LONG-TERM TRENDS OF SURGICAL MANAGEMENTS FOR MALE STRESS URINARY INCONTINENCE: ARTIFICIAL URETHRAL SPHINCTER VS MALE URETHRAL SLING

Click to add text

Zhenyue Huang[1], Kelly Leong[2], Michael Gross[2], Xiaohui Liang[2], Steven Weissbart[1], Jason Kim[1]
[1]Stony Brook University Hospital, [2]Stony Brook University School of Medicine

Abstract number 20-6555

Introduction

- Artificial urethral sphincter (AUS) has traditionally been the gold standard treatment for male stress urinary incontinence (SUI) that failed conservative managements.
- Success rates of AUS are high ~80% patients <1PPD after 2 years
- Male urethral sling provides a less invasive management for mild to moderate SUI.
- Some patients with SUI are reluctant to pursue AUS due to concern for infection, erosion, device complexity, mechanical failure, etc.
- There is paucity of long-term data on temporal trends of surgical management for male SUI
- We sought to investigate long-term trends of AUS vs male sling utilizing a state-wide all-payer database.

Methods

Data was extracted from the New York Statewide Planning and Research Cooperative System (SPARCS) database

- All-payer database (diagnoses and treatments, services, inpatient stay, outpatient visit, physician license.)
- We used CPT procedures codes and ICD-9 /10 codes to extract all AUS and male sling procedures performed from 2001 to 2015.

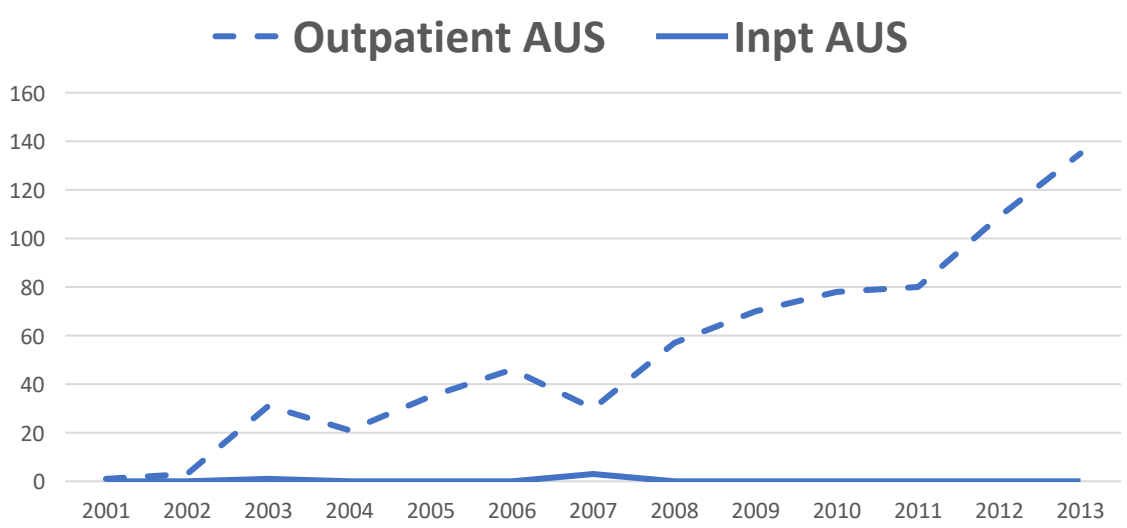
Methods

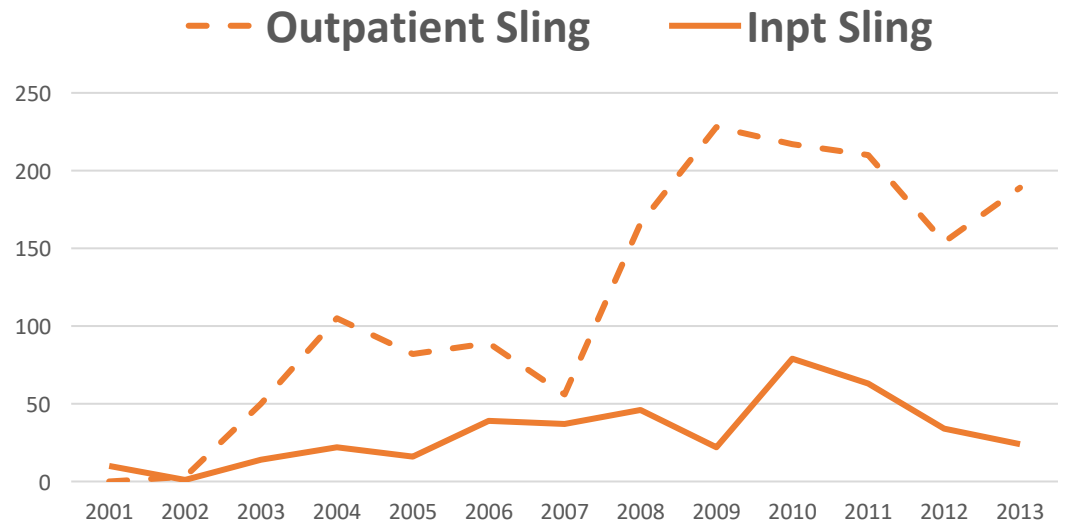
CPT	
53444-53445	Insertion of tandem cuff (dual cuff)/insertion of inflatable urethral/ bladder neck sphincter, including placement of pump, reservoir and cuff
53446 -53448	Removal of inflatable urethral/bladder neck sphincter, including pump, reservoir, and cuff/ through an infected field at the same operative session
53449	Repair of inflatable urethral/bladder neck sphincter, including pump/reservoir/cuff
53440	Sling operation for correction of male urinary incontinence (eg fascia or synthetic)
53442	Removal or revision of sling for male urinary incontinence (eg fascia or synthetic)

ICD-9	
58.93	Implantation of AUS
59.4/59.5/59.6	Suprapubic sling operation/retropubic urethral suspension/paraurethral suspension

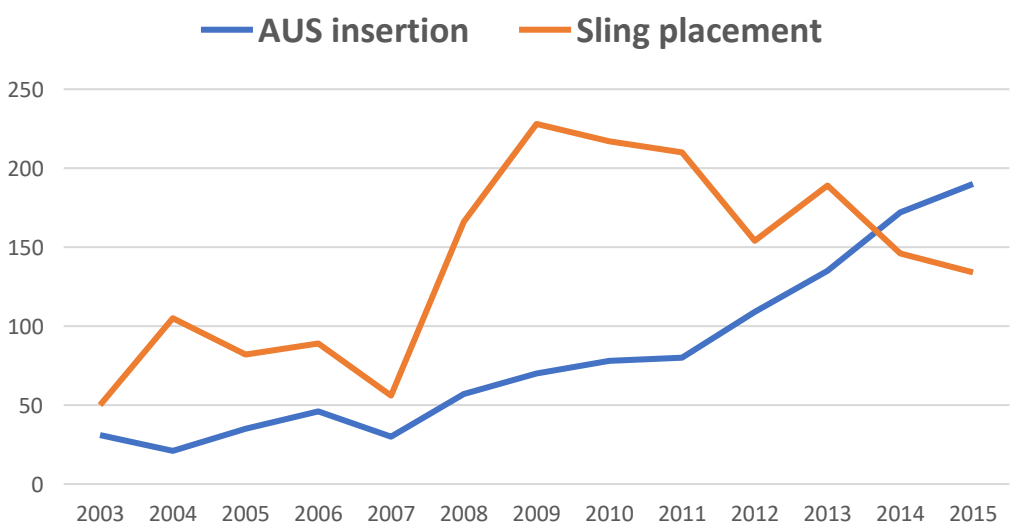
ICD-10	
Insertion of AUS into bladder neck/urethra	0THB8LZ/0THC0LZ/0THC3LZ/0THC4LZ/0THD0LZ/0THD3LZ/0THD4LZ/0THD8LZ/0THDXLZ
Reposition bladder neck/urethra	0TSC0ZZ/0TSC4ZZ/0TSDOZZ/0TSD4ZZ

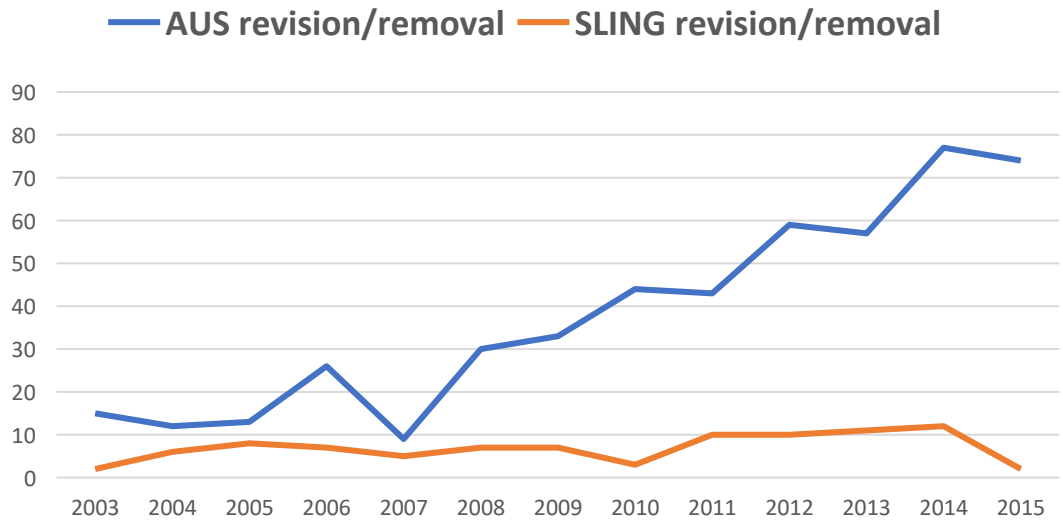
Results


Outpatient AUS
Inpt AUS
160
140
120
100
80
60
40
20
0
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013


Outpatient Sling
Inpt Sling
250
200
150
100
50
0
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013

Results


AUS insertion
Sling placement
250
200
150
100
50
0
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015


AUS revision/removal
SLING revision/removal
90
80
70
60
50
40
30
20
10
0
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015

Conclusions

- Overall, majority of both AUS and Sling procedures are increasingly being performed at an outpatient setting.
- The utilization of both AUS and male urethral sling has increased over the past decade.
- AUS removal/revision trended upwards, whereas incidence of male sling revision/removal remained relatively low and stable.
- Future studies are warranted to investigate physician and patient factors influencing the trends of surgical management of male SUI.
- Limitations:
  Regional differences across different states

References

Macdonald S, Colaco M, Terlecki R. Waves of Change: National Trends in Surgical Management of Male Stress Incontinence. Urology. 2017 Oct;108:175-179.

Sahai A, Abrams P, Dmochowski R, Anding R. The role of male slings in post prostatectomy incontinence: ICI-RS 2015.Neurourol Urodyn. 2017 Apr;36(4):927-934.

Suarez OA1, McCammon KA. The Artificial Urinary Sphincter in the Management of Incontinence. Urology. 2016 Jun;92:14-9.

Khouri RK Jr, Ortiz NM, Baumgarten AS, Ward EE, VanDyke ME, Hudak SJ, Morey AF. Artificial Urinary Sphincter Outperforms Sling for Moderate Male Stress Urinary Incontinence. Urology. 2020 Apr 11.