2023 Annual Research Day Poster Sessions – April 19th, 2023

Session/Poster#	Presenter
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Home Blood Pressure Monitoring and Nocturia in Adults

Rationale: Although widely viewed as a urological condition, nocturia has been increasingly recognized to accompany various non-urological conditions such as hypertension and blood pressure (BP) elevation on office determination. Home BP monitoring (HBPM) has been shown superior to office-based readings and provides an opportunity to assess potential relationships between nocturia and novel indices derived from multiple BP recordings including BP load, BP variability, and arterial stiffness, which have prognostic significance. We sought to determine any relationship between systolic blood pressure (SBP) and frequency of Nocturia in Adults, and to elucidate any statistical differences between Mean Ambulatory SBP and Office SBP as they relate to Nocturia.
Methods: We retrospectively studied 103 home BP logs and nocturia frequencies provided by 61 stable cardiology patientsâ‰¥21 years without medication change.
Results: Nocturnal voids ranged from 0 to 5 voids per night, median: 1.5. Nocturia frequency was significantly correlated with home and office systolic BPs and with BP load, but not with diastolic BPs, BP variability or arterial stiffness. On Poisson regression analysis, the estimated prevalence ratio (PR) for home and office systolic BPs were 1.025 (CI: 1.01, 1.04; p<.001) and 1.01 (CI:1.00, 1.02; p=.019), indicating 2.5% and 1% increases in the risk of nocturia per mmHg increases in BP respectively.
Conclusion: Higher mean home and office systolic BPs are associated with self-reported nocturia frequency with stronger associations seen for home BP measurement. Nocturia frequency appears unrelated to mean home and office diastolic BPs. Nocturia may be related to BP load, (percentage of elevated BP values), but not to BP variability or arterial stiffness. Future prospective studies using HBPM are needed to confirm these findings and to contribute to the understanding of the elevated BP-nocturia link.