**MP45-03**  
LOW TESTOSTERONE ON SOCIAL MEDIA: APPLICATION OF NATURAL LANGUAGE PROCESSING TO UNDERSTAND PATIENTS' PERCEPTIONS OF HYPOGONADISM  
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INTRODUCTION AND OBJECTIVE: Despite the results of the Testosterone Trials, physicians continue to be uncomfortable treating men with hypogonadism. Discouraged, men increasingly turn to social media—an environment where anecdotes predominate and advertising masquerades as advice—to discuss medical concerns. Here, we apply quantitative natural language processing (NLP) to social media posts to identify themes of discussion regarding low testosterone and testosterone replacement therapy (TRT) to inform how physicians may better evaluate and counsel men with hypogonadism.  

METHODS: We retrospectively extracted posts from the Reddit community r/Testosterone from 12/2015-5/2019. We applied an NLP technique called the meaning extraction method (MEM) with principal component analysis (PCA) to computationally derive themes of discussion (Fig. 1). We then performed a prospective, cross-platform analysis of Twitter data (tweets) that contained the terms "low T," "low testosterone," and "testosterone replacement" from 6/2019-9/2019 using MEM. Kaiser-Meyer-Olkin (KMO) statistic, Bartlett's test, and word frequencies were calculated for each data set.  

RESULTS: 199,335 Reddit posts and 6,659 tweets were analyzed. MEM revealed dominant themes of discussion, including: symptoms of hypogonadism (Reddit and Twitter); cardiovascular risk (Twitter); TRT administration, lifestyle interventions, lab test results, and seeing a doctor (Reddit). KMO >0.60 and Bartlett's test <0.01 for all data, indicating appropriateness for MEM/PCA. 25% of Reddit posts contained the term "doctor" and >5% of posts refer to a "urologist." 1% of all social media posts contained the terms "prostate" or "cancer."  

CONCLUSIONS: Analysis of over 200,000 discrete social media posts revealed dominant themes of discussion, including those related to cardiovascular risk and seeing a physician. In the era of social media, physicians may do well to bring up online discussions during clinic consultations to pull back the curtain and dispel myths.  

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**MP45-04**  
COMPARISON OF LOW INTENSITY SHOCKWAVE FOR VASCULGENIC ERECTILE DYSFUNCTION USING ELECTROHYDRAULIC VS ELECTROMAGNETIC RADIAL SHOCKWAVE GENERATORS  
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INTRODUCTION AND OBJECTIVE: Low intensity shockwave therapy (LSWT) has emerged as a novel treatment of arteriogenic erectile dysfunction (ED). Part of the difficulty of comparing results in the literature is the use of multiple different machines and protocols. Even controlling for total energy applied, the shape of the waveform depending on the shock generator is different and might produce variable biologic effects. The purpose of this study is to compare outcomes of LSWT for men with ED between devices that generate either electrohydralic spark waves or electromagnetic radial waves.  

METHODS: A retrospective chart review compiled the outcomes of men who had LSWT for ED either using the TRT Urogold 100 (electrohydralic generation) or the Zimmer enpuls Pro (electromagnetic radial generation). All men received 6 weekly treatments. On the Urogold, we used a total of 3000 shocks at 0.09 mJ/mm² and for the Zimmer we used 10,000 shocks at 15 Hz and 90 mJ energy (both are standard protocols for each respective device). Given the higher frequency of the Zimmer device, total treatment times were equivalent. There were 6 treatment sites: one at each crus of the penis and 2 on the shaft bilaterally. SHIM score assessed erectile function before and 6 weeks after therapy. Men also self reported erectile hardness on a scale of 0 (no change), 1 (firm enough for penetration) or 2 (completely firm). Data was compared with paired or unpaired t test, Chi squared or Kruskal-Wallis as appropriate and significance set at α<0.05  

RESULTS: 24 men were treated with the Urogold and 23 with the Zimmer device. Both groups were equivalent in age (61.3 vs 60.5 years) and duration of ED symptoms (61 vs 72 months). Starting SHIM score was also similar (9.3 ±- 4.2 vs 8.7 ±- 4.8, p=0.67). Following treatment there was a clinically and statistically significant increase in SHIM scores with both machines. For the Urogold mean SHIM increased from 9.3 to 15.5 (p<0.001) and for the Zimmer mean SHIM increased from 8.7 to 15.8 (p<0.001). Self reported erectile hardness for the Urogold was 0: 46%, 1: 21% and 2: 33%. For the Zimmer it was 0: 29%, 1: 38%, 2: 33%. Differences between these proportions were not significant by Chi squared (p=0.36). There were no reported side effects of either machine.  

CONCLUSIONS: In our patient population, LSWT was effective for arteriogenic ED in the majority of patients and there was no significant difference in outcomes between an electrohydralic and an electromagnetic radial device.  

Source of Funding: None

**MP45-05**  
LOOKING BEYOND HYPOGONADISM: ASSOCIATION BETWEEN LOW TESTOSTERONE AND METABOLIC SYNDROME  
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INTRODUCTION AND OBJECTIVE: Men with low testosterone are routinely referred to urology clinics for intervention. It has been suggested that low testosterone is associated with metabolic syndrome, a harbinger for cardiac morbidity. Yet, this relationship remains unclear. The AUA guidelines state that ordering an HbA1c should be considered by urologists. Given the potential opportunity for earlier diagnosis of metabolic disorders among urologists, the goal of this study was to better define the relationship between low testosterone and metabolic syndrome.  

METHODS: The National Health and Nutrition Examination Survey (NHANES) database was queried for men between 19-59 years of age between the years of 2013-2016. We defined metabolic syndrome per the National Cholesterol Education Program (NCEP) ATP III criteria and hypogonadism as total testosterone < 300 ng/dl as defined by the AUA. Sample weights were applied for sampling and non-response bias. We compared demographic, clinical, hormone factors with chi square and t-tests, and then performed logistic regression.  

RESULTS: Among 3,350 men included in this study, 24% had testosterone < 300 and 26% had metabolic syndrome. Men with low testosterone were more likely to be older, have a higher BMI, higher HbA1c, lower HDL, higher triglycerides, higher fasting blood glucose, larger waistline, hypertension, and metabolic syndrome (<0.001 for all). In the multivariate analysis, significant associations were seen between hypogonadism and large waistlines and low HDL (OR 4.32 <0.001, OR 1.67 p=0.008 respectively). When stratifying by a
younger age cohort (19-39), we found an even stronger association with larger waistline (OR 6.52 p <0.001).

CONCLUSIONS: This study suggests that low testosterone is associated with risk factors of large waistline and low HDL among men 19-59 years old. Among young hypogonadal men, we identified an even stronger association with large waistline. Further studies are needed to better define the significance of this relationship and associations with metabolic syndrome.

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MP45-06
SHOULD WE TREAT TESTOSTERONE DEFICIENCY IN PATIENTS WHO DO NOT HAVE SYMPTOMS?
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INTRODUCTION AND OBJECTIVE: Testosterone replacement therapy (TRT) is effective for treating the symptoms and ameliorating the metabolic consequences of hypogonadism. TRT improves muscle mass, bone mineral density, mood, and sexual performance. However, a significant number of patients have low serum levels of testosterone without any subjective symptoms or complaints. We evaluated the suitability of TRT for patients with non-symptomatic late-onset hypogonadism.

METHODS: Seventy patients whose initial serum levels of testosterone were <300 ng/dL without any symptoms or complaints were consecutively enrolled and followed for 30 weeks. All patients received 1,000 mg parenteral testosterone undecanoate on day 1, followed by additional injections on weeks 6, 18, and 30. Serological tests (for total testosterone, lipid profile, glucose, and prostate-specific antigen [PSA]) were performed and Body Mass Index (BMI), International Index of Erectile Function (IIEF) score, International Prostate Symptom Score (IPSS), the Aging Males’ Symptoms (AMS) questionnaire, and the Global Assessment Questionnaire (GAQ) were performed at baseline and at the end of the study.

RESULTS: Mean patient age was 56.2 ± 10.5 years. The total IIEF score increased from 44.9 ± 12.9 at baseline to 54.8 ± 13.0 on week 30 (p < 0.001). The AMS score improved from 37.9 ± 13.2 to 24.6 ± 13.2 on week 30 (p < 0.001). Baseline and 30-week total testosterone levels were 272.2 ± 48.2 and 598.2 ± 52.5 ng/dL, respectively (p < 0.0001). No significant changes were detected in the IPSS, lipid profiles, glucose, BMI, or PSA level. The percentage of patients reporting improvement in the GAQ was 58.6%. Improvements in the sexual desire domain of the IIEF, sexual subscale of the AMS, and in change in total testosterone (>300 ng/dL) were significantly correlated with a positive GAQ response. The majority of adverse events were mild, reversible, and of short duration.

CONCLUSIONS: Although a patient may not complain of any subjective symptoms at the initial visit, TRT can be considered in patients with low testosterone levels and decreased sexual desire and function. It is postulated that patients with low testosterone levels may not recognize their symptoms. Thus, more specific screening is needed for such patients.

Source of Funding: None

MP45-07
DISCONTINUATION OF DAPoxetine TREATMENT IN PATIENTS WITH PREMATURE EJACULATION: A 2-YEAR PROSPECTIVE OBSERVATIONAL STUDY
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INTRODUCTION AND OBJECTIVE: Although dapoxetine is the only oral pharmacological agent approved for the treatment of premature ejaculation (PE), and is very effective, the discontinuation rate is high. We assessed the discontinuation rate in patients with PE, and the reasons for discontinuation, in real-world practice.

METHODS: A total of 182 consecutive patients were enrolled. The type of PE, the self-estimated intravaginal ejaculation latency time (IELT), and medical history were evaluated in all patients, who also completed the International Index of Erectile Function-Erectile Function Domain (IIEF-ED) questionnaire. Visits were scheduled 1, 3, 6, 12, and 24 months after initiation of therapy; we checked treatment status and the reasons for discontinuation in those who did in fact discontinue. We compared the relationships of discontinuation rates with various parameters and the time to discontinuation after treatment commencement.

RESULTS: Of all patients, 9.9% continued treatment to 2 years. The cumulative discontinuation rates at 1, 3, 6, 12, and 24 months were 26.4%, 61.6%, 79.1%, 87.3%, and 90.1%, respectively. 79.1% of all patients discontinued treatment within 6 months. After 12 months, however, the discontinuation rate fell sharply. The reasons for discontinuation were cost (29.9%), disappointment that PE was not curable and that dapoxetine was required every time sexual intercourse was contemplated (25%), side effects (11.6%), perceived poor efficacy (9.8%), a search for other treatment options (5.5%), and unknown (18.3%). Patients with acquired PE (compared to lifelong PE), with IELT >2 min prior to treatment, on PDE-5 inhibitors, and with IIEF-ED scores <26 tended to discontinue early and thus exhibited high drop-out rates.

CONCLUSIONS: The treatment discontinuation rate of dapoxetine was very high. The main reasons for discontinuation were the cost and disappointment that treatment was required every time adequate sexual function was required.

Source of Funding: None

MP45-08
PHOSPHODIESTERASE TYPE 5 INHIBITOR (PDE5i) USE AFTER RADICAL PROSTATECTOMY (RP) IS NOT ASSOCIATED WITH INCREASED RISK OF BIOCHEMICAL RECURRENCE RISK (BCR)
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INTRODUCTION AND OBJECTIVE: The data on the association between PDE5i utilization and BCR after RP and PDE5i is mixed. We aimed to provide a better risk assessment based on exposure data.

METHODS: Patients completed a PDE5i exposure survey serially after RP in a prospective, quality of life study evaluating men post-RP. PDE5i exposure scores: O-never, 1-sometimes, 2-regularly, 3-daily. Men who had data on PDE5i use at 3m, 6m, 9m, and 12m in the first year following RP were included in the analysis, thus PDE5i exposure score is the mean of the surveys and ranged from 0-3. The tested predictors of BCR were: age, preoperative PSA, Gleason score (G), surgical margin status (SMS), seminal vesicle involvement (SVI), extra capsular extension (ECE), and lymph node involvement (LNI). Prostate cancer risk categorization was deemed high if: Gleason 8+, LNI+, SMS+ or SVI+. Correlation coefficients and Chi-square was used for univariate analysis and time-to-event (Cox Proportional Hazards) analysis was used for multivariable analysis.

RESULTS: Mean age of 647 men was 60.5±7 years. 106 men (16%) had BCR. PDE5i groups are summarized in Figure 1. On univariate analysis, race (black vs white), PSA, and diabetes were associated with BCR (p=0.03 to <0.01). PDE5i score as a continuous variable was not significant (HR 0.96, 95% CI: 0.70-1.33, p=0.82). The highest use PDE5i group (mean score = 2.01 – 3) was not significantly different from the never used group (mean score = 0) (HR 0.95, 95% CI 0.2 – 4.42). On multivariable analysis, race, baseline PSA, and diabetes were associated with BCR (HR 1.55, 1.04, 2.12, respectively), PDE5i dose score was again not a significant predictor of BCR (HR: 0.98, 95% CI: 0.70-1.36).

CONCLUSIONS: Using a PDE5i exposure score, PDE5i use is not a risk factor for BCR in RP patients.