.6) | 1127 (6.8) | 177 (6.1) | < 0.001 |
| Parkinson disease | 461 (3.2) | 423 (2.6) | 68 (2.3) | 0.001 |
| Spinal stenosis | 420 (2.9) | 353 (2.1) | 54 (1.9) | < 0.001 |
| HIVD | 448 (3.1) | 368 (2.2) | 46 (1.6) | < 0.001 |

^{*:} Using chi-square model

Source of Funding: None

1739

THE ASSOCIATION OF SUICIDAL IDEATION, DEPRESSION AND LOWER URINARY TRACT SYMPTOMS, DATA FROM THE NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY (NHANES), 2005-2006 AND 2007-2008

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INTRODUCTION AND OBJECTIVES: To examine the association between self-reported lower urinary tract symptoms (LUTS) and suicidal ideation or depression in a large cross-sectional population-based study.

METHODS: The study included 2890 men participating in the 2005-2006 or 2007-2008 cycles of the National Health and Nutrition Examination Survey (NHANES), who were ≥ 40 years old and without a history of prostate cancer. Men were considered to have LUTS if they reported nocturia, urinary hesitancy and/or incomplete bladder emptying and were examined by number of LUTS symptoms. Men reported frequency of suicidal ideation in the prior two weeks (frequency categories) and depression status was determined using the 9 item depression scale of the Patient Health Questionnaire (PHQ-9). Logistic regression was used to measure association. Multivariate models were adjusted for demographic factors (age, race, education), lifestyle factors (smoking, physical activity, alcohol use, BMI), comorbidities, health care utilization, and other factors associated with depression including depression medications. Suicidal ideation adjusted models also included emotional/financial support and number of close friends.

RESULTS: The prevalence of LUTS was 43.3% and 5.6% for men reporting 1 symptom and ≥ 2 symptoms, respectively. Moderate to severe depression and suicidal ideation were reported by 181 (6.3%) and 109 (3.8%), respectively. Men with depression were more likely to be younger, have less than a college degree, were more likely to smoke, and were less likely to exercise and consume alcohol on a weekly basis. Men with ≥ 2 LUTS symptoms were more likely to report moderate to severe depression (adjusted odds ratio (AOR) 3.1, 95% Confidence Interval (95%CI) 1.2-8.1 and a trend was observed across higher (worse) depression scores (p=0.02). Men with ≥ 2 LUTS symptoms had a 1.8-fold greater odds of suicidal ideation (95% CI, 0.9-3.7), with a significant trend observed with greater LUTS symptoms (Ptrend=0.01).

CONCLUSIONS: Having LUTS increases risk for reporting major depression and may increase risk of suicidal ideation.

Source of Funding: NIDDK K12DK083021

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GENETICS VARIANTS THAT INCREASE SEVERE LOWER URINARY TRACT SYMPTOMS IN AFRICAN-AMERICAN MEN

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INTRODUCTION AND OBJECTIVES: There is a clear heritable component underlying lower urinary tract symptoms (LUTS) related to benign prostatic hyperplasia (BPH). Our research group recently identified 6 single nucleotide polymorphisms (SNPs) that are associated with the likelihood of severe LUTS and BPH medication use in Caucasian men. Many studies have suggested that minority populations including African-Americans (AA) are at increased risk for developing bothersome LUTS. However, the genetic predisposition for this racial disparity remains to be determined. Our objective was to determine whether a well-characterized panel of SNPs was associated with LUTS severity in AA men.

METHODS: The genotypes of 38 SNPs previously associated with prostate cancer risk were determined for 620 healthy AA male volunteers. Their demographics and AUA symptom index (AUA-SI) score were documented prospectively. AUA-SI score was analyzed as a categorical (mild, moderate or severe) or continuous variable. Statistical analyses compared the frequency of the SNPs with AUA-SI score.

RESULTS: Univariate analyses demonstrated that 2 SNPs including rs10934853 on chromosome 3q21 (p=0.004) and rs445114 on chromosome 8q24 (p=0.04) were inversely associated with the severity of LUTS; whereas, rs5945572 on chromosome Xp11 (p=0.09) was positively associated. After adjusting for the presence of the other genetic variants and age, rs5945572 (OR=1.33, 95% C.I. 1.04-1.71) remained significantly associated with increased urinary symptoms, while rs445114 was associated with marginally decreased urinary symptoms (OR=0.78; 95% C.I. 0.60-1.00).

CONCLUSIONS: Two SNPs were associated with LUTS severity in a population of AA men. Interestingly, these same SNPs were previously associated with a well-characterized LUTS phenotype in Caucasian men. Future studies are warranted to further evaluate the genetic underpinnings for LUTS in AA men.

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EXPRESSION PROFILE OF CD105 IN PATIENTS WITH BENIGN PROSTATIC HYPERPLASIA (BPH): A NEW ANGIOGENIC MARKER

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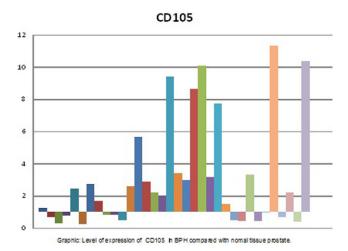
INTRODUCTION AND OBJECTIVES: Angiogenesis is recognized as an important process in tumor growth, inflammation and scarring. The vascular endothelial growth factor (VEGF) is the main biomarker involved in neovascularization and has been observed in hyperplastic prostate stromal cells. Recently, experimental evidences show that endoglin (CD105), a transmembrane glycoprotein that functions as a co-receptor for TGF&1 is expressed both in endothelial cells of mature and immature blood vessels. Endoglin gene mutation is associated with the occurrence of hereditary hemorrhagic telangiectasia/Osler-Weber-Rendu syndrome. Despite the importance of this an-

giogenic factor and the attempt to create target therapies that inhibit the action of CD105 in tumors, this is the first study about the expression of this marker in BPH.

METHODS: We analyzed frozen prostate tissue from 34 patients undergoing transurethral prostate resection or open surgery to treat BPH. The control group consisted of tissue samples without BPH obtained from prostates of three patients organ donors. The expression levels of CD105 was assessed by quantitative real-time polymerase chain reaction method. Expression levels of the epidermal growth factor (EGF), fibroblast growth factor 2 (FGF2), prostate derived factor (PDF), insulin-like growth factor1 (IGF1), transforming growth factor(TGF&1), vascular endothelial growth factor (VEGF) and interleukins 2,6,8 and 17 were also enalyzed.

RESULTS: There was overexpression of CD105 and all the growth factors, angiogenesis and inflammation markers compared to normal tissue except the levels of TGF-1 and interleukins 2 and 17. A subgroup analysis of patients with (n = 6) and without (n = 28) histological prostatitis associated with BPH showed increased expression of EGF (p = 0.02), IGF1 (p = 0.02), TGF-1 (p = 0.037) and CD105 (p = 0.008) in patients with BPH only. The average expression of CD105 was 2.91 greater in BPH than normal. Medium size prostate of patients with overexpression and subexpression of the marker was 69,1 and 59g respectively.

CONCLUSIONS: CD105 is overexpressed in the the majority of patients with BPH. Expression levels were sigificantly lower among cases with histological prostatitis. This findings suggest a possible role for CD105 in the pathogenesis of the disease and opens a potential therapeutic window.



Source of Funding: Fapesp

1742 ROLE OF MICRORNAS IN REGULATING TISSUE INFLAMMATION IN PATIENTS WITH BENIGN PROSTATIC HYPERPLASIA: PRELIMINARY RESULTS

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INTRODUCTION AND OBJECTIVES: The etiology of benign prostatic hyperplasia (BPH) is not fully understood. Studies have suggested that the inflammatory process may play a role in the development of BPH and that at least 50% of the tissue samples retrieved from surgical procedures contain inflammatory cells. However how the process is developed and how it is regulated is still unknown. We studied the expression levels of micro RNA (miRNAs) 126, 146a, 155, 181c and 223, which are involved with inflammatory process in other organs, in the prostatic tissue from patients with BPH with and without prostatitis.

METHODS: We analyzed prostate specimens from 16 patients who underwent surgery for treatment of BPH. We removed tissue samples from the transitional zone of the prostate until 15 minutes after

