

ORIGINAL RESEARCH—MEN'S SEXUAL HEALTH

The Decline of Inpatient Penile Prosthesis over the 10-Year Period, 2000–2010

Amjad Alwaal, MD, MSc, FRCSC,^{*,†} Catherine R. Harris, MD,^{*} Ahmed A. Hussein, MD,^{*} Thomas H. Sanford, MD,^{*} Charles E. McCulloch, PhD,[‡] Alan W. Shindel, MD,[§] and Benjamin N. Breyer, MD, MAS^{*}

^{*}Department of Urology, University of California San Francisco, San Francisco, CA, USA; [†]Department of Urology, King Abdul Aziz University, Jeddah, Saudi Arabia; [‡]Department of Epidemiology and Biostatistics, University of California San Francisco, San Francisco, CA, USA; [§]Department of Urology, University of California at Davis, Sacramento, CA, USA

DOI: 10.1002/sm2.82

ABSTRACT

Introduction. Across all specialties, economic pressure is driving increased utilization of outpatient surgery when feasible.

Aims. Our aims were to analyze national trends of penile prosthesis (PP) surgery and to examine patient and hospital characteristics, and perioperative complications in the inpatient setting.

Methods. We analyzed data from National Inpatient Sample. Patients in NIS who underwent PP insertion between 2000 and 2010 were included.

Main Outcome Measures. Our main outcomes were the number of inpatient PP procedures, type of prosthesis, patient demographics, comorbidities, hospital characteristics, and immediate perioperative complications.

Results. There was a progressive and dramatic decline by nearly half in the number of both inflatable (IPP) and noninflatable (NIPP) inpatient insertions performed from 2000 to 2010 ($P = 0.0001$). The overall rate of inpatient complications for PP insertion was 13.5%. Patients with three or more comorbidities were found to have a higher risk of complications than patients with no comorbidities (OR = 1.45, 95% CI = 1.18–1.78) ($P = 0.0001$). Surgeries performed in high-volume hospitals (10 or more PP cases per year) were associated with reduced risk of complications (OR = 0.6) ($P < 0.0001$). There was a dramatic decrease in inpatient setting for PP placement in high-volume hospitals (32% in 2000 compared with 6% in 2010; $P < 0.0001$), and when compared with lower volume hospitals. NIPP was more likely performed in younger patients and in community hospitals, and less likely in white patients. Medicaid health insurance was associated with much higher rate of NIPP insertion than other types of insurance.

Conclusions. The number of PP procedures performed in the inpatient setting declined between 2000 and 2010, likely reflecting a shift toward increasing outpatient procedures. Our data also suggest a better outcome for patients having the procedure done at a high-volume center in terms of inpatient complications. **Alwaal A, Harris CR, Hussein AA, Sanford TH, McCulloch CE, Shindel AW, and Breyer BN. The decline of inpatient penile prosthesis over the 10-year period, 2000–2010. Sex Med 2015;3:280–286.**

Key Words. Erectile Dysfunction; Penile Prosthesis; Outpatient Surgery; Complications

Introduction

Rectile dysfunction (ED) affects more than half of men between 40 and 70 years of age [1]. Penile prosthesis (PP) placement is the gold standard treatment for ED among men who are unwilling to use, not candidates for, or refractory to medical management [2]. There are two types of PP; noninflatable (NIPP) and inflatable (IPP) types; the latter is associated with generally higher patient and partner satisfaction rates [3]. Utilization of PP appears to be increasing, with approximately 17,540 PP placed in 2000 compared with 22,420 in 2009 [4]. In addition, Medicare records from 2002 to 2012 show a slightly increased performance of IPP from 4615 in 2002 to 5328 in 2010 (see Figure S1) [5].

Over 70% of surgical procedures in the United States are performed in the outpatient setting [6,7]. Outpatient surgery is generally more cost-effective with an acceptable safety profile for most procedures [6,8]. While most outpatient surgeries are performed in hospital outpatient departments, utilization of nonhospital ambulatory surgery centers and physician offices for surgical procedures has increased by 300% over the last decade [7,8].

Several large single-center series have demonstrated the safety and economic advantage of PP insertion in the outpatient setting [9–11], with one series showing a 17% reduction in financial cost [12]. We were interested in understanding the national trends in the number and type of inpatient PP and perioperative outcomes of PP performed in the inpatient setting over time. We hypothesized that the number of inpatient PP insertions has declined over time.

Materials and Methods

Data Source

For our analysis of inpatient PP, we utilized the National Inpatient Sample (NIS), the largest publicly available, all-payer inpatient care database in the United States [13]. NIS contains data from approximately 1000 hospitals in 37 states and includes 8 million inpatient hospital admissions per year; this sample represents approximately 20% of all hospital admissions in the United States [13].

Inclusion Criteria

All patients in NIS who underwent PP insertion between January 1, 2000 and December 31, 2010

were candidates for inclusion. Subjects were identified using the International Classification of Diseases (ICD-9-CM) procedure codes for insertion of IPP (64.97) and NIPP (64.95). Two urologists (A.A. and B.N.B.) evaluated this data to ensure that the patients included in the analysis did undergo PP insertion and not a different surgery. Some patients were excluded because of major concurrent procedures that would preclude concomitant PP insertion in the same admission, such as radical cystectomy, as it would most likely be a result of an error in coding. We elected to include patients who had PP placement in combination with other minor procedures, including removal of PP prior to replacement (64.96), artificial urinary sphincter insertion (5893), inguinal hernia repair (5300, 5301, 5302, 5303, 5304, 5305, 5314, 5317, 5321), abdominal hernia repair (5341, 5349, 5351, 5359, 5361, 5369), hydrocelectomy (612, 617), circumcision (640), orchiectomy (623, 6241), varicocelectomy (631), vasectomy (6373), and epididymal cyst excision (632). We have also identified PP revision cases through the presence of the PP removal ICD-9 procedure code (64.96) in the same inpatient admission along with one of the two codes of insertion (64.97 or 64.95).

Predictors

We abstracted demographic data from NIS including patient age (grouped as patients aged 18–44, 45–64, and ≥ 65 years), race (white, black, and other), number of medical co-morbidities such as hypertension (0, 1, 2, and ≥ 3) as defined and previously validated by NIS [13], year of operation, hospital size (small, medium, and large), number of PP inserted per year at each hospital (grouped as 1, 2–9, and 10 or more), payer type (Medicare, Medicaid, private insurance, and other), and geographic region (Northeast, Midwest, South, and West) [13].

Outcome Variables

Our primary outcomes were trends of PP insertion across the different categories according to the type of prosthesis and inpatient complications. In addition, we analyzed trends in the number of inpatient PP insertion performed over the last decade, and examined the change in trends of inpatient PP insertion in terms of patient comorbidity and hospital volume of PP cases/year.

We analyzed the prevalence and type of complications whether surgical or medical. Complications were divided into surgical complications (e.g., wound and genitourinary complications) and

Download English Version:

<https://daneshyari.com/en/article/4274503>

Download Persian Version:

<https://daneshyari.com/article/4274503>

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