Kallikrein Panel Can Reduce Unnecessary Prostate Biopsies

Reducing Unnecessary Biopsy During Prostate Cancer Screening Using a Four-Kallikrein Panel: An Independent Replication.

Vickers A, Cronin A, et al:

J Clin Oncol 2010; 28 (May 20): 2493-2498

A 4-kallikrein serum test can help determine who needs a prostate biopsy in men with an elevated prostate-specific antigen.

Objective: To independently verify if a panel of 4 kallikreins (total, free, and intact prostate-specific antigen [PSA] and kallikrein-related peptidase 2) can determine who may not need prostate biopsy in the face of an elevated, initial screening PSA.
Participants/Methods: 2914 men who underwent their first PSA screening for prostate cancer were evaluated from the European Randomized Study of Screening for Prostate Cancer (ERSPC). Frozen serum was used to measure the kallikreins that were part of the panel. The cohort of patients was divided into separate training and validation sets, and results were analyzed for the ability of the kallikrein panel to predict prostate cancer at the time of biopsy.
Results: The kallikrein panel significantly improved the test performance of both a simplified model (age and PSA) and a clinical model (age, PSA, and digital rectal examination) in predicting prostate cancer at the time of biopsy. This was true both in the training and separate validation sets. Among 1000 men with an initial elevated PSA >4.0 ng/mL, the use of the kallikrein panel would reduce the number of biopsies by 513 at the cost of missing 54 of the 177 low-grade cancers and 12 of the 100 high-grade cancers.
Conclusions: A panel of kallikreins in combination with patient age and physical exam findings can reduce the number of unnecessary prostate biopsies while still detecting the majority of low- and high-grade cancers.
Reviewer's Comments: Because of the known limitations of total PSA as a screening study, a test that could improve its performance characteristics would be very beneficial. This study published by Vickers and colleagues seeks to address this issue using a panel of 4 different kallikreins. It demonstrates that, using this panel, it is possible to dramatically reduce the number of unnecessary biopsies while detecting the majority of cancers, including the majority of high-grade cancers. The study's strengths are the large number of patients included, the use of completely distinct training and validation patient cohorts, and the careful use of clinical decision analysis to demonstrate the utility of this panel in routine clinical practice. The main limitation of the study is that, at the time the ERSPC study was initiated, the standard biopsy was a sextant biopsy. This has known limitations in prostate cancer detection, and the standard now is a more extended biopsy. It is, therefore, not entirely clear how this test would perform either with the use of an extended biopsy template or if lower PSA threshold <4.0 was used to trigger a biopsy. Despite this limitation, the results presented here are promising, but only time will tell if this panel will become a routine part of clinical practice going forward. (Reviewer-Peter E. Clark, MD).

Keywords: Prostate Cancer, PSA, Kallikrein, Biopsy

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Radical Cystectomy Underutilized for Invasive Bladder Ca

Use of Radical Cystectomy for Patients With Invasive Bladder Cancer.

Gore JL, Litwin MS, et al:

J Natl Cancer Inst 2010; 102 (June 2): 802-811

Only about 20% of Medicare recipients with muscle-invasive bladder cancer will undergo radical cystectomy.

Objective: To examine factors associated with the use of radical cystectomy for muscle-invasive bladder cancer, and to compare overall survival between cystectomy and alternative forms of therapy.
Design/Methods: Population level study using linked Surveillance, Epidemiology and End Results-Medicare data to identify 3262 patients ≥66 years of age who were diagnosed with muscle-invasive bladder cancer between 1992 and 2002. Statistical models were used to determine the variables that were associated with the use of radical cystectomy and with survival outcomes among those who underwent cystectomy compared to chemotherapy/radiation therapy or surveillance.
Results: Overall, only 21% of the patients with muscle-invasive bladder cancer underwent radical cystectomy. Factors associated with a decreased use of radical cystectomy included advancing age, increasing comorbidity (measured by the Charlson Comorbidity Index), and travel distance to the nearest cystectomy provider of >50 miles. On multivariate analysis, radical cystectomy was associated with a lower risk of death compared to either chemotherapy/radiation therapy or surveillance.
Conclusions: Radical cystectomy is associated with better overall survival than alternative treatment strategies and is underutilized in Medicare recipients ≥66 years of age.
Reviewer's Comments: In the United States, it has been believed for many years that radical cystectomy remained the gold standard for the management of muscle-invasive bladder cancer and that, in general, those who receive alternative therapies should be the exception, not the rule. Nevertheless, there has been a growing tendency in the last 2 decades for more urologists not to do this operation in their practice. As a consequence, patients with muscle-invasive bladder cancer are often referred to other centers, often tertiary care centers, to have this surgery done. This study strongly suggests, at least for the decade from 1992 to 2002, that the rate at which Medicare beneficiaries age ≥66 years actually went through that process was shockingly low. Only 1 in 5 patients underwent cystectomy, and one of the main drivers of this observation, even after accounting for age and comorbid disease, was how far away the patient lived from the nearest cystectomy provider. A distance of >50 miles was associated with a much lower likelihood of undergoing cystectomy. These disturbing statistics suggest that we are far from optimizing care to our Medicare beneficiaries, at least with respect to muscle-invasive bladder cancer. This has potentially profound implications on our view of health care delivery, particularly as we move through a period of change and adjustment over the upcoming decade. This study raises the key issue that access to care can have a substantial impact on patient outcome and must be addressed as we move forward with changes in our health care delivery system. (Reviewer-Peter E. Clark, MD).

Keywords: Radical Cystectomy, Invasive Bladder Cancer, Resource Utilization

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Renal Function Affects Outcomes of Shockwave Lithotripsy

Chronic Kidney Disease Affects the Stone-Free Rate After Extracorporeal Shock Wave Lithotripsy for Proximal Ureteric Stones.

Hung S-F, Chung S-D, et al:

BJU Int 2010; 105 (April): 1041-1193

Male gender and estimated glomerular filtration rate <60 mL/min/1.73 m2 are predictors of poorer outcomes for shockwave lithotripsy for proximal ureteral stones.

Objective: To evaluate the effect of renal function on stone-free rates after shockwave lithotripsy (SWL) for proximal ureteral stones.
Design: Retrospective chart review.
Participants: 319 patients with proximal ureteral stones treated from January 2005 to December 2007.
Methods: Patients requiring treatment of renal stones, ureteral stents, or nephrostomy drainage were excluded. This included all patients with severe renal disease (glomerular filtration rate [GFR] <30 mL/min/1.73 m2). Patients were divided into normal renal function (estimated GFR [eGFR], ≥60 mL/min/1.73 m2) or diminished (Stage 3) renal function (eGFR, 30 to 60 mL/min/1.73 m2). The stone-free rate (SFR) was determined by plain radiography (KUB) at 3 months.
Interventions: SWL was delivered using the Siemens Lithostar Multiline SWL under IV analgesia. Shockwave frequency was 60 per minute.
Results: The mean stone width was 6 mm, and the length was 9 mm. Patients with renal disease were older and were more likely to have hypertension, diabetes, and pyuria. The SFR was 94% for patients with normal eGFR and 50% for those with diminished eGFR. Male gender and stone width >7 mm were also predictors of residual stone fragments. Stone length was not predictive of shockwave success. The estimated probability for a stone-free result for a male with renal insufficiency and a 6-mm calculus was only 40% compared to >95% for a woman with normal renal function.
Conclusions: Renal function affects success for shockwave lithotripsy, and this effect is most pronounced in males.
Reviewer's Comments: The authors do not state the time at which the serum creatinine was obtained, which was used to calculate the estimated GFR. This is a critical omission. Ideally, the serum creatinine and GFR would have been evaluated after resolution of the obstructing calculus. This would identify those with true chronic kidney disease. In contrast, if these values were evaluated at the time of obstruction, the abnormality may have been post-renal. Indeed, if the authors had selected patients with renal insufficiency due to severe obstruction, one would anticipate that these patients may have more severe hydronephrosis or longer duration since onset of pain and obstruction; both of these factors could be independent predictors of failure of SWL. The observation that stone width is more critical than stone length in determining shockwave success may be important when counseling patients. (Reviewer-Manoj Monga, MD).

Keywords: Extracorporeal Shockwave Lithotripsy, Renal Failure

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New Research Model Opens Avenues for Evaluating Stent Discomfort

Novel in vitro Model for Studying Ureteric Stent-Induced Cell Injury.

Elwood CM, Lange D, et al:

BJU Int 2010; 105 (May): 1318-1323

Inflammatory markers may hold the key to understanding ureteral stent discomfort.

Background: Ureteral stents cause significant discomfort and are known to move in the body with patient movement and respiration.
Objective: To develop a novel in vitro model of stent-mediated mechanical injury to bladder and renal epithelial cells. To evaluate the impact of triclosan, an antimicrobial and anti-inflammatory compound, on stent injury.
Design: In vitro study involving Percuflex Plus® ureteral stents (control) and Triumph® (triclosan-eluting) ureteral stents (anti-inflammatory).
Methods: Cell cultures were developed for bladder and kidney epithelial cell lines. Stent segments were incubated on top of the cell cultures, and dishes were rotated to mimic stent movement. After 3 hours of contact between the cells and stents, assays were performed to analyze pro-inflammatory cytokines and growth factors.
Results: Both cell lines demonstrated significant increases in levels of interleukin (IL)-6, IL-8, basic fibroblast growth factor, and platelet-derived growth factor. Kidney cells had an increased expression of tumor necrosis factor. Triclosan added to the medium or triclosan-coated stents prevented the increased expression of pro-inflammatory markers but did not have predictable effects on growth factors. The protective effect of triclosan was more pronounced in the renal epithelial cell culture.
Conclusions: Stent-related symptoms may be partially due to an inflammatory response to stent movement across epithelial cells.
Reviewer's Comments: The authors have previously evaluated ketorolac coated stents, noting no significant improvement in patient symptoms. It would be of value to test the anti-inflammatory properties of ketorolac-coated stents in this novel in vitro model. It would also be interesting to develop epithelial:smooth muscle co-cultured matrices to evaluate the impact of stromal:epithelial interactions after stent irritation on the expression of inflammatory markers and growth factors. The concept of uroepithelial cell disruption as a cause for stent pain may suggest that patients undergoing long ureteroscopic procedures with forceful irrigation may experience more stent discomfort due to the hydrodistension of the upper collecting system and subsequent stimulation of the inflammatory response. It would be important to evaluate inflammatory markers in urine after ureteroscopy and with urinary stents. (Reviewer-Manoj Monga, MD).

Keywords: Ureteral Stents, Discomfort

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BUR With CPRE Can Improve Outcomes

Bilateral Ureteral Reimplantation at Primary Bladder Exstrophy Closure.

Braga LHP, Lorenzo AJ, et al:

J Urol 2010; 183 (June): 2337-2341

Bilateral ureteral reimplant with complete primary repair of bladder exstrophy can be performed safely with less postoperative hydronephrosis, febrile urinary tract infection, and vesicoureteral reflux than when bilateral ureteral reimplant is omitted.

Objective: To compare the outcomes of children undergoing complete primary repair of bladder exstrophy (CPRE) with bilateral ureteral reimplant (BUR) to that of children undergoing complete primary repair alone.
Background: Over the last 4 years of the study, the authors have been doing bilateral ureteral reimplants in conjunction with primary closure.
Design/Methods: A retrospective study was performed from 1997 to 2008 identifying children having undergone CPRE with BUR (group 1, n=15) or without BUR (group 2, n=23). All patients had postoperative ultrasound and voiding cystogram evaluation. Outcome parameters included febrile urinary tract infection, hydronephrosis, and vesicoureteral reflux (VUR).
Results: The follow-up for group 1 was significantly less than that for group 2 (34 vs 70 months). Age at operation was similar between groups (3 days). Group 1 had 10 boys and 5 girls, whereas group 2 had 11 boys and 12 girls. Postoperative hydronephrosis was more common in group 2 (43% vs 13%), as was febrile urinary tract infection (48% vs 7%). No VUR persisted in group 1, but 74% in group 2 had VUR at follow-up. No complications were reported related to bilateral ureteral reimplant.
Conclusions: Bilateral ureteral reimplant with complete primary repair of bladder exstrophy can be performed safely with less postoperative hydronephrosis, febrile urinary tract infection, and VUR than when bilateral ureteral reimplant is omitted.
Reviewer's Comments: The authors provide a compelling argument to include bilateral ureteral reimplant with complete primary repair of bladder exstrophy. The population studied is small, but, given the rarity of the diagnosis, it is substantial. The outcome of hydronephrosis, febrile urinary tract infection, and residual VUR were all significantly better in the bilateral ureteral reimplant group with essentially no downside. (Reviewer-John Gatti, MD).

Keywords: Exstrophy, Vesicoureteric Reflux

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Hymenal Injury Uncommon in Accidental Genital Trauma, Think Sexual Assault

Patterns of Accidental Genital Trauma in Young Girls and Indications for Operative Management.

Iqbal CW, Jrebi NY, et al:

J Pediatr Surg 2010; 45 (May): 930-933

Accidental genital trauma is commonly caused by straddle-type injuries and can generally be managed nonoperatively.

Objective: (1) To define the injury patterns of accidental genital trauma in girls, and (2) to characterize the indications and outcomes of operative intervention.
Methods: A retrospective chart review was performed identifying girls ≤16 years of age with accidental genital trauma from 1980 to 2007. Sexual and obstetric-related trauma was excluded.
Results: 167 girls were identified, with a mean age of nearly 7 years. The majority of injuries were straddle type (70.5%), followed by non-straddle blunt (23.5%) and penetrating injuries (6%). Labial injuries were most common at 64%. Other locations included perineum (22%), vulva (9%), posterior fourchette and hymenal disruption (8% each), vagina (6%), and rectum (3%). The majority of injuries were handled nonoperatively (88%) without further sequelae. Penetrating trauma was more likely to require operative management with a higher incidence of rectal injury. Operatively managed trauma was more likely to involve multiple genital injuries (60% vs 25%). If the patient was evaluated in the operating room, proctoscopy, vaginoscopy, and/or cystoscopy were usually performed, although these were generally low yield with additional findings in only 25% of vaginoscopy cases, and none with proctoscopy and cystoscopy. Seven rectal injuries required repair, and 1 required colostomy as an adjunctive procedure, but all patients were fecally continent at follow-up.
Conclusions: Accidental genital trauma is commonly caused by straddle-type injuries and can generally be managed nonoperatively. Labial injury was common, but hymenal and posterior fourchette injuries commonly associated with sexual trauma were rare.
Reviewer's Comments: This article characterizes an under-emphasized type of trauma, namely nonsexual female genital trauma. The article emphasizes the different spectrum of injury. Most cases of nonsexual straddle-type trauma can be managed expectantly, but penetrating trauma has a much higher likelihood of requiring operative intervention. If posterior fourchette or hymenal injuries are encountered, sexual assault should be considered as potentially causative. (Reviewer-John Gatti, MD).

Keywords: Females, Accidental Genital Trauma, Nonsexual

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Increased Incontinence Rates Associated With Kit Repair

Urodynamic Assessment of Anterior Vaginal Wall Surgery: A Randomized Comparison Between Colporrhaphy and Transvaginal Mesh.

Ek M, Tegerstedt G, et al:

Neurourol Urodyn 2010; 29 (April): 527-531

An increased risk of stress urinary incontinence occurring de novo after mesh kit repairs was noted in comparison with colporrhaphy in this relatively small study.

Objective: To evaluate the effects of mesh kit repair versus anterior colporrhaphy's plication technique based on changes in urodynamic criteria occurring after the intervention.
Design/Participants: Prospective, randomized, multicenter controlled trial of 50 patients, 27 of whom underwent anterior colporrhaphy and 23 of whom underwent a mesh kit repair.
Methods: In this case, using the Prolift® system, urodynamics were performed both preoperatively and postoperatively. Patients underwent intervention with greater than stage 2 prolapse on the Pelvic Organ Prolapse Quantification system.
Results: Of the women undergoing the procedure (all without primary stress incontinence procedures being performed), a higher rate of de novo stress urinary incontinence was found after the Trocar mesh placements compared to the plication colporrhaphy. Postoperative urodynamic maximum urethral closure pressure was affected significantly by the mesh kit placement compared to little effect with the anterior colporrhaphy. Patient characteristics between the 2 groups were similar with essentially no statistical differences based on age, body mass index, or prior surgeries. No other significant urodynamic changes were noted between the 2 groups; specifically there was no significant difference between the postvoid residual volumes and pressure flow criteria assessed urodynamically.
Conclusions: Trocar-guided mesh anterior compartment repair was associated with significant changes in maximal urethral closure pressure, resulting in increased rates of stress urinary incontinence after placement.
Reviewer's Comments: This is an interesting study demonstrating potentially that some aspect of mesh placement may alter urethral anatomy such that urethral function may become altered. This is measured by urethral closure pressures, but presumably would also have been noted with leak point pressures as well. This finding is important and again raises the necessity of tack testing and other modes of “unmasking” incontinence in individuals undergoing anterior compartment repair to exclude the possibility of de novo and stress incontinence occurring after surgical repair. (Reviewer-Roger R. Dmochowski, MD).

Keywords: Pelvic Organ Prolapse, Surgical Mesh, Urodynamics

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TVT Procedure Has Long-Term Benefit

Long-Term Efficacy of the Tension-Free Vaginal Tape Procedure for the Treatment of Urinary Incontinence: A Retrospective Follow-Up 11.5 Years Post-Operatively.

Olsson I, Abrahamsson A-K, Kroon U-B:

Int Urogynecol J Pelvic Floor Dysfunct 2010; 21 (June): 679-683

In this superannuated evaluation of tension-free vaginal tape for urinary incontinence, at 10 years, long-term efficacy has been maintained.

Objective: To assess long-term cure rates and late complications associated with the use of tension-free vaginal tape (TVT) for the treatment of urinary incontinence.
Design/Participants: Retrospective review of the records of patients undergoing TVT between 1994 and 1997.
Methods: 147 patients underwent TVT procedures in the time frame identified. Of these 147 patients, 128 were alive for follow-up, and 104 actually were assessed at objective evaluation at the 10-year time point. The remaining patients were contacted by phone for a telephone questionnaire. The mean follow-up was 11.5 years (range, 10 to 13 years). Patients who physically attended follow-up underwent a stress pad test and, if positive, a 24-hour pad test and a questionnaire with a visual analog scale similar to the one used preoperatively.
Results: The overall cure rate was 84%, with a subjective cure rate of 77% and an improvement rate of 18%. Overall, 94% of patients were satisfied with the results of the procedure. No long-term sequelae of the procedure were noted; 19.5% of the study group had urge incontinence preoperatively, with resolution in 13 of those 24 patients. De novo incontinence appeared in 21.2% (21 patients) postoperatively. In the time frame of the study, 3 patients had short-term mesh take-down because of obstructive symptoms. Four women with relatively elevated post-void residual volumes were identified in the follow-up group. Bladder perforation and acute issues associated with perioperative bleeding occurred in 4 patients and urethral injury in 2 patients, while 9 patients had urinary tract infection. There was 1 mesh erosion, which did not require mesh excision.
Conclusions: The TVT procedure at 10 years was shown to be safe and effective and was recommended as a viable option in the treatment of pelvic organ prolapse.
Reviewer's Comments: Now 10-year data and longer are being proven again, demonstrating the long-term benefit of transvaginal tape when properly performed. There does not appear to be any onus associated with long-term indwelling mesh, and the majority of patients appear to do very well with this. There does not appear to be any manifestation of long-term risks associated with the utilization of this mesh. These types of studies further demonstrate that mesh is most likely safe and of long-term benefit for patients. (Reviewer-Roger R. Dmochowski, MD).

Keywords: Cure Rate, Mixed Incontinence, Stress Incontinence, TVT Procedure

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DAT1 Polymorphism Associated With Premature Ejaculation

The Dopamine Transporter Gene (DAT1) Polymorphism Is Associated With Premature Ejaculation.

Santtila P, Jern P, et al:

J Sex Med 2010; 7 (April): 1538-1546

There is a significant association between the *DAT1* gene and premature ejaculation, so that individuals homozygous for the 10R allele are at the highest risk.

Background: Modulating effects of dopamine (DA) on male sexual behavior was established in the 1970s, described in both rats and in patients who were treated for Parkinson disease with L-DOPA. A hereditary component of premature ejaculation (PE) was proposed in 1943 by Shapiro. When using twin studies, conclusive evidence suggested that genetic effects account for approximately 30% of the variants in PE. The dopamine transporter gene (*DAT1*) encodes the protein responsible for the reuptake of dopamine back into the presynaptic neuron.
Objective: To investigate the possible influence of the function 3 prime untranslated region, variable number tandem repeats, and polymorphism of the *DAT1* on PE.
Participants/Methods: The study involved 1290 men; of these, 867 were twin individuals and 423 were brothers. These participants were subset from the Genetics of Sex and Aggression sample. The PE increments used addressed anteportal ejaculation, number of thrusts, the ejaculation latency time, and the feelings of control.
Results: The anteportal ejaculation was negatively correlated with the other indicators, which were, in turn, positively correlated with each other. Preliminary analysis showed that the 9R9R genotype did not differ from the 9R10R genotype on the PE variables. Those with the 10R10R genotype reported more frequent anteportal ejaculation and a lower number of thrusts prior to ejaculation. Carriers of the 10R10R genotype were in the majority among those reporting that they suffered from PE. With regard to a PE composite score, those with the 10R10R genotype differed significantly from those with the 9R9R or 9R10R genotype.
Reviewer's Comments: The results indicate a significant association between the *DAT1* gene and PE, so that individuals homozygous for the 10R allele are at the highest risk. This effect was present for all indicators of premature ejaculation except ejaculation latency time, which is the one measure generally used in studies for premature ejaculation trials. (Reviewer-Kevin T. McVary, MD).

Keywords: Premature Ejaculation,*DAT1*Polymorphism

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Is Orodispersible Vardenafil Effective for ED?

The POTENT I Randomized Trial: Efficacy and Safety of an Orodispersible Vardenafil Formulation for the Treatment of Erectile Dysfunction.

Sperling H, Debruyne F, et al:

J Sex Med 2010; 7 (April): 1497-1507

The results of vardenafil orodispersible tablets for erectile dysfunction are consistent with those of previous studies demonstrating the efficacy of the film-coated tablet used worldwide.

Background: Oral phosphodiesterase type 5 inhibitors (PDE5i) are recommended as first-line therapy for the treatment of erectile dysfunction (ED). Some analysis has shown that men would prefer a more convenient method of taking PDE5i. To address this, the orodispersible tablet (ODT), which dissolves in the subject's mouth, otherwise known as the ODT formulation of vardenafil, has been developed. It has a 1.2- to 1.4-fold higher bioavailability than the film-coated tablet formulation and is not affected by food intake. There were no discernable differences on tolerability and onset, and duration of action has not been assessed.
Design/Objective: The primary objective of this pivotal phase 3 trial was to investigate the efficacy and safety of ODT vardenafil versus placebo in the treatment of men with ED. ***Note:*** It was recommended for the drug intake to occur 1 hour before the intended sexual intercourse, similar to the standard method.
Results: 409 men aged ≥18 years (54.8% men were aged ≥65 years) were enrolled in 40 centers across Europe and Africa; 362 men were randomized to treatment with either vardenafil ODT (n=186) or placebo (n=176). The primary efficacy was changes in the International Index of Erectile Function (IIEF) erectile function domain. At baseline, both groups' IIEF score was 12.9, indicative of moderate ED. At week 12, the score was statistically significantly greater following ODT treatment compared to placebo (21.5 vs 14.4; *P* <0.0001). Treatment assessments, including the Sexual Encounter Profile question 2 success rate, were considerably better than with placebo, with 73.7% for ODT versus 46.7% for placebo (*P* <0.001). Treatment-emergent adverse events were mild to moderate in severity and were consistent with PDE5I use, including headache, flushing, and dyspepsia.
Reviewer's Comments: Vardenafil ODT was significantly better than placebo and is consistent with the efficacy of the film-coated tablet. Treatment satisfaction and adverse events mirrored those of the standard formulation. Although market research suggests that the demand for a convenient method of using vardenafil offers an improved confidence, it is not clear that ODT formulation is any better than the standard prescription. (Reviewer-Kevin T. McVary, MD).

Keywords: Erectile Dysfunction, Phosphodiesterase Type 5 Inhibitors, Vardenafil

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ED -- Physical Activity Plus PDE5 Inhibitor Better Than PDE5 Alone

Physical Function and PDE5 Inhibitors in the Treatment of Erectile Dysfunction: Results of a Randomized Controlled Study.

Maio G, Saraeb S, Marchiori A:

J Sex Med 2010; March 30 (): epub ahead of print

It is time to tell men taking prescription drugs for erectile dysfunction that exercise can make this pill work much better.

Background: Several observational studies had suggested that exercise reduces the risk of erectile dysfunction (ED), but no randomized trial of exercise and phosphodiesterase type 5 (PDE5) inhibitors had ever been completed.
Objective: To determine the synergistic relationship between PDE5 inhibitors and exercise.
Design/Participants: A randomized, open-label study of 60 patients with ED was completed.
Methods: Half of the participants took the PDE5 inhibitor, and the other half combined the pill with regular exercise. Men in this trial were overall inactive at baseline and were instructed to choose any form of exercise (along with intensity and duration information) if they were in the exercise group. Men with a history of radical pelvic surgery were excluded.
Results: The mean age of participants was 50 years, and body mass index was 27 (overweight). A significant improvement was observed in all aspects of the International Index of Erectile Function-15 except the orgasm domain for men who exercised ≥3 hours a week compared to the group that took only the ED pill. Erectile function, confidence, sexual desire, intercourse satisfaction, and total satisfaction were all statistically significantly improved over the PDE5 group alone. There was no significant difference between testosterone levels between groups, but, within the exercise group, there was an increase only in testosterone. The frequency of intercourse was nonsignificantly greater compared to the pill group alone.
Conclusions: A PDE5 inhibitor along with regular exercise is more effective compared to just taking a PDE5 inhibitor alone.
Reviewer's Comments: Heart health=penile health (Moyad, circa 1995 to present day). Is this really such a shock? Yes! It is shocking because there was a significant improvement in libido. PDE5 inhibitors were never found to significantly and consistently improve libido. This is the Achilles heel of the PDE5 inhibitors (along with cost and side effect issues). However, if patients can be told that now taking PDE5 inhibitors along with exercise may improve libido, there should be more excitement in taking these drugs. In fact, perhaps ED drugs should also come with a free treadmill with every prescription (one has to be allowed to dream). There was no significant difference in intercourse frequency, which should have been explored or theorized as to "why" in the follow-up. Finally, don't you find it interesting that there was no exercise-only (no-pill) group? Is it possible that exercise alone could have beaten the pill? We are left to ponder this thought, but, in the meantime, it was found that the drug not only worked better with exercise, but it also improved the diversity of benefits that could be offered with these pills. Bring on that new commercial, boys and girls! (Reviewer-Mark A. Moyad, MD, MPH).

Keywords: Erectile Dysfunction, Treatment, PDE5 Inhibitors

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Do Fruits, Vegetables Really Prevent Cancer?

Fruit and Vegetable Intake and Overall Cancer Risk in the European Prospective Investigation Into Cancer and Nutrition (EPIC).

Boffetta P, Couto E, et al:

J Natl Cancer Inst 2010; 102 (April 21): 529-537

Fruits and vegetables should be promoted only as potentially heart healthy. In this large epidemiologic study, only a small and weak inverse association was found for fruit and vegetable consumption and cancer risk.

Background: Fruit and vegetable consumption receives a good deal of promotion in the area of cancer prevention, but prospective research over the past several years has not provided convincing evidence to support this hype. However, a large and longer follow-up epidemiologic study was needed to provide greater clarity on this issue.
Objective: To determine the impact of fruit and vegetable consumption on the risk of a variety of cancers in one of the largest epidemiologic studies ever completed.
Design/Methods: This prospective study involved 142,605 men and 335,873 women who were free of cancer; >30,000 cancer cases were identified during this time period. The median follow-up was almost 9 years.
Results: A significant 4% reduction was observed in the risk of being diagnosed with any cancer for every 2 extra servings per day of fruits or vegetables. Individuals who consumed the highest amount (>6 servings a day) of fruits and vegetables compared to the lowest received a ≤10% reduction in risk. Individuals who consumed more fruits and vegetables also were more physically active, drank less alcohol, were less likely to smoke, and received more education, on average, compared to those consuming less produce.
Conclusions: A small and weak inverse association was found for fruit and vegetable consumption and cancer risk.
Reviewer's Comments: Just because something sounds healthy and productive does not mean it should get a free pass in terms of research scrutiny. It still drives me nuts (not a fruit or vegetable) when I hear cancer organizations and "experts" promoting fruit and vegetable consumption as the miracle way to reduce cancer risk. I believe this is promoted because of ignorance or simply to promote an agenda. However, if someone trying to reduce their risk of cancer is told to eat ≥5 servings a day (this has been advertised for decades) because it can affect cancer, it is sad that we are not providing more objective candor. I tell patients to eat more fruits and vegetables because it makes them feel fuller (fiber, folks!) and may possibly reduce blood pressure and weight, but vegetables have more data available compared to fruits because there are fewer calories and carbohydrates or because there is less simple sugar in vegetables. Personally, I think someone consuming a lot of fruits may also gain weight (fruits contain calories and simple sugars such as fructose). In reality, we also have to accept the results of numerous recent studies that suggest a minimal or even no impact of eating tons of fruits and vegetables on cancer risk, but it could just be that eating these things are simply a marker of overall healthy human behavior, which is why people thought they were so effective. (Reviewer-Mark A. Moyad, MD, MPH).

Keywords: Cancer, Nutrition, Fruits, Vegetables

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Urologist Density per County Affects Cancer Survival

Urologist Density and County-Level Urologic Cancer Mortality.

Odisho AY, Cooperberg MR, et al:

J Clin Oncol 2010; April 20 (): epub ahead of print

Having at least 1 urologist per 100,000 population in a county decreases mortality for prostate, bladder, and kidney cancer.

Objective: To determine, at a population level, if the density of urologists in a county affects cancer-specific mortality.
Design/Methods: Using a series of national, population-level data sets, county level data for nonrural counties were collected, and the influence of urologist density per 100,000 population on cancer-specific mortality was measured for prostate, bladder, and kidney cancer. Analysis also examined and controlled for demographic, socioeconomic, and health care infrastructure such as primary care physicians and hospital bed availability.
Results: For all 3 cancers (prostate, bladder, and kidney), an increase in the urologist density from 0 to at least 1 urologist per 100,000 population was associated with a decrease in cancer-specific mortality. The reduction ranged from an 8% to 14% reduction for kidney cancer, a 17% to 20% reduction for bladder cancer, and a 16% to 22% reduction for prostate cancer. Additional density ≥2 per 100,000 population did not substantively improve these results. For all 3 cancers, metropolitan counties were associated with better mortality compared to nonmetropolitan counties. Also, in the case of prostate cancer, mortality was affected by the density of primary care physicians and by the racial/ethnic composition of the county.
Conclusions: Having at least 1 urologist per 100,000 population in a county is associated with improved cancer-specific mortality, although increasing density beyond this has little added benefit.
Reviewer's Comments: There has been a policy debate within the urologic community for some time now regarding the number of urologists practicing in the United States. Currently, there is a growing consensus that there are probably not enough urologists in the United States, and that there should be some attempt to increase the number that are trained each year. This paper by Odisho and colleagues is intriguing since it addresses an important nuance to this debate. It is not only important to address, in a broad sense, the overall number of urologists, but it is also important to address the more complex question of where these urologists are located. Many areas of the country (generally, more urban, affluent, and well-educated regions) have an excess of urologists, while many areas are grossly underserved. Indeed, this study had to exclude rural counties from the analysis since only a tiny fraction (4%) had any urologist at all! This study indicates that by increasing the urologist density from 0 to 1 to 2 per 100,000, there is a substantial drop in cancer mortality, whereas saturating an area beyond this adds little further benefit. This highlights a complex and difficult challenge in the future. As a professional community, we need to work on strategies not only to train a larger urologic work force, but also to distribute that work force to the areas that need care the most. Not an easy task. (Reviewer-Peter E. Clark, MD).

Keywords: Urologist Density, Prostate Cancer, Bladder Cancer, Kidney Cancer

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Duration Off Tx for Intermittent ADT Predicts Outcome

Duration of First Off-Treatment Interval Is Prognostic for Time to Castration Resistance and Death in Men With Biochemical Relapse of Prostate Cancer Treated on a Prospective Trial of Intermittent Androgen Deprivation.

Yu EY, Gulati R, et al:

J Clin Oncol 2010; 28 (June 1): 2668-2773

In men undergoing intermittent androgen deprivation therapy for biochemically relapsed prostate cancer, the duration off treatment after the first cycle of therapy predicts outcome.

Objective: To establish predictors of outcome in men on intermittent androgen deprivation therapy (ADT) for biochemically relapsed prostate cancer.
Design/Methods: Analysis of a prospective, phase II trial that enrolled men with biochemically relapsed prostate cancer after surgery or radiation therapy and started them on intermittent ADT with leuprolide acetate and flutamide. ADT was stopped after 9 months, and serum PSA was monitored. ADT was reinitiated when the serum PSA reached defined levels (1 ng/mL for postsurgery and 4 ng/mL for postradiation patients). Analysis was undertaken to examine risk factors for the development of castrate-resistant prostate cancer (CRPC) and/or death.
Results: 72 patients were enrolled in the study and met the analysis criteria. After adjusting for other potential risk factors such as age, tumor stage, biopsy Gleason score, and serum PSA at initial diagnosis, the duration off ADT after the first cycle of therapy of ≤40 weeks was associated with a higher risk of subsequent CRPC and death compared to a longer interval.
Conclusions: Patients put on intermittent ADT for biochemically relapsed prostate cancer who must resume ADT in ≤40 weeks after the first cycle of therapy are at increased risk of CRPC and death.
Reviewer's Comments: Biochemically relapsed prostate cancer is a growing problem in the United States, as more men are diagnosed and treated for localized prostate cancer. One mainstay of therapy for these men is the initiation of ADT. However, this is associated with short- and long-term morbidity that can adversely affect both overall health and quality of life. Because of these side effects, it is not at all uncommon for a man to start ADT but find that he does not tolerate it well, and then it is stopped. This trial has important implications for such a patient in that it provides some guidance regarding his prognosis as he is monitored off therapy. If his PSA rises back to a point where ADT is again considered within 40 weeks, that portends a worse prognosis. It is important to remember, however, that the data presented here were in the context of a trial in which many of the parameters governing therapy were, appropriately, strictly outlined. Therefore, these data specifically pertain to men who are treated only in the same strict manner described in this trial. Nevertheless, this concept of duration off therapy predicting outcome is an important one and may be useful as a general guide for clinicians as they try to optimize the care of their patients. (Reviewer-Peter E. Clark, MD).

Keywords: Prostate Cancer, Biochemical Recurrence, Intermittent Androgen Deprivation Therapy

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Coil-Reinforced Stents Resist Compression, But Flow Still Superior Through 10.2 F Stent

Resistance to Extrinsic Compression and Maintenance of Intraluminal Flow in Coil-Reinforced Stents (Silhouette® Scaffold Device): An In Vitro Study.

Miyaoka R, Hendlin K, Monga M:

J Endourol 2010; 24 (April): 595-598

Coil-reinforced stents are resistant to extrinsic compression as one might see with ureteral obstruction from tumor. However, flow through the 8 F stents does not surpass 10.2 F stents until >4 N of force is exerted.

Background: Stent failure may occur due to stent encrustation and intraluminal obstruction or failure to maintain cross-sectional stability in the face of extrinsic compression.
Objective: To evaluate the resistance to extrinsic compression of a coil-reinforced ureteral stent.
Design/Methods: This in vitro engineering study involved the Applied Medical Silhouette® Scaffold stent (8 F) and the Cook Amplatz stent (10.2 F). Stents were tested for radial compression and intraluminal flow as the pressure exerted on the exterior of the stent was gradually increased to a maximum of 5 N.
Results: The internal lumen of the 10.2 F stent was 0.125 mm larger than the 8 F stent; this led to a higher baseline flow (1.1 cc/sec vs 0.7 cc/sec). However, there was a 4x faster drop in flow rates with the 10.2 F stent as extrinsic compression was applied. Equivalence in flow was reached (0.6 cc/sec) at 4.3 N force for the 10.2 F stent and 5 N force for the 8 F stent.
Conclusions: The coil-reinforced stent is resistant to extrinsic compression. The traditional 10.2 F stent provides superior flow at baseline but loses flow more rapidly as it is compressed.
Reviewer's Comments: This study demonstrates the value of coil-reinforcement of ureteral stents for extrinsic compression. However, it also demonstrates that larger 10 F coil-reinforced stents are needed to reach equivalence with traditional 10 F stents with regard to intraluminal flow. Although the reinforced stents demonstrated superior flow beyond 4 N of force, we do not know the clinical significance of this number; if tumors are capable of exerting forces beyond 4 N, then it is possible that the current 8 F stents have value. (Reviewer-Manoj Monga, MD).

Keywords: Stents, Intraluminal Flow, Extrinsic Compression

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Obesity Does Not Affect Outcomes for PCNL

Outcomes of Percutaneous Nephrolithotomy Stratified by Body Mass Index.

Tomaszewski JJ, Smaldone MC, et al:

J Endourol 2010; 24 (April): 547-550

Neither efficacy nor safety of percutaneous nephrolithotomy is impacted by increasing body mass index.

Objective: To stratify outcome and morbidity of percutaneous nephrolithotomy (PCNL) with respect to body mass index.
Design: Retrospective chart review.
Participants: 187 patients undergoing PCNL from 2000 to 2008.
Methods: Patients were categorized as ideal body weight (<25 kg/m2), overweight (25 to 30 kg/m2), obese (30 to 35 kg/m2), or morbidly obese (>35 kg/m2) Stone diameter was measured on preoperative CT. Bleeding was estimated by hematocrit.
Interventions: Nephrostomy tract dilation was performed by balloon dilation. Operative time was limited to 240 minutes. The urologists obtained access in 90% of patients. Plain film or CT was used for follow-up imaging.
Results: The mean stone size was 3.5 cm, and the mean length of stay was 2.6 days. On average, nephrostomy tubes were left in place for 2 days. The mean decrease in hematocrit was 6%, and the stone-free rate was 80%. The overall complication rate was 13%. No significant differences were noted in any of these parameters when stratified by body mass index.
Conclusions: Stone-free rates, complication rates, bleeding, and length of stay are not impacted by body mass index.
Reviewer's Comments: The authors acknowledge that some selection bias may exist in their study, as obese patients with significant comorbidities may have elected to undergo a ureteroscopic approach to their stones rather than a percutaneous approach. Although no differences in surgical complications were noted, the authors do not detail any perioperative medical complications that occurred in their patient group such as urinary tract infection, pneumonia, cardiac events, deep venous thrombosis, or neuropraxia. One might anticipate that these may be higher in obese patients. Despite this, the study establishes that the efficacy of PCNL is independent of body size. (Reviewer-Manoj Monga, MD).

Keywords: Obesity, Percutaneous Nephrolithotomy

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DHA Injection -- How Steep Is the Learning Curve?

Is There a Learning Curve for Subureteric Injection of Dextranomer/Hyaluronic Acid in the Treatment of Vesicoureteral Reflux?

Bennett SD, Foot LM, et al:

J Pediatr Urol 2010; 6 (April): 122-124

A learning curve does not seem to exist for dextranomer/hyaluronic acid injection.

Objective: To determine if a learning curve exists for the technique of dextranomer/hyaluronic acid (DHA) injection for the treatment of vesicoureteral reflux (VUR).
Design/Methods: A retrospective review was performed of the records of patients having undergone DHA injections by 3 surgeons. Two less-experienced surgeons performed intraoperative cystograms after injection, and the injection was repeated until the study was negative for persistent reflux (group 1). Two other more experienced surgeons did not perform intraoperative cystograms (group 2).
Results: 82 ureters met inclusion criteria, 33 in group 1 and 49 in group 2. The 2 groups were similar in the grade of reflux, DHA volume injected, and ultimate success (67% in group 1 vs 77% in group 2; *P* =0.4). Early versus late patients in the series also had identical success rates (73% overall), with 30 of 41 cases being successful in the first and second half of the series each.
Conclusions: A learning curve does not seem to exist for DHA injection. A negative intraoperative cystogram does not predict success.
Reviewer's Comments: This is an interesting article challenging the notion that DHA requires a significant learning curve. The authors indicate that failure is more likely related to implant contraction or migration given the similar failure rates in both groups. Other authors have shown a significant improvement in success over time. The authors touched on an important point in that the brunt of the learning curve may have been endured by those who jumped on the DHA bandwagon early. Subsequently, many of the pitfalls and technical tricks to DHA injection have been popularized, and less-experienced surgeons are likely starting at an advanced level. Unfortunately, in experienced or inexperienced hands, the failure rate of DHA is significant. (Reviewer-John Gatti, MD).

Keywords: Vesicoureteral Reflux, Dextranomer, Hyaluronic Acid, DHA Deflux

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Not All Urachal Abnormalities Require Excision

Nonoperative Management of Symptomatic Urachal Anomalies.

Lipskar AM, Glick RD, et al:

J Pediatr Surg 2010; 45 (May): 1016-1019

Nonoperative (nonexcisional) management of urachal anomalies is a regional approach to urachal anomalies, even after drainage of infected cysts.

Background/Objective: The management of urachal anomalies has generally been excision of the tract. The authors sought to challenge this algorithm with a review of a single institution's experience with operative surgical excision and nonexcision management of symptomatic urachal anomalies.
Design/Methods: A retrospective chart review performed from 2002 to 2008 identified 15 patients with symptomatic urachal anomalies. Children without radiographic confirmation of a urachal anomaly despite suggestive symptoms (draining umbilicus) were excluded.
Results: Mean age was 3.5 years (range, 4 weeks to 14 years). Symptoms included umbilical drainage (n=10), abdominal pain (n=6), omphalitis (n=4), abdominal mass (n=3), dysuria (n=1), recurrent urinary tract infection (n=1), and fever (n=4). Imaging revealed the urachal anomaly by ultrasound in 13 and CT scan in 4. Surgical excision was undertaken in 7 urachal cysts (5 uninfected, 2 infected), and 1 patent urachus. Cases treated without surgical excision included 3 infected urachal cysts (2 drained percutaneously, 1 laparoscopically). There were no recurrences in either group (37 months surgical excision vs 26 months nonexcision follow-up).
Conclusions: Nonoperative (nonexcisional) management of urachal anomalies is a regional approach to urachal anomalies, even after drainage of infected cysts.
Reviewer's Comments: This article is very interesting in that it certainly challenges dogma. In my own practice, I have seen several infected urachal remnants recur even after what seemed to be adequate drainage and an appropriate antibiotic course with negative follow-up cultures. The authors describe "nonoperative" management but really refer to nonextirpative treatment as some cysts were drained percutaneously. The authors provide a treatment algorithm that is reasonable, initiating with expectant management or percutaneous drainage. This is a question ripe for a prospective trial! (Reviewer-John Gatti, MD).

Keywords: Urachal Anomaly, Symptomatic, Nonoperative Management

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TURP Has Sustained Effect Over 10 Years

The 12-Year Symptomatic Outcome of Transurethral Resection of the Prostate for Patients With Lower Urinary Tract Symptoms Suggestive of Benign Prostatic Obstruction Compared to the Urodynamic Findings Before Surgery.

Masumori N, Furuya R, et al:

BJU Int 2009; 105 (May): 1429-1433

In this cadre of patients, transurethral resection of the prostate performed in standard fashion had a persistent effect >10 years with some deterioration of overall magnitude of effect, although quality of life remained improved.

Objective: To determine if the presence of bladder outlet obstruction, either associated with detrusor underactivity or overactivity based on urodynamic assessment, results in changes in the long-term outcomes of transurethral resection of the prostate (TURP).
Design: Retrospective review of the records of patients undergoing TURP at a single institution.
Participants/Methods: 92 patients underwent TURP in a 2-year time-frame (1995 to 1997); 43 patients were alive for purposes of evaluation, with 9 patients being excluded because of prostate cancer, neurologic disease, or issues with cognitive assessment of score. The International Prostate Symptom Score (IPSS) and quality of life (QoL) index were determined both at baseline and during the first year of surgery, as well as at 12 years after surgery in 34 patients.
Results: Despite long-term follow-up, both IPSS and QoL index maintained improvement at 12 years and were significantly improved compared to baseline, although scores were slightly worse than initial highs obtained at the first 3-month follow-up postoperatively. In patients without bladder outlet obstruction, the IPSS deteriorated faster than in those with it, whereas in patients with detrusor underactivity or overactivity, there was no significant change in the slope of the IPSS. The QoL index remained essentially improved for 12 years regardless of findings of urodynamics. Two-thirds of patients with underactivity were satisfied with the urinary condition at 12 years.
Conclusions: Improvement from TURP can last for >10 years, and even though there is gradual deterioration of magnitude of effect, quality of life remains substantially improved over time.
Reviewer's Comments: This paper again demonstrates the long-term benefits of TURP; interestingly enough, these benefits did not appear to be affected by urodynamic criteria preoperatively to any great degree. Patients with less significant bladder outlet obstruction, as based on urodynamic criteria, did appear to have greater deterioration than those with more profound bladder outlet obstruction; this is not surprising given the mechanism of action of this procedure. (Reviewer-Roger R. Dmochowski, MD).

Keywords: Transurethral Resection, Bladder Outlet Obstruction, Detrusor Underactivity/Overactivity

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Fascial Sling Efficacy Unaffected by Delivery

Long-Term Durability of Pubovaginal Fascial Slings in Women Who Then Become Pregnant and Deliver.

Tan H-J, Siu W, et al:

Int Urogynecol J 2010; 21 (June): 631-635

Pubovaginal fascial slings, in this trial, had long-term durability despite either vaginal or cesarean section. These slings remain an option for women with stress incontinence still interested in childbearing.

Objective: To assess the efficacy of women undergoing pubovaginal slings and then subsequently delivering in terms of their ultimate comments status after delivery.
Design: The records of women undergoing a pubovaginal sling procedure over a 12-year period were retrospectively reviewed.
Methods: In this relatively small trial, 9 women who had undergone surgery for stress incontinence over this 12-year time frame and then who subsequently delivered were identified.
Results: 7 women had undergone vaginal delivery, and 2 had cesarean section. Using questionnaire data, 5 of the 9 women remained continent, 3 had no change in their continence status predelivery and postdelivery, and 1 patient noticed worsening incontinence after delivery. Questionnaires were actually completed by only 4 patients, 1 of whom had a vaginal delivery and had high symptom scores and dissatisfaction with the overall status. No long-term complications were associated with this particular delivery method. All women who underwent procedures had undergone them for typical stress urinary incontinence. The age range of the patients was 18 to 41 years at the time of the procedure. None of the 9 patients who had undergone intervention underwent secondary procedures at any time for their incontinence.
Conclusions: The pubovaginal sling appeared to be a durable option despite delivery status, whether vaginal or cesarean section. The sling remains a durable option for women considering intervention who may be interested in procreation at a later time.
Reviewer's Comments: This is an interesting paper. Although the numbers were small, a relatively large number of women (341) underwent sling during the time frame of the study; however, only 9 subsequently delivered. This is always a question that is discussed with younger patients who may be interested in delivery and wrongly so, the admonition has probably been to avoid subsequent pregnancy and childbirth once the sling has been placed. These data seem to impute that this admonition is faulty and that, indeed, women can safely give birth. Larger-scale prospective trials are necessary to ensure that this finding is indeed consistently found in large numbers of patients. (Reviewer-Roger R. Dmochowski, MD).

Keywords: Incontinence, Pregnancy, Pubovaginal Sling

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Hypogonadism and Statins -- Is There an Association?

The Effect of Statin Therapy on Testosterone Levels in Subjects Consulting for Erectile Dysfunction.

Corona G, Boddi V, et al:

J Sex Med 2010; 7 (April): 1547-1556

There is a negative association between statin therapy and testosterone levels, independent of the type of statin used.

Background: The association between erectile dysfunction (ED) and dyslipidemia is evident from preclinical epidemiologic and clinical studies.
Objective: To evaluate the association of statin therapy and testosterone levels in a large series of men seeking medical care for ED. Patients involved in the study included those treated with statins (n=244) compared to case controls selected from the same cohort in a 1:1 ratio.
Results: Among the patients studied, 244 (7%) were treated with statins. Compared to untreated individuals, patients with statins were older and had a higher body mass index (BMI) and cardiovascular (CV) risk. The prevalence of biochemical hypogonadism was also significantly higher in subjects treated with statins, regardless of the threshold used to define it; all of these differences were confirmed after adjustment with confounders. The use of statins was also associated with low testicular volume. By comparing subjects treated with statins with age, waist circumference, and CV risk match controls, the authors confirmed that patients being treated with statins have lower levels of total, free, and bioavailable testosterone.
Conclusions: These observations support the concept of a specific association between overt hypogonadism and the use of statin therapy. It is possible that obesity, per se, and other metabolic syndrome-related factors may induce a decrease in gonadotropin releasing hormone and form a secondary hypogonadism that is superimposed on the primary testicular failure. Statin-associated hypogonadism reported here could be attributed more to the metabolic differences between groups taking or not taking statins than to the intake of statins themselves. However, the association between hypogonadism and statin therapy was confirmed after adjustment for BMI and CV risk using multivariate analysis.
Reviewer's Comments: The cross-sectional nature of this study does not allow causal inference. The epidemiologic nature of this study might represent a limitation, and the results are derived from patients consulting an andrology unit. These patients may have different characteristics than those in general practice or those not seeking medical care. (Reviewer-Kevin T. McVary, MD).

Keywords: Erectile Dysfunction, Hypogonadism, Dyslipidemia

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Does Low Testosterone Predict Mortality in ED Patients?

Low Testosterone Is Associated With an Increased Risk of MACE Lethality in Subjects With Erectile Dysfunction.

Corona G, Monami M, et al:

J Sex Med 2010; 7 (April): 1557-1564

Clinically overt hypogonadism is relevant for cardiovascular health.

Background: Erectile dysfunction (ED) may represent an early surrogate marker of diabetes, hypertension, metabolic syndrome, depression, and coronary heart disease. Referral for ED should become an opportunity to screen for comorbidities.
Objective: To study the effects of low serum testosterone as a predictor of incident major adverse cardiovascular events (MACE) and mortality in men consulting for ED.
Design/Participants: The study was an observational, prospective cohort study of a sample of subjects enrolled through a clinic.
Methods: In follow-up, nonfatal cases of cardiovascular disease requiring hospitalization were identified through a regional hospital discharge system.
Results: Among patients studied, 5.2%, 13.8%, and 22.4% were hypogonadal, according to different thresholds of testosterone (230, 300, and 350 ng/dL, respectively). During a follow-up of 4.3 years, there were 139 cases of MACE, 15 of which were fatal. Lower testosterone was significantly associated with cardiovascular death but not with overall death. These differences were maintained even after adjusting for age. When chronic diseases score was introduced as a possible confounder, only the association between incident fatal MACE and total testosterone <231 ng/dL was confirmed.
Conclusions: This study demonstrates an association between hypogonadism and MACE lethality in subjects consulting for ED. This association was more evident when a threshold of 230 ng/dL was considered. The authors found an association between incident cardiovascular death and hypogonadism-related symptoms and signs as derived from the ANDROTEST score and even after adjustment for confounding factors. This suggests that overt hypogonadism is relevant for cardiovascular health. These data demonstrate that screening for hypogonadism in subjects with ED helps clinicians identify subjects with a higher risk of cardiovascular events. It is not clear if the lower testosterone levels are the cause or the consequence of the observed higher risk. Testosterone levels could be considered a possible factor involved in stratification of MACE lethality. Clinical and animal evidence shows that testosterone exerts a favorable effect on vascular reactivity, inflammation, cytokine production, and adhesion molecule expressions, as well as on serum lipid concentrations in hemostatic factors.
Reviewer's Comments: These results are derived from patients consulting an andrology clinic for sexual dysfunction, meaning that these patients could have had different characteristics from other populations. The authors were also unable to determine whether some of the hypogonadal patients received replacement therapy during follow-up. (Reviewer-Kevin T. McVary, MD).

Keywords: Erectile Dysfunction, Coronary Heart Disease

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