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CHARACTERISTICS OF PATIENTS WITH ERECTILE COMPLAINTS REFERRED TO A CENTER OF EXCELLENCE – DEFINING COMPLEX ERECTILE DYSFUNCTION

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Introduction: The prevalence of erectile complaints in the US is estimated to be more than 50%. Most of the time ED complaints are evaluated and treated in the primary care setting. However, when first line measures are not efficient, patients are referred to general Urologists or to a specialized center.

Objective: The primary aim of this study is to describe the characteristics of patients referred to a tertiary center for evaluation of erectile complaints not responding to traditional first line therapies and, or patients with an associated complaint of penile deformity (rule out Peyronie’s Disease/PD).

Methods: We retrospectively analyzed a cohort of patients between 2005 and 2019, detailing primary complaints, sexual histories, self-assessment scores, medical history and results of in office intracavernous injection followed by Color Doppler Duplex Ultrasound (CDDU). CDDU findings were recorded following injection of low dose alprostadil (10-20 mcg) and again after a period of privacy and visual sexual stimulation. CDDU findings including peak systolic velocities (PSV), and resistive indices (RIs) were recorded. Arterial insufficiency (AI) was defined as either a post-stimulation PSV < 25 (severe) or a PSV 25-34.9 with RI ≥ 0.9 (moderate). Cavernous venous occlusion disease (CVOD) was defined as post-stimulation PSV ≥35 with RI < 0.9. Vascular normal was defined as post-stim PSV ≥ 35 with RI ≥ 0.9.

Results: A total of 1490 patients with a median age of 60 (range, 18 – 88), median BMI of 28.4 (range, 15.9 – 56.8) and median Sexual Health Inventory for Men (SHIM) score of 10 (range, 0-25). In our cohort, 257/1489 (17.3%) patients had heart disease, 656/1489 (44.1%) patients had hypertension, 520/1489 (34.9%) patients had diabetes, and 203/1488 (13.6%) patients had a past medical history of hypertriglyceridemia. Smoking history was present in 853/1478 (57.7%) of patients and complaint of PDE-5 failure was made by 945/1201 (78.7%) patients who reported using it. 900 patients (60.4%) had a complaint of penile deformities and ED, 461 (30.9%) had a complaint of ED only, and 129 (8.7%) had a complaint of PD only. Prostate surgery history was noted in 316 men: radical retropubic prostatectomy 108, robotic assisted prostatectomy 134 and endoscopic resection or enucleation 74. Following CDDU we confirmed 767 (51.5%) patients with both ED and PD, 351 (23.6%) with ED only, and 310 (20.8%) PD only. We found 62 men (4.2%) had normal vascular erectile response to low dosage PGE1 (diagnosed as psychogenic ED vs. post-prostatectomy neurogenic ED). Among the 351 patients with ED only on Doppler, 132 (37.6%) had AI, 124 (35.3%) had CVOD, and 95 (27.1%) had a mixed vascular diagnosis. Among patients with vascular ED on diagnoses by CDDU, 73/351 (20.8%) had heart disease, 192/349 (55.0%) had smoking history, 273/311 (87.8%) complained of PDE5-inhibitor failure, 130/351 (37.0%) had diabetes, and median SHIM score was 7 (range 1-25).

Conclusions: This summary describes the characteristics in 1490 men who presented for evaluation of erectile complaints and or complaints of penile deformity to a tertiary care center. Patients referred to Urologists have complex ED, defined as refractory to PDE5-Inhibitors, associated with penile deformities, and multiple medical / surgical risk factors.

Disclosure: No

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IMPACT OF COVID-19 PANDEMIC IN ONLINE INTEREST IN ERECTILE DYSFUNCTION

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Introduction: The COVID-19 pandemic has had a significant impact on global health. During uncertain times, priorities amongst patients shifted as many faced health concerns, economic uncertainty, and isolation. Access to general medical care during 2020 was challenging for many Americans who spent the year in quarantine. Without access to care, we hypothesize that patients were less likely to search for treatment options for a non-emergent condition like erectile dysfunction.

Objective: Herein, we aim to report on Google search trends observed in the pre COVID and post COVID era.

Methods: Google Trends was analyzed using search terms related to erectile dysfunction between June 2018 and June 2021. The search volume index (SVI), a relative measure of search volume on Google, was obtained for the following terms: erectile dysfunction, viagra, trimix, penile pump, and penile implant. Student t test was used to compare changes in mean SVI for each month compared to the same month one year prior.

Results: Compared to one year prior, the search for erectile dysfunction remained relatively stable over time with the exception of three months (9% decline Mar 2020, 38% increase Jan 2021, 8% increase Jun 2021). When compared to the preceding year, searches for Viagra declined during 9/37 (24%) months analyzed including Mar-Jun 2020, which coincided with the early part of the COVID-19 pandemic (p<0.05 for all). The only statistically significant increase occurred Oct 2020, a 16% change compared to Oct 2019 (p<0.05). In contrast, search for trimix did not change significantly over time except for an increase of 62% Mar 2021 and 60% Apr 2021 (p<0.05 for all). Search for the term penile pump did not change over time except for a 16 and 10% decline early during the pandemic, Feb and Mar 2020, respectively (p<0.05 for all). Lastly, search for penile implant declined 37% Mar 2020 and 32% Apr 2020 compared to 2019, and increased by 67% May 2021 compared to May 2020 (p<0.05 for all).

Conclusions: COVID-19 represented a major global health crisis, raising concerns and uncertainties for many. Erectile dysfunction remained a constant source of online interest. Despite limited access to medical care for elective conditions, only a few isolated increases in Google SVI were noted, most of which occurred during 2021 compared to 2020. This may be a reflection of the general public’s lack of familiarity with treatments other than phosphodiesterase-5 inhibitors.

Disclosure: No

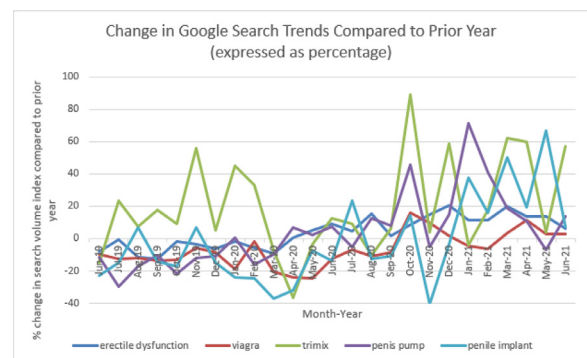


Table 1: Change in Google search volume index compared to one year prior for erectile dysfunction related terms.

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SUCCESSFUL TREATMENT OF HARD FLACCID SYNDROME: A CASE REPORT

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Introduction: Hard flaccid syndrome (HFS) is a chronic, painful condition cited in several patient online forums but poorly defined in literature. Gul and Towe were the first to report on cases of HFS with symptoms including a semi-rigid penis in the flaccid state, erectile dysfunction, penile sensory changes of numbness and coldness, and incomplete voiding. These symptoms have a rapid onset, typically following a traumatic event during sexual intercourse or masturbation. The leading hypothesis regarding the pathophysiology of HFS involves physical or psychological stress which injures the pelvic floor neurovasculature leading to prolonged contraction of the pelvic floor muscles and subsequent pelvic floor dysfunction. Though there is no standardized treatment for HFS, patients have been treated, largely unsuccessfully, with analgesics for the neuropathic pain, phosphodiesterase 5 inhibitors for the erectile dysfunction, and pelvic floor relaxation exercises for the overactive pelvic floor muscles.

Objective: We present a case of a patient diagnosed and successfully treated for HFS.

Methods: A 16-year-old male patient presented to the emergency room with penile and testicular pain and numbness after masturbation and other associated HFS symptoms. Laboratory and imaging tests were normal. He underwent a circumcision for phimosis which did not relieve his symptoms. His symptoms persisted for several months until seeking a sexual medicine trained urologist. The patient was referred to pelvic floor physical therapy and through a series of exercises targeting abdominal and gluteal muscles he became symptom free.

Results: We found that specialized pelvic floor physical therapy can relieve the overactive pelvic floor and entrapped penile neurovasculature, supporting and supplementing the leading theory on the pathophysiology of HFS. The patient, like many of the others cited in forums and case reports, also had an inciting traumatic stressor, masturbation, for his HFS. This physical trauma to the pelvic neurovasculature partially explains the contraction of pelvic and penile musculature and resultant erectile and ejaculatory dysfunction; however, it does not provide a full picture of the pathophysiology of HFS. In this case study, physical activity level, social factors, changes in muscle strength and coordination, and postural changes may have all played a role in the development of this chronic condition.

Conclusions: HFS is a rare condition that requires further research. A multidisciplinary approach including individualized pelvic floor physical therapy that addresses impairments beyond the pelvic floor may be a key in treatment.

Disclosure: No

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GROWTH FACTOR CONCENTRATION CAN VARY IN PLATELET-RICH PLASMA FROM MEN WITH ERECTILE DYSFUNCTION

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Introduction: Erectile Dysfunction (ED) affects 40% of men over 40 and every decade after increases the likelihood by 10% (1). Platelet Rich Plasma (PRP) is a restorative therapy rich in cytokines and growth factors that may reverse the underlying pathology of ED (2). Before PRP can be used effectively in clinic, it is necessary to understand if its components are similar among men with ED.

Objective: To determine whether growth factors vary among PRP of men with ED

Methods: Blood was obtained from three men with ED and one healthy man as a control. The Arthrex Angel system was used to extract their PRP. The sample was immediately stored in ice and kept in -80 C. Bradford assay was ran to ensure equal protein concentrations were used. The Abcam Human Growth Factor Antibody Array kit (ab134002) was used to simultaneously detect 41 human growth factors.

Results: Subject 1 was 43 years old with ED only. Subject 2 was 43 years old with obstructive sleep apnea, hyperlipidemia, and delayed sleep phase syndrome, and BMI 27.1. Subject 3 was 49 years old with hypertension, diabetes mellitus (not on insulin), asthma, high cholesterol, and BMI 32.4. The results of evaluating the 41 growth factor array showed that several growth factors had a fold change greater than 1.5 compared to the control. In PRP of adults with ED, PDGF-AA, PDGF-AB, and PDGF-BB had a greater than 1.5-fold change in at least 2 out of the 3 samples when compared to control. In FGF-6, GM-CSF, NT-3, TGF- α , TGF- β , and TGF- β 2, there was a negative fold change of greater than 1.5 in at least 2 out of the 3 samples when compared to control.

Conclusions: Based on these results, the use of PRP as a therapeutic agent may need to be personalized based on individuals' age, comorbidities, or growth factor content. Individuals with underlying comorbidities may need different volumes of PRP. Our future ongoing research is focusing on particular growth factors within PRP that are responsible for improvement in erectile function, thus being able to personalize PRP therapy for men with ED.

Citations: 1. Feldman HA, Goldstein I, Hatzichristou DG, Krane RJ, McKinlay JB. Impotence and its medical and psychosocial correlates: results of the Massachusetts Male Aging Study. *J Urol.* 1994;151(1):54-61. 2. Liu MC, Chang ML, Wang YC, Chen WH, Wu CC, Yeh SD. Revisiting the Regenerative Therapeutic Advances Towards Erectile Dysfunction. *Cells.* 2020;9(5). 3. Fang J, Huang X, Han X, Zheng Z, Hu C, Chen T, et al. Endothelial progenitor cells promote viability and nerve regenerative ability of mesenchymal stem cells through PDGF-BB/PDGFR-beta signaling. *Aging (Albany NY).* 2020;12(1):106-21.

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

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PRELIMINARY RESULTS FROM A MULTICENTER STUDY ON THE USE OF A NEW DEVICE FOR THE TREATMENT OF GENITO PELVIC PAIN DISORDERS

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Introduction: Genito-pelvic pain/penetration disorder (GPPPD) causes painful sex, emotional distress, depression, as well as feelings of inadequacy and sexual frustration, which may gradually trigger problems with other domains of sexual functioning in the majority of diagnosed women. One in ten women suffers from GPPPD according to recent studies of prevalence with a wide range of psychosocial consequences. Treatment options in health care are limited. The majority of women with GPPPD do not receive appropriate treatment.

Objective: In this study, we will investigate the safety and preliminary evidence of the effectiveness of Crescendo Therapy System Kit (CTS) for the treatment of GPPPD.

Methods: A one-group pretest-posttest multicenter design was used in the current research. Main outcome measures were assessed using the Female Sexual Function Index (FSFI) domain for Sexual Pain at baseline and after 12 weeks. The collected data were tabulated and analyzed using the Statistical Package for the Social Sciences version 22 (SPSS). Quantitative data are expressed as means \pm standard deviations (SDs). For the comparison of paired variables the Wilcoxon test was used. A total of 21 subjects, aged