Poster Session 5 - Unmoderated - All Day Viewing Only - Incontinence, Prostate

4:30 - 5:30pm Sunday, 31st October, 2021

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11 Risk Of Urinary Retention After Fascial Sling Placement In Setting Of Concomitant Prolapse Repair

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Abstract

Objectives

The autologous fascial sling is often considered mainly as a salvage procedure for stress urinary incontinence, in the setting of failed previous incontinence intervention. This is partially due to the perception that autologous fascial sling is associated with an increased risk of urinary retention after placement. This perception may prevent surgeons from utilizing it as an initial intervention for stress incontinence. We examined the rates of transient urinary retention with harvest of fascia lata graft and placement of autologous fascial sling, both in autologous fascial sling-only cases, in addition to autologous fascial sling performed with concomitant prolapse repair.

Methods

We retrospectively reviewed all autologous fascial sling performed by a single surgeon from August 2016 through October 2020, looking at urinary retention rates in the postoperative setting. Urinary retention was defined as the need for clean intermittent catheterization (CIC) for greater than two weeks after surgery.

Results

Over 50 months, 116 patients underwent autologous fascial sling placement. Of these, 39 (33%) had concomitant prolapse repair performed. Overall, there were 18 (15%) patients who had urinary retention and had to perform CIC for more than 2 weeks. Of these, 7 (18%) had a transvaginal prolapse repair performed at the same time as compared to 11 of the autologous fascial sling-only cases (14%). Only 2 of the patients with urinary retention had to undergo urethrolysis with incision of fascial sling, to facilitate self-voiding and alleviate the need for CIC. One of the two patients requiring sling incision had a transvaginal prolapse repair at the time of autologous fascial sling placement. All remaining patients were able to void spontaneously within 3 months of surgery, without any further need for CIC.

Conclusions

In our patient cohort, it appears that concomitant transvaginal prolapse repair, in the setting of autologous fascial sling placement, increases the risk of transient urinary retention. However, overall, we demonstrate a very low risk of retention necessitating urethrolysis (less than 2%), both with and without concomitant transvaginal prolapse repair, providing further reassurance for surgeons counseling patients regarding peri-operative risks of placement of autologous fascial sling for stress urinary incontinence.

If funding provided, type in source company / entity name(s):

None

47 Evaluation of Online Video Gamer Behavior on Twitch: Are Gaming Streamers Providing Adequate Time for Their Streams?

Aaron Smith MD[1], Wai Lee MD[1], Morgan Sly BS[2], Kiley Clark BS[2]

[1]Northwell Health - Smith Institute for Urology, New Hyde Park, NY, USA. [2]American University of the Caribbean School of Medicine, Cupecoy, N/A, Sint Maarten (Dutch part)

Abstract

INTRODUCTION AND OBJECTIVE: Undesirable voiding habits, such as holding urine, can lead to dysfunctional voiding by promoting poor coordination of the sphincter and detrusor.[1] Twitch is the leading online platform for users to live stream video game gameplay. Our objective was to evaluate the behaviors of top twitch streamers to determine if their video gameplay could potentially be a source of suboptimal voiding behavior.

METHODS: An observational study was performed by watching and analyzing the break patters of online video game players on Twitch. The videos were previously recorded live broadcasts. A break was recorded as when a player left his or her desk. Only game streams of 480 minutes or longer were analyzed. The total amount of footage for each player was taken from two near-equal length recordings.

RESULTS: A total of 396.5 hours of gameplay was analyzed between 20 Twitch streamers (14 male and 6 female). The median analyzed time per player was 19.9 hours (IQR 19.1-20.5). Each video had from thousands to millions of views. For the female cohort, two out of six players only took 3 breaks (median of 1.8 minutes per break) for the duration of their recorded play time. The other females took 10 to 25 breaks. For the male players, one player took only 2 breaks (average 2.8 minutes per break) for the duration of his gameplay. The other 13 players averaged 8.8 breaks each.

CONCLUSIONS: To the author’s knowledge, this is the first study to evaluate behaviors of online video gamers in the context of its potential for future urinary dysfunction. Due to the observational nature of this study, we were only able to assess time intervals in the absence of voiding, since the breaks could not be confirmed to be for urination. We did observe 3 players who only took 2-3 breaks over a 19-hour interval, suggesting suboptimal voiding behavior. Though it is not established that this behavior could lead to long-term voiding dysfunction, further studies on prolonged video game play can offer better understanding on a prevalent social activity and its potential to form suboptimal voiding behaviors.

80 Application of urodynamic methods and the Adverse Childhood Experiences Module as teaching tools to evaluation and manage sexual abuse associated lower urinary tract dysfunction

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Abstract

I &O: Adverse childhood experiences (ACE's), including a historic sexual abuse, are associated with life-long negative adult health impacts. But limited literature discusses evaluation of lower urinary tract symptoms (LUTS) and dysfunction following abuse, and clinical approaches in care are lacking. Objectives: to a) evaluate uroflow and EMG coupled with educational models in the management of abuse related LUTS, & b) report satisfaction and outcome of an educational clinical care protocol to reduce sexual abuse associated LUTS.

M: N = 210 women (28-72 yrs. mean 48) with a history of sexual abuse and LUTS participated completing history, physical exam, urinalysis and clinical tools (perineometry, bladder diary, Center for Disease Control ACE Module, Behavioural Risk Factor Surveillance System (BRFSS), UDI-6, CRADI-8 and POPDI; uroflow with EMG). Personalized teaching of pelvic anatomy with models along with viewing of uroflow with EMG graphs before & after anatomy teaching was compared. Secondary education about bladder/pelvic floor function & the conduct/rationale for urodynamics preceded CMG, & pressure flow studies. A validated assessment tool recorded satisfaction with the clinical protocol and willingness to recommend the approach to others.

R: Of 210 women N=80 self-declared abuse (80% physical sexual abuse, 20% mental; while N=130 reported abuse in response to intake history questioning (55% physical abuse - forced perineal touching, vaginal/anal penetration, accompanied in 35% by forced viewing of adult explicit pornographic images). 90% completed uroflow with EMG with 87% having dysfunctional voiding correlating 92% with increased perineal tone on exam and perineometry. Physical abuse history was more associated with lower education ($p<0.05$), history of substance abuse ($p<0.01$) & minority ethnicity ($p<0.05$) compared to those with mental abuse. 92% of subjects were highly satisfied with the educational teaching modules, with 90% recommending the approach to others.

C: Sexual abuse associated LUTS may only be reported in response to clinical questioning; the educational approach of non-invasive uroflow with EMG, with teaching of bladder function & pelvic anatomy was effective and valued by those with a history of sexual abuse, dysfunctional voiding & LUTS. Important differences in social & educational backgrounds were found between physical and mental sexual abuse victims.

127 Travel characteristics and outcomes for patients seeking holmium laser enucleation of the prostate.

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Abstract

Introduction: HoLEP is an effective but underutilized option for the surgical management of BPH. With low adoption, questions arise surrounding patients access to care. It is unclear whether patients undergoing HoLEP are local or specifically seek care from afar. We looked to determine the proportion of patients that traveled out-of-state for HoLEP care and how travel influenced their peri- and post-operative metrics.

Methods: This was a retrospective cohort study evaluating patients that underwent HoLEP at a single institution from 2007-2019. Patient demographic, perioperative data, post-operative outcomes, distance and income data were evaluated and compared between those who traveled and did not travel out-of-state for care.

Results: From 2007 – 2019, 1565 patients underwent HoLEP at our institution. The mean age was 70.0 years, average BMI of 27.9 kg/m^2, and 91.6% identified as Caucasian. 44.2% of patients traveled from out-of-state for HoLEP care, traveling a median of 597 miles. Patients who came from out-of-state had larger prostates ($p=0.005$) and worse pre-operative IPSS total and bother scores ($p=0.002$). There was no difference in immediate, 30- or 90-day complications rates. In- and out-of-state patients had similar post-operative urinary and functional outcomes.

Conclusions: A large proportion of patients specifically seek out HoLEP and travel out-of-state for care. The etiologies are likely multifactorial – factors which may play an important role include lack of local care, complexity of disease and healthcare consumerism. These results have implications for those that provide HoLEP as a treatment option and for those motivated to start a HoLEP practice.

171 The COVID Effect on 3rd Line Overactive Bladder Therapy in Contemporary Practice

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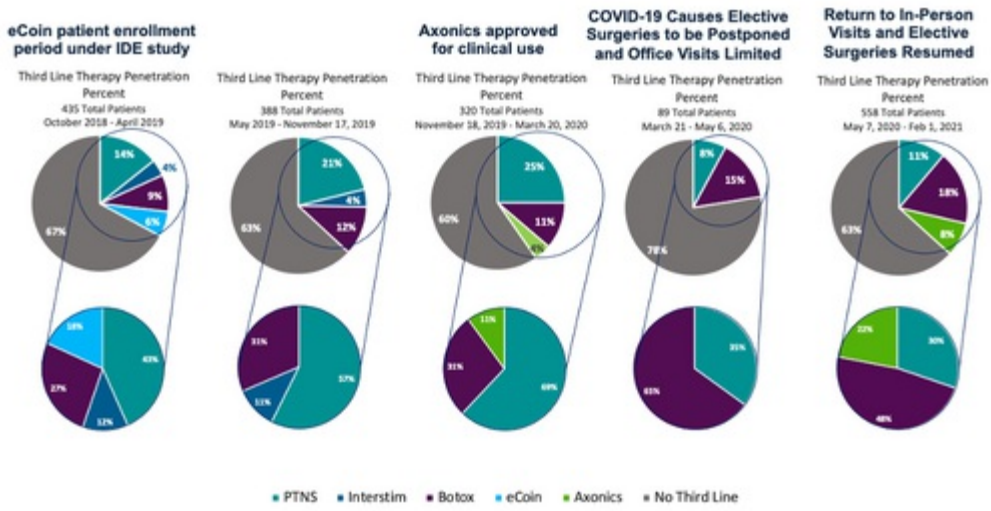
Abstract

INTRODUCTION AND OBJECTIVE: Highly prevalent overactive bladder (OAB) remains under-treated. This failure remains multifactorial with high attrition & low penetration despite efficacious therapies. COVID further disrupted delivery with banned elective surgeries & social distancing. We describe a provider's 3rd line penetration before & during COVID.

METHODS: A chart review from 10/1/2018-7/2/2021 for unique OAB visits & 3rd line delivery was performed with an evolving care pathway. From 10/1/2018- 4/30/2019 the investigational eCoin device was offered.

RESULTS: 1,719 unique OAB patients were seen. When eCoin was available 3rd line rates increased from 27% to 33%, with 6% choosing eCoin. After Axonics availability, sacral neuromodulation (SNM) was stable at 4%, with all selecting Axonics but PTNS was the most chosen at 25%. Before COVID, the 3rd line rate was 40%. During the acute COVID phase the overall rate declined to 23% despite telemedicine & creation of a website (www.bladderbotique.com) to facilitate education. Additionally, PTNS rates dropped from 25% to 8%, SNM was unavailable, & Botox injections increased from 11% to 15%. After reintroduction of mostly in-person visits & elective surgery resuming, 3rd line penetration recovered to 37%. Botox remained the most utilized 3rd line during both COVID phases rising to 18%, SNM implants doubled to 8% with PNE testing being newly offered & PTNS partly recovered to 11%. Of the 3rd line offerings during the chronic COVID phase 47.8% selected Botox, 30.2% opted for PTNS and 22% underwent Axonics SNM.



CONCLUSIONS: Despite tele-med, 3rd line penetration dramatically declined. Although PTNS was the most popular option pre-COVID it plummeted with social distancing & limited staff & experienced only a partial recovery. Responding to the banned SNM period, PNEs were offered to minimize pandemic barriers & maximize reduced OR time. Coupled with patient marketing on SNM advances, Axonics implants doubled. Botox office injections rose offering months of pragmatic therapy with even higher selection after re-opening given continued restraints. Adaptation was critical to rebounding 3rd line delivery & shifting therapy choices during COVID.

If funding provided, type in source company / entity name(s):

None

112 AdVance and AdVance XP Male Sling Comparison, an Institutional Experience

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Abstract

The AdVance male sling has been used for many years for the treatment of male stress urinary incontinence with multiple previous studies evaluating its efficacy. More recently, a new generation AdVance XP was designed with modifications in its design and surgical tools in hopes to improve patient outcomes. The aim of our study was to provide our institution's outcomes comparing both types of slings.

All patients who have had placement of an AdVanceXP male urethral sling were retrospectively reviewed. Inclusion criteria included the necessity of one-year post-operative follow up. We then identified a comparative cohort who had placement of the AdVance sling at a time period matching the surgeon's surgical experience with the new product. We compared patient demographics, baseline characteristics, functional outcomes, voiding studies and complications.

A total of 11 patients who received the AdVanceXP were compared to 11 patients who received the AdVance male sling (Table1). When comparing the AdVance XP to AdVance, there was no difference in change in average flow rate (-1.26mL/s vs 1.84mL/s, p=0.561) or peak flow (-8.37mL/s vs 3.39mL/s, p=.113). Patient's pre-surgical pad usage was similar in the AdVanceXP and AdVance groups (2.64 vs 2.55, p=0.868). The mean decrease in pad usage was 1.95 in those with the AdVanceXP compared to 1 with the AdVance (p=.156). One patient in the AdVance cohort had a repeat procedure within one year as well post-operative retention. One patient in each cohort had complaints of postoperative pain (Table2).

Patient's who had placement of the AdVanceXP were found to have greater reduction in pad usage when compared to the AdVance sling, though not reaching statistical significance.

Demographics and Baseline Characteristics			
	AdVanceXP	AdVance	p-value
Age	71.1	76.9	0.044
Race			
Caucasian	9	11	
Hispanic	1		
African American	1		
BMI	26.9	28.8	0.245
Smoking			
Never	7	4	1
Former	7	4	
DLD	7	6	1
DM	0	0	
HTN	5	8	0.387
CAD	1	2	1
Prior Prostatectomy	10	11	1
Years Prior	5.07	7.18	0.394
Radiation	0	0	
TUIBNC	0	1	1
HoLEP	1	0	1
Urethral Stricture	0	0	0
Capacity	339.6 (N=5)	368.0 (N=10)	0.624

Surgical Outcomes			
	AdVanceXP	AdVance	p-value
Pads Per Day (pre)	2.64	2.55	.868
Pads Per Day (post)	.68	1.55	.191
Change in Pad Usage	1.95	1.0	.156
PVR – Pre (mL)	16.6	40.1	.473
PVR – Post (mL)	59.7	38.9	.602
Change in PVR (mL)	42.6	49.7	0.025
Qavg - Pre (mL/s)	12.3	7.74	.115
Qavg – Post (mL/s)	11.7	8.5	.332
Change in Qavg (mL/s)	-1.26	1.84	.561
Qmax - Pre (mL/s)	26.0	13.95	.056
Qmax – Post (mL/s)	18.6	14.5	.416
Change in Qmax (mL/s)	-8.37	3.39	.113
Operative Time (min)	64.5	58.5	0.098
Reoperation in 1 Year	0	1	.476
Post-Operative Retention	0	1	.476
Post-Operative Pain	1	1	1
Post-Operative Infection	0	0	

Poster Session 4 Effects of Vibegron on Ambulatory Blood Pressure in Patients With Overactive Bladder: Results From a Double-Blind Study

Michael A Weber MD[1], William B White MD[2], Jennifer King PharmD[3], Ann Walker MS[4], Paul N Mudd, Jr. PharmD, MBA[3], Cornelia Haag-Molkenteller MD, PhD[3]

[1]State University of New York Downstate College of Medicine, Brooklyn, NY, USA. [2]University of Connecticut School of Medicine, Farmington, CT, USA. [3]Urovant Sciences, Irvine, CA, USA. [4]Apex Biostatistics, Inc, Apex, NC, USA

Abstract

Objectives: Ambulatory blood pressure monitoring (ABPM) is a sensitive method used to determine whether small changes in blood pressure (BP) and heart rate (HR) are induced by new drugs. This randomized, double-blind, placebo-controlled ABPM trial characterized the BP and HR profile of vibegron, a β_3-adrenergic receptor agonist, in patients with overactive bladder (OAB).

Methods: Patients were randomized to once-daily vibegron 75 mg or placebo for 28 days. The primary endpoint was change from baseline (CFB) to day 28 in mean daytime (waking hours) ambulatory systolic BP (SBP). Key secondary endpoints were CFB to day 28 in mean daytime ambulatory diastolic BP (DBP) and HR and in mean 24-hour ambulatory SBP, DBP, and HR. Point estimates for treatment group means and treatment differences were presented with a 2-sided 90% confidence interval (CI). For the primary endpoint, the upper limit of the CI was evaluated against a criterion of 3.5 mmHg.

Results: A total of 214 patients with OAB were randomized; of these, 96 in the vibegron group and 101 in the placebo group had evaluable ABPM measurements at baseline and day 28. Mean age was 59.3 years and 74.6% were female; 39.6% and 30.7% of patients receiving vibegron or placebo, respectively, had pre-existing hypertension. The least squares mean difference (LSMD; 90% CI) CFB to day 28 in daytime SBP was 0.81 (−0.88, 2.49) mmHg for vibegron vs placebo (**Table**). Changes in daytime DBP and HR were comparable for vibegron and placebo (**Table**). The 90% CIs include 0, implying no statistically significant differences were seen in mean 24-hour SBP, DBP, or HR (**Table**). The most commonly reported treatment-emergent adverse event was hypertension (vibegron: n=5 [4.7%, 95% CI=1.6%-10.7%]; placebo: n=4 [3.7%, 95% CI=1.0%-9.2%]); no event of hypertension with vibegron was considered treatment related.

Conclusions: In patients with OAB, once-daily vibegron was not associated with clinically meaningful or statistically significant effects on BP or HR and had a safety profile comparable with placebo.

Table. Change from baseline to day 28 in daytime and mean 24-hour SBP, DBP, and HR.

	Daytime		Mean 24-Hour	
Change From Baseline to Day 28	**Placebo (N=101)**	**Vibegron (N=96)**	**Placebo (N=101)**	**Vibegron (N=96)**
SBP, mmHg				
LS mean (90% CI)	0.01 (–1.37 to 1.39)	0.82 (–0.58 to 2.22)	0.03 (–1.23 to 1.29)	0.60 (–0.68 to 1.87)
LSMD (90% CI)*	–	0.81 (–0.88 to 2.49)	–	0.57 (–0.97 to 2.10)
DBP, mmHg				
LS mean (90% CI)	0.55 (–0.40 to 1.49)	0.50 (–0.46 to 1.47)	0.70 (–0.16 to 1.56)	0.51 (–0.38 to 1.40)
LSMD (90% CI)*	–	–0.04 (–1.20 to 1.11)	–	–0.19 (–1.25 to 0.87)
HR, bpm				
LS mean (90% CI)	0.19 (–0.74 to 1.12)	1.08 (0.12 to 2.03)	–0.15 (–1.01 to 0.70)	0.80 (–0.08 to 1.68)
LSMD (90% CI)*	–	0.88 (–0.26 to 2.03)	–	0.96 (–0.10 to 2.01)

BP, blood pressure; DBP, diastolic BP; HR, heart rate; LS, least squares; LSMD, LS mean difference; SBP, systolic BP.

*Vibegron – placebo.

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Urovant Sciences

61 Active Surveillance or Watchful Waiting in Clinically Low-Risk Prostate Cancer Patients in the SEER Database With and Without an Oncotype DX Genomic Prostate Score Assay

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[1]Surveillance Research Program, Division of Cancer Control and Population Sciences, National Cancer Institute, Rockville, MD, USA. [2]Exact Sciences Corporation, Redwood City, CA, USA. [3]Department of Epidemiology and Biostatistics, University of California, San Francisco, CA, USA. [4]Information Management Services, Calverton, MD, USA

Abstract

Introduction and objective:

The Surveillance, Epidemiology, and End Results (SEER) Program collects cancer data on approximately 35% of the US population. The Oncotype DX Genomic Prostate Score® (GPS™) assay is used to help guide treatment decisions at prostate cancer diagnosis. We linked data from the SEER registries with results from the GPS assay and evaluated determinants of selection of active surveillance/watchful waiting (AS/WW) for patients diagnosed with localized clinically low-risk prostate cancer.

Methods:

The SEER data were restricted to patients diagnosed with localized prostate cancer from 2013 through 2017 and linked to GPS data from 2013 through 2018. Eligible patients were classified into NCCN risk groups using clinical variables. We used multivariable logistic regression to identify factors associated with selecting AS/WW as initial management.

Results:

120,223 patients were included. Median age was 64 years, 70% were white, and 44% were NCCN Very Low/Low, 27% Favorable Intermediate, 22% Unfavorable Intermediate, and 7% Unknown Intermediate risk. AS/WW percentages increased by year, from 18.3% (95% CI: 17.8, 18.8) in 2013 to 27.1% (26.5, 27.7) in 2017. Among the 5,553 (4.6%) patients with a GPS result 48.8% (47.5, 50.1) had AS/WW, compared to 21.6% (21.3, 21.8) with no GPS result ($p < 0.001$). The percentage of patients on AS/WW decreased as the GPS result increased: 58.3% (56.1, 60.4) for GPS results 0-20, 47.4% (45.6, 49.3) for 21-40, and 27.1% (23.8, 30.6) for >40. In a multivariable logistic regression model that included age, race/ethnicity, year of diagnosis, and NCCN risk group, receiving a GPS result (vs no GPS result) was associated with AS/WW selection (OR 2.7 [95% CI 2.5, 2.9], $p < .001$).

Conclusions:

While overall use of AS/WW increased from 2013 to 2017, the GPS assay was independently associated with AS/WW, after adjusting for year of diagnosis and other covariates.

If funding provided, type in source company / entity name(s):

Exact Sciences Corporation

12 Budget Impact of Minimally Invasive Surgical Treatments for Benign Prostatic Hyperplasia: An Analysis of States with Limited New Technology Coverage

James Bresee MD[1], Sirikan Rojanasarot PhD[2], Julie Baxter BA[2], Emi Suzuki BA[2], Bilal Chughtai MD[3]
[1]Northwest Urology, Portland, OR, USA. [2]Boston Scientific, Marlborough, MA, USA. [3]Weill Cornell Medicine, New York, NY, USA

Abstract

Objectives

Prostatic urethral lift (PUL) and convective water vapor thermal therapy (WVTT) are emerging treatment options for benign prostatic hyperplasia (BPH). While both procedures are minimally invasive and can be performed in an office-based setting, there are private payers in Alabama, New Jersey, New York, Oregon, Pennsylvania, and Washington that have limited coverage for WVTT. This study compared the budget impact of PUL and WVTT on private payers in these 6 states.

Methods

An Excel-based Markov model was developed to examine the budget impact of PUL and WVTT for men with lower urinary tract symptoms secondary to BPH in 6 states over a 5-year time horizon. The model was populated with a cohort of men with a mean age of 63 years and an International Prostate Symptom Score of 22. We obtained clinical inputs from PUL and WVTT randomized controlled trials. Private payers typically benchmark their reimbursement with Medicare reimbursement rates. Therefore, we used the weighted average of 2021 Medicare reimbursement as a proxy for procedural and adverse event costs for each state. PUL and WVTT procedures were assumed to occur in an office setting for procedural cost estimates.

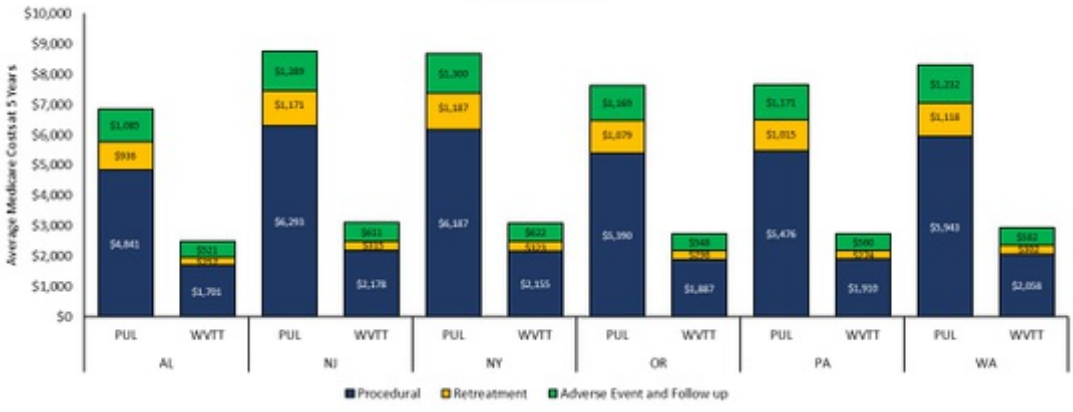
Results

At 1 year, the total costs of PUL ranged from $5,690 to $7,324 in Alabama and New Jersey, respectively, compared to $1,829 and $2,330 for WVTT, reflecting a threefold higher cost for PUL than WVTT in the 6 states. The cost difference between the two procedures continued to diverge in years 2-5. For the two western states, the total costs of PUL at 5 years were $4,905 higher than WVTT in Oregon and $5,350 higher than WVTT in Washington (Figure).

Conclusions

WVTT provided short-term and long-term cost-savings for private payers in these 6 states when compared to PUL. These findings should be considered in BPH surgical treatment coverage decisions.

Figure. Medicare Per Patient Costs of Prostatic Urethral Lift (PUL) and Convective Water Vapor Thermal Therapy (WVTT) at 5 Years by State



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Boston Scientific

186 Registration Accuracy In an Office-Based Low-Field Magnetic Resonance (MR) Imager for Prostate Biopsy Guidance

Selin Chiragzada B.S., Poorvi Satya B.S., Srirama Venkataraman PhD, MBA, Aleksandar Nacev PhD, Ram Narayanan PhD, Dinesh Kumar PhD, MBA
Promaxo Inc., Oakland, CA, USA

Abstract

Objectives: Prostate cancer is expected to affect about 250,000 men in the USA in 2021 and is the most common cancer among men next to skin cancer. Systematic biopsy under transrectal ultrasound-guidance has been the standard of care for diagnosis. In the last decade, use of fusion biopsy, where pre-procedure MR images with annotations are fused with real-time ultrasound, has gained traction. While fusion has resulted in better outcomes, significant drawbacks such as steep learning curve, gland deformation, registration inaccuracies, and transrectal approach in general, have limited its adoption. The Promaxo MRI System is an FDA-cleared low-field MRI system in a single-sided open configuration for guiding prostate interventions within an office setting. Promaxo MR images are acquired without transrectal probes along the axial direction and with patient positioning similar to high-field MRI. The purpose of this study is to assess the registration accuracy of images obtained from the low-field MRI with a pre-procedure high-field MRI.

Materials and Methods: In this study, T2-weighted clinical images were taken using a 1.5T MRI and the low-field MRI. Four prostate MRI experts and radiologists performed image registration between 1.5T and the low-field MR scans. The testers identified anatomical landmarks located in the prostate, urethra, rectum, and obturator muscles. The coordinates of each landmark on the axial low-field and axial pre-procedure high-field images were then identified independently and compared. Target registration error (TRE) for each landmark identified by the experts was calculated by computing the distance between the selected points.

Results: Based on 27 points identified independently by the testers, the results show an average TRE of 1.84 mm with 95% CI [1.27-2.41].

Conclusion: In this 5 patient feasibility study, the TRE was found to be clinically acceptable and non-rigid registration was not required. Promaxo MR images are acquired with external receivers and do not require an endorectal coil, avoiding gland deformation normally encountered. The high-field and Promaxo MRI scans are obtained along the same orientation, with the patient in a supine position, making registration straightforward.

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Promaxo Inc.