

BPH RELATED INCONTINENCE IN PATIENTS ON CHRONIC α BLOCKADE OR 5 α REDUCTASE INHIBITORS

Hypothesis / aims of study

Incontinence related to benign prostatic hypertrophy (BPH) is a relatively rare problem, however overflow and urge incontinence are well described. The aim of this study was to investigate the effect of pharmacological management on the likelihood of urinary incontinence in a cohort of men with BPH.

Study design, materials and methods

The Integrated Healthcare Information Services National Managed Care Benchmark Database (IHCIS) includes information on 33 million patients in the US over the period 1997-2003. Data were extracted based on ICD9 codes for BPH (220.xx and 600.xx) and incontinence (788.3x). Patients were excluded from the analysis for the following reasons: \geq 60 day gap in insurance coverage by IHCIS; if enrolled in the database less than 90 days after the first diagnosis of incontinence; or enrolled in the data < 1 yr after the first record of BPH. α adrenoceptor blocking agents (AB) or 5- α reductase inhibitors (5ARI) users with 30-day breaks in Rx fills or with multiple AB prescriptions were excluded. A conditional logistic regression model was constructed using age and duration in the database after the first diagnosis of BPH as matching strata to assess the urinary incontinence risk among AB and 5ARI user subgroups. Adjustments for the following potential confounders were made: incontinence-related comorbidities (neurogenic bladder, spinal cord injury etc), BPH related complications (UTI, stricture etc), and surgery. Statistical analysis was performed with SASTM software (version 8.2).

Results

411,658 men with BPH were identified. Of these, 8,309 men with incontinence between the ages of 35-80 were identified. Logistic regression estimates demonstrated that AB users were at an increased risk of incontinence (TABLE). Tamsulosin and doxazosin users had a statistically significant increased risk of incontinence (1.63 and 1.46-fold increase, respectively $p < 0.001$). There was no increased risk for incontinence in BPH patients who used 5 ARIs longer than a year, but not less than a year. Men undergoing BPH-related surgical procedures were also at a statistically significant risk for incontinence (3.47-fold increased risk, $p < 0.001$).

The Effect of AB on the Likelihood of Incontinence for Males with BPH

Dependent Variable: incontinence	Odds Ratio Estimates		
	Point Estimate	95% CI	
5-ARI use more than a year	1.104	0.929	1.281
5-ARI use less than a year	1.244*	1.097	1.410
Any surgery	3.475**	3.205	3.676
Neurological comorbidities	0.875	0.664	1.154
Other comorbidities	0.853	0.688	1.057
Hypertension	0.956	0.872	1.048
Diabetes	1.492	0.826	2.694
chronic doxazosin use	1.465**	1.329	1.615
chronic terazosin use	1.232**	1.112	1.366
chronic tamsulosin use	1.634**	1.525	1.752

chronic other a-blocker use	0.911	0.518	1.604
Number of observation			318339
Number of matched incontinence			7539
Number of stratum			7433
	* p<0.05	** p<0.001	

Interpretation of results

1. Incontinence was related to the diagnosis of BPH and not due to comorbidities. 2. These data show that AB use has an increased risk of incontinence. 3. The risk of incontinence varied by type of AB used. 4. 5ARI use greater than a year was not associated with incontinence. 6. BPH-related surgical procedures had the highest risk for developing some type of incontinence, however, the nature, type and duration of incontinence following surgery was not determined.

Concluding message

These results show that the use of ABs has an increased risk of incontinence independent to other factors including BPH-related surgery.

FUNDING:

GlaxoSmithKline