

CARDIOVASCULAR RISK FACTORS AND DISEASE IN WOMEN WITH OVERACTIVE BLADDER VS STRESS INCONTINENCE CONTROLS

Hypothesis / aims of study

As cardiovascular disease (CVD) is the leading cause of death for women in the U. S., identifying syndromes that anticipate CVD risk may be important. To investigate the potential relationship between overactive bladder (OAB) and CVD the prevalence of CVD and risk factors were determined in female OAB patients compared to stress urinary incontinence (SUI) patients as controls.

Study design, materials and methods

Retrospective review of female patients presenting with OAB and SUI in 2008-2009 analyzing demographics, CVD risks and comorbidities, and symptoms and excluding patients with prior urologic surgery, recurrent UTI, neurologic disease, or mixed urinary symptoms. Manifestations of CVD were considered coronary artery disease (CAD), cerebrovascular disease (CVA), and peripheral vascular disease (PVD); CVD risk factors included age ≥ 65 , family history of CAD, smoking, hypertension (HTN), diabetes mellitus (DM), dyslipidemia (DysL), and body mass index (BMI) ≥ 30 . Metabolic syndrome was defined as any 3 of preceding 4 risk factors.

Results

124 OAB and 100 SUI patients were included, mean ages 50.6 (range 14-85) (OAB) and 50.6 (range 26-78) (SUI), and mean BMI 26.9 and 29.9. 16 (13%) OAB patients reported CVD manifestations (8 CAD, 10 CVA, 3 PVD events) vs. 7 (7%) of SUI patients (3 CAD, 1 CVA, 3 PVD events). Of CVD risk factors, OAB patients had higher rates of age ≥ 65 (23% OAB, 14% SUI) and family history of CAD (55% OAB, 46% SUI), while SUI patients had higher rates of BMI ≥ 30 (25% of 69 OAB, 50% of 74 SUI), DM (11% OAB, 13% SUI), DysL (19% OAB, 20% SUI), HTN (34% OAB, 38% SUI) and smoking (29% OAB, 31% SUI). 18% of OAB patients had no CVD risk factors vs. 16% of SUI patients; however, 82% of OAB patients had ≥ 1 risk factors (vs. 84% of SUI) and 52% had ≥ 2 risk factors (vs. 56% SUI). More SUI patients qualified as metabolic syndrome (17% SUI vs 6% OAB).

Interpretation of results

Results of this pilot study comparing OAB patients and SUI patients demonstrate a higher rate of CVD manifestations in OAB patients; however, the prevalence of CVD risk factors is marginally higher in SUI patients with marginal increases in age ≥ 65 , and family history of CAD in OAB patients and in BMI ≥ 30 , DM, HTN, DysL and smoking in SUI patients. Similar numbers of OAB and SUI patients had 0, ≥ 1 and ≥ 2 CVD risk factors, while more SUI patients qualified as having metabolic syndrome.

Concluding message

Differences in CVD and risk factors appear to exist between OAB and SUI patients. Greater numbers of patients are needed to substantiate these findings and to appropriately power the study. Patient accrual continues with the intention of better identifying urologic patients at risk for CVD.

Specify source of funding or grant	None
Is this a clinical trial?	No
What were the subjects in the study?	HUMAN
Was this study approved by an ethics committee?	Yes
Specify Name of Ethics Committee	Vanderbilt University Institutional Review Board
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	No