

GENDER DIFFERENCES IN 24-HOUR URINARY DIARIES OF ASYMPTOMATIC ADULTS.

Aims of Study

Voiding diaries are commonly used to evaluate patients with lower urinary tract symptoms, and are less prone to recall bias than questionnaires concerning urinary frequency. There is little published information about the voiding habits of asymptomatic adults; in particular, it is not known whether there is any gender difference in those voiding habits. Our aim was to determine whether there were any important gender differences in the voiding habits of asymptomatic adults, as reported in 24-hour frequency-volume diaries.

Methods

The 24-hour urinary diaries of asymptomatic men were compared with those of age- and race-matched asymptomatic women. Diary variables included total urinary frequency, total intake, voids per liter intake, total voided volume, maximum and mean voided volumes, daytime and nighttime diuresis rates. We used multivariate linear regression and logistic regression to determine the effect of gender on diary variables, with results considered significant at the 5% level.

Results

We included a total of 284 diaries from subjects aged 18-68. Males and females had similar body mass indices. Subjects were 56% African American, 31% Caucasian, 8% Asian and 6% Hispanic. Linear regression analysis determined that in females, 24 hr urinary frequency was greater, mean voided volume was lower and the number of voids per liter intake was greater. Males had a higher fluid intake (see Table of mean +/- standard deviation, range, below).

Diary variable	Females (n=142)	Males (n=142)	P value
Total voids / 24 hours	8.2 +/- 2.3 (4-18)	7.6 +/- 2.7 (3-21)	< 0.01
Mean voided volume (mL)	210 +/-90 (53-533)	251 +/- 126 (90-1350)	< 0.01
Maximum voided volume (mL)	364 +/- 181 (90-870)	404 +/- 216 (90-1350)	0.22, NS
Total fluid intake (mL)	2061 +/- 771 (625 – 3960)	2854 +/- 1450 (960-10520)	<0.001
Voids per liter intake	4.4 +/- 1.7 (1.5–10.7)	3.1 +/- 1.3 (0.6-8.3)	<0.001
Record of any nocturic episode	44%	39%	P = 0.3, NS

Conclusions

The results of this preliminary study of asymptomatic North American adults suggest that there are significant gender effects on 24-hour urinary diary variables. These differences should be borne in mind when using diaries clinically, and in the design of research studies.