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70

THE SAPOC TECHNIQUE: A NOVEL APPROACH UTILIZING MULTIPLE SLICES AROUND POINT OF MAXIMAL CURVATURE FOR THE CORRECTION OF PENILE CURVATURE AT THE TIME OF PENILE PROSTHESIS PLACEMENT IN PATIENTS WITH SEVERE PEYRONIE'S DISEASE

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Introduction: Placement of an inflatable penile prosthesis (IPP) is indicated for patients with severe Peyronie's disease (PD) and erectile dysfunction (ED) that do not respond to medications. When utilizing plaque incision and graft placement, most surgeons perform an incision at the point of maximal curvature. In most cases of severe PD, this incision results in a large defect that requires placement of a large graft while postoperative penile shortening remains a concern among patients.

Objective: To present a novel technique for the treatment of severe PD and ED during IPP implantation, in which multiple relaxing incisions are made around the point of maximal curvature. This technique minimizes the size or even the need of a graft and maximizes length restoration.

Methods: A total of 35 patients with PD and severe ED underwent IPP placement with penoplasty by a single surgeon from October 2018 to March 2021. 27 of these patients underwent the SAPOC technique at the time of IPP placement through a non-degloving approach. This technique involves elevation of the neurovascular bundle for dorsal or lateral curvatures along with elevation of the urethra for ventral curvatures. After the point of maximal curvature is identified, 2 to 4 transverse relaxing incisions (slices) are made around the point of curvature approximately 1 to 1.5cm apart in order to minimize the size of the defect, and hence the size of the graft, while allowing for maximal restoration of length. Primary outcome measurements included straightening rates, patient satisfaction, change in penile length, immediate and late complications.

Results: The SAPOC technique was applied to 27 patients. Mean patient age was 58.2. Mean preoperative curvature was 71.9 degrees. Mean preoperative stretched penile length at the time of surgery was 14.18 cm. Mean increase in erect penile length after IPP with SAPOC technique was 0.94 cm ($p=0.006$) (range 0 to 2.5 cm). A total of 12 patients (44.4%) did not require graft placement. After a mean follow-up of 13.5 months, 23 of 27 (85.2%) patients had a totally straight penis. 4 patients (14.8%) had less than 20 degrees residual curvature which was sufficient for penetrative intercourse. 26 patients (96.2%) were satisfied with their postoperative result. Complications included delayed ejaculation ($n=4$, 11%, all of which resolved within 12 months), device malfunction ($n=1$) after 2 years of initial surgery which was revised successfully, device infection at 6 weeks ($n=1$) and intractable pain 2 years after implantation ($n=1$), both of which required removal of the prosthesis.

Conclusions: The SAPOC technique at the time of IPP placement is a novel, safe and feasible technique for the management of complex Peyronie's disease and erectile dysfunction. This technique allows the surgeon to complete the procedure without graft placement in some occasions which theoretically will decrease operative time. It also provides for length restoration which will increase patient satisfaction.

Disclosure: Any of the authors act as a consultant, employee or shareholder of an industry for: Consultant for Coloplast, Boston Scientific, and Endo Pharmaceuticals

71

ADULT PATIENT'S OPINIONS ON SURGICAL CORRECTION OF CONGENITAL PENILE CURVATURE

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Introduction: Congenital penile curvature is common and presents with varying levels of severity. The curvature may present during infancy or post-pubertal. Historically, treatment has consisted of surgical correction, typically with penile plication or complex grafting procedures. Most pediatric urologists recommend surgical management for penile curvature (PC) based on curvature severity, with previous work identifying $\geq 30^\circ$ as a common threshold to recommend correction.

Objective: To assess adult patients' opinions on willingness to consider surgical correction for PC in order to determine if this aligns with pediatric urologists' opinions.

Methods: In this cross-sectional study, a survey was administered to adult patients and their partners (> 18 years of age) in general adult urology clinics at 3 geographically separate institutions. The survey consisted of unlabeled images of penis models with varying degrees of PC (range 10-90°). Respondents were asked to select the images they would want surgically corrected for themselves or their partners. Univariable and multivariable analyses were performed to identify demographic variables associated with willingness to consider correction (p -values $< .05$ considered significant).

Results: Response rate was 77% (300/388). The majority (80%) of participants chose to surgically correct PC, however 20% chose to not surgically correct any degree of PC. Most participants were male (70%), married (62%), heterosexual (92%), and did not work in healthcare (80%) (Table 1). Among those who endorsed willingness to surgically correct PC, the average threshold for correction was 40.5° (SD 25.3). On univariable analysis, there was a significant difference in willingness to undergo PC correction based on gender, age groups, sexual orientation, and region (Table 1). Male patients were more likely to consider surgery at a lower degree of PC compared to females (36.6° vs 50.6°, $p<.001$). Those who identified as heterosexual also had a lower threshold for correction compared to those identifying as LGBTQ (39.6° vs 56.4°, $p=.015$). Midwestern residents endorsed an average threshold for correction of 21.5° compared to other regions varying between 40° to 60° ($p<.001$). Regionality differences remained true on multivariable analysis when accounting for all demographic features ($p<.001$).

Conclusions: In surveying adult patients, we identified an average PC threshold of 40° beyond which surgical correction was desired. Females and LGBTQ+ participants had a higher threshold for surgical correction, but when accounting for all demographic factors, only residence in the Midwest US was associated with a lower threshold for correction.

Disclosure: No

Table 1. Demographics & Univariable Analysis

Study Characteristics	N (%)	Minimum Degree of Correction, Mean (95% CI)	p-value
Gender			<.001
Female	87 (29)	50.6 (45.2 to 55.9)	
Male	212 (70)	36.6 (32.9 to 40.4)	
Age			0.002
18 to 24	12 (4)	42.7 (25.1 to 60.4)	
25 to 34	35 (12)	44.6 (36.6 to 52.7)	
35 to 44	43 (14)	40.0 (31.9 to 48.1)	
45 to 54	35 (12)	55.9 (47.6 to 64.2)	
55 to 64	77 (25)	38.9 (33.2 to 44.6)	
≥ 65	98 (32)	33.0 (26.9 to 39.2)	
Relationship Status			0.14
Single	59 (20)	48.6 (41.1 to 56.1)	
In a relationship	31 (10)	38.6 (26.7 to 50.5)	
Married	186 (62)	38.9 (35.2 to 42.7)	
Divorced	22 (7)	37.6 (25.5 to 49.8)	
Sexual Orientation			0.015
Heterosexual	279 (92)	39.6 (36.6 to 42.8)	
LGBTQ	20 (7)	56.4 (42.9 to 69.9)	
Region			<.001
Northeast	30 (10)	57.7 (50.3 to 65.2)	
Mid-Atlantic	47 (16)	49.7 (42.2 to 57.2)	
Midwest	97 (32)	21.5 (17.0 to 25.9)	
South	26 (9)	44.5 (34.0 to 55.0)	
West	93 (31)	49.9 (45.2 to 54.6)	
Works in healthcare			0.07
No	242 (80)	38.9 (35.3 to 42.5)	
Yes	57 (19)	46.3 (39.5 to 53.0)	

72

EIGHT INJECTIONS OF COLLAGENASE CLOSTRIDIUM HISTOLYTICUM MAY BE EFFECTIVE IN CALCIFIED PLAQUES

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Introduction: Peyronie’s disease (PD) is the result of abnormal tissue healing in the tunica albuginea resulting in an inelastic plaque. In some instances, plaques will calcify. Several studies question the efficacy of Collagenase Clostridium Histolyticum (CCH) in calcified plaques leading to a belief that calcification is associated with failure of medical treatment and an increased risk of surgical intervention. Our objective is to measure changes in curvature before and after treatment of calcified plaques with CCH.

Objective: To determine change in curvature of calcified plaques treated with 8 injections of CCH

Methods: We prospectively evaluated PD plaques using ultrasound in all men presenting with PD starting November, 2018. Plaques were evaluated in the flaccid state and curvature was measured after the injection of intracavernosal Trimix using goniometer. We utilized a standardized system of plaque typing: type 1: thickening of the tunica albuginea without acoustic shadowing, type 2: a moderately calcified plaque with a typical ultrasound shadow, type 3: a severely calcified plaque complete acoustic shadowing. We measured pre and post CCH curvature 6 months after all eight injections using the standard manufacturer protocol. All patients were instructed on home modeling. Paired T-t was used to compare pre and post measurements. Results presented as means± standard deviations.

Results: We identified 19 men with calcified PD who completed all 8 injections of CCH. Mean age and curvature were 61±7 years and 55±22 degrees. Of the 19 men, 7 had type 3 plaques and 12 had type 2 plaques. There were no differences in patient age however there was a difference in baseline curvature between type 2 and 3 plaques (55±17 vs 75±17 degrees p<0.05). Curvature improved by an average of 25±20 degrees p<0.05. Interestingly, as a group, type 3 plaques improved by 37±23 degrees compared to 18±15 degrees for Type 2, however this difference was not significant

Conclusions: In our small cohort, 8 injections of CCH appear to be an effective therapy for men with calcified PD plaques. Interestingly, CCH remained effective even in severely calcified PD. A larger study including a comparison of non-calcified PD is needed.

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Clarification: Industry funding only - investigator initiated and executed study

Any of the authors act as a consultant, employee or shareholder of an industry for: Endo Pharmaceuticals

73

THE VALUE OF THE INTERNATIONAL INDEX OF ERECTILE FUNCTION (IIEF) IN CHARACTERIZING THE ERECTILE FUNCTION IN PATIENTS WITH PEYRONIE’S DISEASE

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Introduction: Peyronie’s Disease (PD) is characterized by physical deformity in the penis that often has a negative impact on the sexual relationship of the patient and his partner. The International Index of Erectile Function (IIEF) is a standardized patient questionnaire used to measure various aspects of erectile performance and the severity of erectile dysfunction. IIEF accuracy in patients with Peyronie’s disease has been criticized as the questions that compromise this tool inquire about sexual activity and intercourse in the patient over the past 30 days, not considering the fact that those patients are able to achieve adequate erection for intercourse but do not engage either due to physical difficulty due to curvature or psychological stress, hence misrepresenting the degree of erectile dysfunction.

Objective: In this study, we correlate the IIEF score domain with the presence of vascular abnormalities on penile duplex doppler ultrasound (PDDU) during the evaluation of patients for PD.

Methods: We evaluate all patients presenting with symptoms suggestive of PD with a PDDU for better counseling on different treatment options. The IIEF questionnaire is filled at the beginning of each study. Arterial insufficiency is characterized by peak systolic velocity (PSV) less than 30 ml/sec, while venous leak is characterized by end-diastolic velocity (EDV) more than 5 ml/sec. Those measurements are obtained at 10, 15 and 20 min after injecting intracavernosal vasoactive agent, while recording the tumescence and rigidity at each time point. In addition, we correlate the severity of IIEF score with the prevalence of vascular abnormalities detected in the PDDU study.

Results: 540 consecutive patients between January 2016 and December 2020 were included in this study. The mean age of the cohort was 55.1 years. The average curvature was 53.3 degrees, with mean tumescence and rigidity achieved 90% and 70.6%, respectively. Graph 1 shows the distribution of the different vascular abnormalities detected on the PDDU in each category of IIEF abnormality. There is a clear decreasing trend of finding non-vascular abnormalities as the IIEF value decrease from None to Severe (Figure 1). Additionally, there is concomitant rise in the amount of arterial insufficiency and venous leak (counting venous leak and mixed etiology) as the severity measured on IIEF questionnaire increases.

Conclusions: While IIEF questionnaire has been criticized in patients with PD as being an inaccurate assessment of erectile function, it seems to still be of a value and roughly correlates with PDDU findings. After analyzing data from our cohort, IIEF has the potential assist in treatment decision making as a screening tool for need of additional tests with higher specificity.

Disclosure: Any of the authors act as a consultant, employee or shareholder of an industry for: Endo Pharma