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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 symptoms (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 Administration between self-reported lower urinary tract symptoms (LUTS) and suicidal ideation or depression in a large cross-sectional population-based study.

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 category) and were examined by number of LUTS symptoms. Men reported moderate to severe depression (adjusted odds ratio (AOR) 3.1, 95% CI, 0.9-3.7), with a significant trend observed with greater LUTS symptoms had a 1.8-fold greater odds of suicidal ideation (95% CI, 1.2-2.8) 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 (P trend=0.01).

**Source of Funding:** None
CONCLUSIONS: Having LUTS increases risk for reporting major depression and may increase risk of suicidal ideation.

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1740 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.

Source of Funding: Supported in part by the Urological Research Foundation, the Prostate SPORE Grant (P50 CA90386-05SS), the Robert H. Lurie Comprehensive Cancer Center Grant (P30 CA60553), and a pilot grant from NorthShore University Health-System.

1741 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-β1 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 angiogenic 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 analyzed.

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 significantly 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