duplex ultrasound and the other CVD biomarkers was identified.

Conclusions: Our findings suggest that hs-CRP may represent a sensitive biomarker for vasculogenic ED and may identify early CVD or CVD risk factors in men in whom these abnormalities may not otherwise be identified.

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IS THERE A RELATIONSHIP BETWEEN PHOSPHODIESTERASE TYPE 5 INHIBITORS (PDE5i) AND PROSTATE CANCER BIOCHEMICAL RECURRENCE?

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Objectives: There have been conflicting studies looking at an association between prostate cancer biochemical recurrence (BCR) after radical prostatectomy (RP) and PDE5i use.

Methods: Patients completed a 1 − 5 assessment of PDE5i use pre-RP and serially after RP in a prospective, quality of life study evaluating men post-RP. Men who had data on PDE5i use at 3m, 6m, 9m, and 12m in the first year following RP were included in the analysis. The tested predictors of BCR were: age, PSA, Gleason score (G), surgical margin status (SMS), seminal vesicle involvement (SVI), extra capsular extension (ECE), and lymph node involvement (LNI). Predictive nomograms have established these as the important predictors of BCR. PDE5i groups were: low use (never/sometimes) vs. high use (regularly/routinely/more than once a day). Risk groups were low risk (G 6/7 and organ confined disease) or intermediate/high risk (all others).

Results: Mean age of the 655 men was 61±7 years. 117 men (18%) had BCR. The mean time to BCR was 1.4±1.4 years. PDE5i groups: 55% low use, 45% high use. There were 16% in the low use PDE5i group with BCR vs 20% in the high use PDE5i group with BCR (RR=1.3: 95% CI: 0.84-1.86, p=0.28). On multivariable analysis, G, SMS, SVI, ECE, and LNI were all associated with BCR (p=0.05 to p=0.001). Age (OR: 1.02, 95% CI: 0.99-1.06, p=0.22), PSA (OR: 1.02, 95% CI: 0.98-1.06, p=0.31), and PDE5i group assignment (OR: 1.52, 95% CI: 0.95-2.43, p=0.08) were not significant predictors in the model. Risk groups were low risk (178 men) and intermediate/high risk (476 men) disease. We could not replicate the analysis with the low risk group since only 5 men had BCR. In the high risk group, there were 112 (23%) who had BCR. The pattern of results for disease characteristics were similar as above. The PDE5i variable, on univariate analysis the group assignment was not significant. There were 22% in the low use PDE5i group with BCR vs 26% in the high use PDE5i group with BCR (RR=1.3: 95% CI: 0.81-1.90, p=0.33). In multivariable analysis, PDE5i group assignment was again not a significant predictor of BCR (OR: 1.37, 95% CI: 0.84-2.22, p=0.20).

Conclusion: This is assessment of risk is based on a drug exposure algorithm, which has not been reported before. There does not seem to be a significant association between PDE5i use and BCR.

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THE EFFICACY OF PLATELET-RICH PLASMA (PRP) AS A SUPPLEMENTAL THERAPY FOR THE TREATMENT OF ERECTILE DYSFUNCTION (ED): INITIAL OUTCOMES

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Objective: Through past decades a variety of therapies have evolved for erectile dysfunction (ED). The effectiveness of these methods vary by individual and are often used in conjunction with each other for optimal penile rehabilitation. While the advent of platelet-rich plasma (PRP) is not new to medicine, there has been limited clinical data for its application in the field of sexual medicine, specifically in conjunction with other forms of ED therapy. Evidence suggests PRP promotes the body's natural healing process and may help tissues in the penis better accept other therapies. This abstract provides an early review of PRP outcomes for ED.

Materials and Methods: Over 12 months (8/2015 − 8/2016) patients at Midwest Urological Group were presented with the option of adding PRP to a medication and vacuum therapy regimen for the treatment of ED. Patients were excluded if they had active/metastatic cancer or any blood dyscrasias. PRP was obtained using the patients' own plasma and each patient received only one treatment. To assess the change of erectile function, patients completed the International Index of Erectile Function (IIEF) prior to treatment and at least 4 weeks post. Patients were included in this chart review if their initial IIEF indicated moderate ED (score 10-21).

Results: Preliminary results, N = 9 patients met the criteria to be included in the present study. The mean age was 56 years (range 34-66). The average pre-PRP IIEF score was 15.6 (range 12-20). The average post- PRP IIEF was 19.9 (range 11-27). A paired samples t-test revealed no significant difference between groups, $t(8) = 1.59$, $p = 0.157$, however the effect size was large, *Cohen's d* = 0.793. No adverse events were reported. 100% of patients reported no side effects.

Conclusions: PRP may represent a safe and viable option as a supplementary therapy for penile rehabilitation. Particularly notable is the prospect of zero side effects. Further investigation is

required to assess how PRP works in conjunction with specific therapies and to establish the fit within the physician's treatment protocol.

Disclosure: Work supported by industry: no. The presenter or any of the authors act as a consultant, employee (part time or full time) or shareholder of an industry.

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CLINICAL CHARACTERISTICS OF YOUNG MEN WITH ERECTILE DYSFUNCTION

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Introduction and Objective: Erectile dysfunction (ED) is usually considered a condition of older men and is associated with various comorbidities. However, ED commonly occurs in younger men, with limited data available on clinical characteristics and outcomes in this population. Given the paucity of data, we sought to describe common clinical and pathologic characteristics of men under 30 presenting with ED.

Methods: A retrospective chart review was performed of all men <30 years old undergoing penile duplex Doppler ultrasonography (PDDU) at our institution from January 2014 to November 2015. Variables included demographic information, medical comorbidities, IIEF scores, laboratory values, and PDDU vascular parameters.

Results: A total of 262 men were included in the database, including 27 men (10%) < 30 years old who underwent evaluation for ED with PDDU during the study period. In these patients, median age was 23 (IQR 19.3;26.5), median BMI was 25 (IQR 22;26), and median IIEF-6 score was 7 (IQR 6;21). Relevant comorbid conditions included depression (22%), current tobacco use (11%), and current alcohol use (54%). Median total and free testosterone values were 474 (IQR 417;583) and 15.5 (12.3;16.8), respectively. Fasting glucose and lipid results were within normal ranges for all men. Median peak systolic velocity, end diastolic velocity, and resistive index were 63.3 cm/sec (IQR 49.2;77.2), 0 cm/sec (IQR -6.2;2.1), and 1 (IQR 0.9;1.1), respectively, accounting for a 15% rate (4/27) of venoocclusive dysfunction.

Conclusion: The majority of men under 30 with ED have normal laboratory and PDDU findings. These results suggest that the majority of cases of ED in younger cohorts represent a distinct disease process from that of older men.

Disclosure: Work supported by industry: no.

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SACUBITRIL/VALSARTAN (ENTRESTO®) AND VALSARTRAN/SILDENAFIL COMBINATION IMPROVES FUNCTIONAL RESPONSES ON ISOLATED RAT CORPUS CAVERNOSUM FROM NERVE-CRUSH INJURY MODEL

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Objective: Erectile dysfunction (ED) is a frequent complication of radical prostatectomy (RP), with penile neuropathy contributing to the disease process. Angiotensin-II is a known mediator of smooth muscle vasoconstriction and fibrosis after bilateral cavernosal nerve injury (CNI). Sacubitril-valsartan (Entresto®-Novartis), described as an angiotensin receptor neprilysin inhibitor, is a new oral drug combination for the treatment of symptomatic chronic heart failure in adults with reduced ejection fraction. The aim of this study was to compare the combined effects of sacubitril/valsartan and valsartan/ sildenafil on bilateral CNI-induced functional changes in rat cavernosal tissue.

Materials and Methods: Bilateral CNI was produced in anesthetized male rats and cavernosal tissue was removed 2 weeks after CNI. Organ-bath relaxant responses were performed on corpus cavernosum (CC) strips (1x1x6 mm). After phenylephrine-induced contraction (Phe, 10 μM), dose-response curves were evaluated for valsartan (10 nM-0.5 mM), sacubitril (10 nM-0.2 mM), sacubitril/valsartan (10 nM-0.5 mM) and valsartan (10 μM)/sildenafil (10 μM). Electrical field stimulation (EFS; duration: 15 sec amplitude: 50−80 V; frequency: 1−20 Hz; pulse width: 5msec) of the cavernosal autonomic nerves was accomplished by the use of platinum electrodes positioned on the either side of the tissue strip in the absence and presence of these drugs.

Results: Valsartan, sacubitril, and sacubitril/valsartan inhibited Phe-evoked CC contractions (maximum relaxation responses: 88.6 ± 8.4; 12.6 ± 5.9; 96.5 ± 3.5%, respectively) in a dose-dependent manner in CC strips from CNI rats. Sildenafil-induced relaxation (50.5± 5.5%, at 10μM) was increased by 44.5% in the presence of valsartan (91.0 ± 3.5 %, p=0.0142). EFS-induced relaxation responses (28.8 ± 3.0%, at 20Hz) occurred after Phe-precontraction potentiated by 40.8%, in the presence of valsartan (70.3 ± 6.5%, p=0.0199).

Conclusions: Valsartan markedly relaxed isolated CC strips from CNI rats. Combining the sildenafil with valsartan causes greater nitrergic relaxation of CC smooth muscle compared to sildenafil alone. In vitro administration of valsartan combined with sacubitril in the setting of CNI may mitigate ED caused by CNI. Further experimental and clinical studies are required to advance knowledge of combined treatment modality in ED after RP.

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ETHNICITY AND AGE AS FACTORS IN SILDENAFIL TREATMENT OF ERECTILE DYSFUNCTION

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