

Session/Poster#

Presenter

A08

Tasmia Promi

College of Medicine Student

Advisor(s): Ms. Jason Lazar, Medicine and Cardiovascular Medicine

### **Relation Between Nocturia and Blood Pressure Elevation in Adolescents**

**Introduction:** Nocturia, defined as waking to void during the hours of intended sleep, is a prevalent urologic complaint associated with non-urological conditions in both sexes. Hypertension (HTN) is a common associated condition in adults. Nocturia has been proposed as a useful method to screen for HTN. Although nocturia is common in children, the relationship between blood pressure (BP) and nocturia has not been studied in the pediatric population. The objectives of this study were to determine the relation between HTN and nocturia in adolescents and to compare self-reported frequency to nocturnal voiding-diary frequencies.

**Methods:** 100 patients aged 10-18 years were recruited. Demographic data and clinic BP measurements were collected. Patients completed nocturnal voiding-diaries. Nocturia was pre-defined as 1 or more voids recorded by voiding diary, and self-reported frequency was obtained. Univariate analyses and logistic regression with nocturia as dependent variable were performed.

**Results:** Thirty-four study participants had HTN, defined as elevated BP on 2 or more clinic readings. In patients with nocturia, 17 (37.8%) had normal BP and 28 (62.2%) had elevated BP. While 37% patients self-reported waking up to urinate, voiding diaries showed 45% had 1 or more nighttime void. On logistic regression, patients with HTN were 3.5 times more likely to have nocturia ( $p=0.001$ ).

**Conclusion:** This data suggest nocturia is strongly related to BP elevation in adolescents. Since there is a lower prevalence of co-morbid conditions that may cause nocturia in adolescents as compared to adults, fewer confounding variables would strengthen the BP and nocturia link. In addition, this study suggests the prevalence of nocturia may be underestimated in adolescents based on self-report. Study findings also suggest that nocturia can be a simple method of identifying adolescents at risk of HTN.