
Office Dilation of the Female Urethra: A Quality of Care Problem in the Field of Urology

Richard A. Santucci,* Christopher K. Payne, Christopher S. Saigal and the Urologic Diseases in America Project

From the Detroit Receiving Hospital and The Detroit Medical Center (RAS), Detroit, Michigan, Stanford University School of Medicine, Stanford (CKP), and University of California, Los Angeles, Los Angeles (CSS), California

Purpose: Historically dilation of the female urethra was thought to be of value in the treatment of a variety of lower urinary tract symptoms. Subsequent work has more accurately classified these complaints as parts of various diseases or syndromes in which scant data exist to support the use of dilation. Yet Medicare reimbursement for urethral dilation remains generous and we describe practice patterns regarding female urethral dilation to characterize a potential quality of care issue.

Materials and Methods: Health care use by females treated with urethral dilation was compiled using a complementary set of databases. Data sets were examined for relevant inpatient, outpatient and emergency room services for women of all ages.

Results: Female urethral dilation is common (929 per 100,000 patients) and is performed almost as much as treatment for male urethral stricture disease. Approximately 12% of these patients are subjected to costly studies such as retrograde urethrography. The overall national costs for treatment exceed \$61 million per year and have increased 10% to 17% a year since 1994. A diagnosis of female urethral stricture increases health care expenditures by more than \$1,800 per individual per year in insured populations.

Conclusions: Urethral dilation is still common despite the fact that true female urethral stricture is an uncommon entity. This scenario is likely secondary to the persistence of the mostly discarded practice of dilating the unstricted female urethra for a wide variety of complaints despite the lack of data suggesting that it improves lower urinary tract symptoms.

Key Words: urethral diseases; incidence; demography; female; urinary bladder, overactive

Urethral stricture (narrowing of the urethral lumen causing increased voiding pressure) is rare in women.¹ Despite this lack of prevalence urethral dilation, urethrotomy and other surgical procedures have historically been advocated to treat women with lower urinary symptoms such as urgency, frequency and bladder pain despite a lack of objective findings of urethral stricture.² Dilation of the female urethra as treatment for what is more accurately classified as recurrent urinary tract infection, interstitial cystitis, detrusor instability/overactive bladder or bladder neuropathy (among other conditions) is of questionable value.¹⁻⁴

The increase in popularity of internal urethrotomy or dilation for the treatment of recurrent infection and chronic urethritis was an idea first popularized in the 1960s, and whose history is well documented by McLean and Emmett.⁵ They chronicle the first report of the technique in 1923 and describe that by the 1960s some authors were advocating

dilation of the female urethra to 32Fr to avulse a putative "contraction ring in the distal urethra of little girls." Some authors even advocated cutting this supposed urethral ring with an Otis urethrotome up to 45Fr, even in infants, to treat voiding complaints. These procedures became so commonplace that series reporting results in as many as 800 women were read at the national American Urological Association meeting in 1967.⁵

Dilation of the female urethra in the absence of urethral stricture has lost its scientific backing. Modern urological reference texts do not even mention dilation as a therapeutic regimen for these syndromes.⁶ The last reference to urethral dilation or urethrotomy in the English language literature for the treatment of female urgency/frequency syndrome in the absence of true stricture was before 1970.⁵ Modern studies have demonstrated that urethral dilation is of no value in treating symptoms of urgency/frequency in females in the absence of true urethral stricture.^{2,4} These data have been persuasive for some urologists. Research suggests that the procedure is viewed as ineffective and is rarely done by urologists who completed training after 1989.⁷ However, Medicare reimbursement for urethral dilation remains relatively high, and evidence about the lack of benefit of dilation may not have disseminated uniformly to physicians. To characterize a potential quality of care problem, we sought to describe practice patterns regarding female urethral dilation.

Submitted for publication February 21, 2008.

Supported by National Institutes of Health Grant N01-DK-1-2460.

* Correspondence: Chief of Urology, Detroit Receiving Hospital, Michigan State College of Osteopathic Medicine, 4160 John R. Suite 1017, Detroit, Michigan 48201 (telephone: 313-745-1712; FAX: 313-745-8222; e-mail: rsantucc@dmc.org).

For another article on a related topic see page 2247.

MATERIALS AND METHODS

Nationally Representative Data Sets

We analyzed several public data sets to produce nationally representative data regarding use of relevant services. To describe physician office visits we used the NAMCS. To achieve adequate descriptive power data were pooled from 1992, 1994, 1996, 1998 and 2000. Hospital outpatient visits and visits to ERs were measured using the NHAMCS. Data on inpatient use were captured using the HCUP-NIS. Detailed comments regarding our methods have been previously published.⁸

Diagnostic Codes

We identified females with visits based on diagnostic codes (see Appendix). Analytical files for outpatient visits included those with a relevant diagnosis code listed as 1 of any reasons for the visit. Tables were produced reflecting service use when the diagnosis codes in question were listed as any of the reasons for the visit, and when they were listed as the primary reason for the visit. Analytical files for inpatient stays included only those records of inpatient hospitalizations for which a relevant diagnosis code was listed as the primary diagnosis during the hospitalization. The raw number of visits in each subset varied by condition and by year. Analyses were conducted at the visit level or the stay level depending on which database was being analyzed. Using the weights provided by the survey administrators raw counts were weighted to give nationally representative estimates of use.

Calculations of Visits

National estimates of the annual frequency of visits were calculated when the raw counts were deemed large enough to produce reliable estimates. Under National Center for Health Statistics guidelines the 2 conditions that must be met for the creation of reliable national estimates are 1) there must be at least 30 unweighted counts and 2) estimates must have a relative standard error of less than 30%. When insufficient data were available subgroups (eg age categories) were combined to create adequate unweighted counts. SAS[®] was used to derive the standard errors and compute the 95% CIs for these estimates. The sample design of the database was taken into account when computing statistics to ensure the proper estimation of variance in each case.

National annual outpatient visit rates were calculated using the United States Census noninstitutionalized civilian population estimates corresponding to demographic and visit characteristic groupings for each survey year used. Population estimates were obtained from the CPS for select demographic categories of the United States civilian noninstitutionalized population. Stratification variables evaluated for all databases include age, race/ethnicity, gender, region and/or metropolitan statistical areas, and other variables selected as appropriate for the database of interest. For the purposes of comparison the frequency of visits for male urethral stricture disease was also calculated.⁹

Medicare Data

Data on inpatient and outpatient care for women older than 65 years were examined using claims data from CMS. Data from the 3 Medicare files (MEDPAR [Medicare Provider

Analysis and Review], carrier and outpatient) were linked to determine inpatient, ambulatory surgery center, hospital outpatient, physician office and ER use, as well as to calculate average payments for urethral stricture disease in women.

Because a 5% sample of Medicare records was used national estimates of service use were obtained by multiplying counts by a constant weight of 20 to represent use in the entire Medicare eligible population. The data were stratified by age, gender and race variables. Confidence intervals were calculated using standard methods for proportions.¹⁰

Calculation of Economic Data

To produce a model examining incremental costs associated with a urethral stricture diagnosis we used the Ingenix[®] data set of medical and pharmacy claims of 25 large United States employers covering 322,556 beneficiaries 18 to 64 years old who were continuously enrolled for the entire 2000 calendar year. We excluded dependents and employees 65 years old or older because we could not be sure their medical and pharmacy use was not covered by other insurance. Claims files captured all health care claims and encounters including prescription drugs, inpatient, emergency and ambulatory services. The medical claims included date of service, diagnosis and procedure codes, types of facility and providers, and expenditures including billed charges, negotiated discounts, excluded expenses, deductibles, co-payments, and payments made by the employer, employee and other third-party coverage. Drug claims included information on the type of drug (drug name, national drug codes, dose, supply), place of purchase (retail or mail-order) and expenditures.

Multivariate regression models were used to predict medical and pharmacy spending in 2000 for persons with and without a primary diagnosis of urethral stricture in the medical claims. The primary outcomes of interest were annual medical and pharmacy expenditures for each person. Expenditures consisted of total annual payments made by the enrollee (co-payments, deductibles, excluded expenses) and by all third-party payers (primary and secondary coverage, net of negotiated discounts) for medical services and outpatient prescription drug claims.

We included a detailed set of covariates to control for observed differences between individuals with and without a primary diagnosis of urethral stricture. We used the eligibility file to control for demographic characteristics such as age, sex, work status (active or retired), urban residence and median household income in the zip code of residence. The medical claims were used to identify individuals treated for 34 chronic conditions such as hypertension, diabetes, congestive heart failure and asthma. A binary indicator for each condition was included in the models. We used the benefits data to control for the generosity of medical and drug coverage. Plan characteristics included individual deductibles, co-payments and/or coinsurance rates for medical services and prescription drugs, and a binary indicator for plan type (HMO [Health Maintenance Organization], POS [Point of Service], PPO [Preferred Provider Organizations], FFS [Fee-For-Service]).

We used OLS to estimate medical and drug expenditures for each individual in the sample. The parameter estimates were used to predict average annual spending for persons

Download English Version:

<https://daneshyari.com/en/article/3871070>

Download Persian Version:

<https://daneshyari.com/article/3871070>

[Daneshyari.com](https://daneshyari.com)