

The Value of a Men's Health Center



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J.H. is a 61-year-old married male, father of 2 grown children, and a commercial carpenter performing mostly interior work. He was referred to the Men's Health Center for evaluation of hypogonadism.

A low testosterone was found when his primary care clinician saw him 10 months earlier for fatigue. He reports, "I could work, do my job, but would feel exhausted when I came home. I would force myself to exercise at a local club but feel like I've lost motivation, and the workouts simply tire me out more."

He had a single level of testosterone drawn in the low 200s and was placed on AndroGel® 1.62%, 2 pumps daily, which did not change his symptoms. After 8 to 9 months the levels were repeated, which showed a lower total testosterone than before treatment.

He has not been able to sustain erections for the last 4 to 5 years, and has been successfully using tadalafil 20 mg. He denies loss of desire and rarely awakens with morning erections. His mood has always been optimistic and he loves his wife and his family dearly. He has a history of borderline "high blood pressure and cholesterol problems" but his doctor does not consider them severe enough for medication. His medical history is otherwise negative, although he is a former smoker and quit after 15 years (1 pack per day) approximately 20 years ago. He reports that he drinks 8 to 12 cans of beer a week, usually on weekends, although his alcohol questionnaire was negative. His diet is excellent and low in fat.

J.H. is the typical patient we see at the Men's Health Center. The center was formed jointly with the hospital system and me, a family practitioner of 23 years with an interest in men's health and a urologist specializing in andrology. We were joined by an AASECT (American Association of Sexuality Educators, Counselors and Therapists) certified sex therapist. The center opened in a dedicated office space almost 9 years ago.

At that time we were considered by the hospital administration to be an extension of unique and new services being offered to men, including robotic prostatectomy. We would care for these men postoperatively, lend support, seek physical therapy for postoperative incontinence and offer "penile rehabilitation."

We also saw patients with other forms of sexual dysfunction, primarily erectile dysfunction (ED), as well as testosterone deficiency. The urologist believed we should do what we do best, ie he would see the "straight-ahead" ED and I would see the men with ED and cardiovascular risk and perform a "cardiometabolic workup." I had never seen this in the literature and I worked feverishly to decide what tests would be most predictive of increased cardiovascular risk and most efficacious and cost-effective.

That analysis continues through the present. However, we have since developed a robust and evidence-based evaluation of vasculogenic ED.¹ In recent years we have added more clinicians (another full-time internist, pelvic floor rehabilitation therapists, a nurse practitioner, 3 nurses and 2 other part-time urologists. Through growth we have grappled with the larger issue of defining men's health.

The concept of addressing men's health was partly the result of the finding of a correlation of erectile dysfunction with cardiovascular disease as well as medical comorbidities with poor reproductive health. Men with ED in the 40 to 50-year-old age range have a fiftyfold increase in the rate of cardiac events compared to similar age men without ED.² Also, men with medical comorbidities (such as obesity, type II diabetes mellitus, dyslipidemia) are more likely to have hypogonadism than men without those comorbidities. The significance of these correlations is amplified because men do not seek medical care or primary care services as often as women. Therefore, it is not surprising that men, in general, have higher death rates than women.³

The traditional approach for men with ED was to focus on therapy to induce erections, but not pursue underlying risk factors. Currently ED should be viewed as a red flag resulting in a much more thorough evaluation to identify and manage reversible risk factors. Because of this change in paradigm, there is much more interest among physicians in the field of men's health.

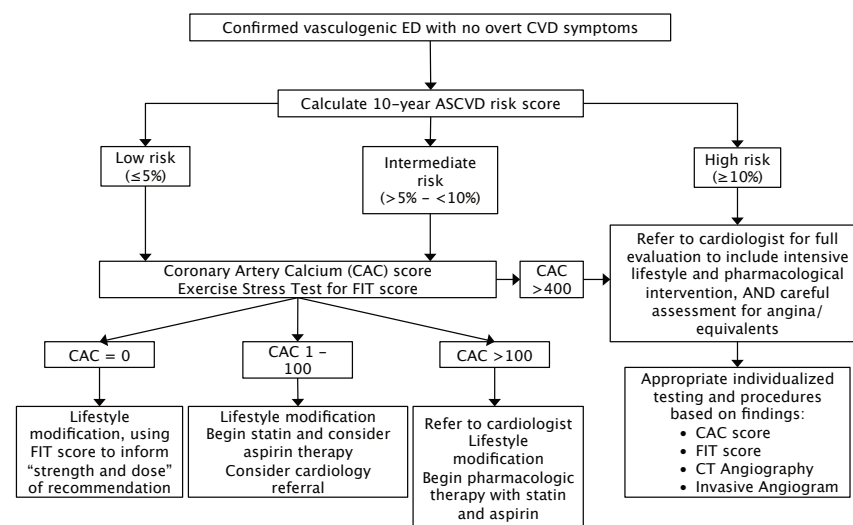


Figure. Modified algorithm for cardiovascular risk assessment and management in asymptomatic men 40 years or older without known cardiovascular disease.

There is no universally agreed upon definition of what the field of men's health encompasses. For some, it consists of conditions that occur only in men, while others may consider it to include any condition that occurs in men (regardless of whether it also occurs in women). Others may take a middle of the road approach, including purely male conditions but also including those that occur more commonly in men.

To adequately deal with the complex nature of male sexual dysfunction, multidisciplinary expertise is needed. Unfortunately, many, if not most, marketed Men's Health Clinics are limited to selling testosterone or penile injection therapy for ED. The multiple underlying comorbid conditions may not be addressed when clinics focus on selling one item, and this is not good for patients.

The urologist may be the first contact that patients have with the medical system when they present with issues such as erectile dysfunction. This is an opportunity to proactively address conditions associated with sexual and reproductive dysfunction such as cardiovascular disease, metabolic syndrome and type II diabetes. Multidisciplinary clinics with in-house expertise may be ideally organized to identify and evaluate those patients needing further more extensive medical management.

While urologists are trained in the management of male reproductive disorders, most are not trained to manage the comorbid conditions associated with reproductive disorders. However, they certainly can have a key role by identifying patients needing further evaluation. The Men's Health Checklist was developed by the AUA to help interdisciplinary management of these cases.⁴

The field of men's health is still developing. The expertise needed

crosses multiple specialties and there are no ACGME (Accreditation Council for Graduate Medical Education) residencies or fellowships in men's health for primary care providers, whereas fellowships in women's health do exist. Nevertheless, there is a growing realization that quality men's health management requires multidisciplinary expertise and recognition that sexual dysfunction often does not develop in a vacuum.⁵

Urologists, primary care physicians and other specialists need to look beyond their own fields to seek evaluation of their patients by other specialties. This move from treating presenting symptoms to multidisciplinary management of risk factors and symptoms will ultimately lead to less morbidity and mortality, and to improved care of men.

Let us quickly return to J.H. His blood pressure is 140/80, body mass index is 31.4 kg/m² (Obese 1) and waist circumference is 44 inches. Laboratory tests reveal a normal fasting blood sugar of 96. Total cholesterol is 170, triglycerides are 96, HDL is 35 and LDL is 96. Total testosterone is 109 upon referral and prostate specific antigen is 0.88.

His lifetime atherosclerotic cardiovascular disease (ASCVD) risk according to the American College of Cardiology/American Heart Association Risk Calculator is 14.7% vs 6.9% with all risk factors being maximally controlled. Based on class IA evidence-based medicine, this same calculator suggests that adults 40 to 75 years old with LDL cholesterol between 70 and 189 and ASCVD risk greater than 7.5% should be treated with a moderate to high intensity statin (see figure).⁶

Mr. H, who is not presently undergoing any risk reduction other than exercise and diet, and who is obese

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with marked visceral adiposity, should undergo further significant risk factor intervention. He may simply have biochemical testosterone deficiency and may or may not have clinical hypogonadism. In addition, the degree to which his ED is vasculogenic is unclear.

It is our recommendation to discontinue the AndroGel 1.62% for 4 weeks, repeat his bioavailable

testosterone in the early morning, and include a luteinizing hormone and serum prolactin to further evaluate the etiology of the testosterone deficiency. In addition, to further delineate the risk we might suggest a computerized tomography (CT) calcium score to determine the presence of subclinical coronary artery disease and, if present, using the calcium score to assess the burden of subclinical atherosclerotic disease present, thereby determining the aggressiveness of future risk reduction and

potential modification of morbidity and mortality.

This is the value of a multidisciplinary men's health center: to listen, assess, treat, educate, modify lifestyle, and potentially alter risk and improve overall quality and quantity of life. This can only be good for men. ♦

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HAVE YOU Read?



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Vaginal mesh insertion has been a widely used surgical method of treating urinary incontinence and pelvic organ prolapse (POP) for the last 10 to 15 years. In January 2016 the Food and Drug Administration reclassified vaginal mesh, changing it from the moderate to the high risk category, in large part due to thousands of reports of device erosion, pain and infection. Because of these problems several manufacturers have withdrawn their mesh devices from the market. Several recent studies have been reviewed to highlight the major issues concerning transvaginal mesh and what could potentially be done to resolve them.

Moon JW and Chae HD: Vaginal approaches using synthetic mesh to treat pelvic organ prolapse. *Ann Coloproctol* 2016; **32: 7-11.**

This review article on the use of synthetic vaginal mesh cites high erosion rates of 23% (perhaps in reality even higher) and discusses the issue of propylene mesh causing foreign body reactions. In addition, the authors report that newer, semi-absorbable mesh may have lower complication rates.

Heinonen P, Aaltonen R, Joronen K et al: Long-term outcome after transvaginal mesh repair of pelvic organ prolapse. *Int Urogynecol J* 2016; Epub ahead of print.

The high erosion rates of vaginal mesh are confirmed in this study, about 23%, similar to those reported in the review article previously discussed. Is there a solution to this serious problem? Yes there is, if one understands the basic cause of most of these complications. A lesson learned

from penile and breast implants is that the major cause of prosthetic failures is device infection.¹ More than 80% of inflatable penile prosthetics that were being routinely removed and replaced for device failure were surprisingly found to be infected.²

Bacteria, primarily *Staphylococcus epidermidis*, attach to the device during surgical implantation and grow in micro-colonies surrounded by a mucus biofilm that is relatively impermeable (including to antibiotics). These micro-colonies attach readily to hydrophobic surfaces and usually grow indolently on the device with minimal to severe interaction with the host.

The immune system is ineffective at eradicating them because of the protective biofilm but it is responsible for the inflammation that causes pain primarily from the immune response to bacterial metabolic wastes. The hallmarks of an infected device are chronic or intermittent pain, device migration (the body attempting to extrude the infection) and erosion to the surface,¹ as has been widely reported for vaginal mesh.

Synthetics like polypropylene do not induce the foreign body reactions seen with vaginal mesh. It is the bacteria on the device that cause these reactions. If a penile or breast implant is infected it can be removed and successfully replaced because the host will surround the device with a capsule allowing ready removal and reinsertion.¹

However, this is not the case with vaginal mesh. Its structure (which is likely key to its ability to correct incontinence and POP) results in infiltration by fibroblasts that weave throughout the mesh, making it at best very difficult if not impossible to remove. This is a particularly serious problem for the patient experiencing intense pain for which there may be no successful remedy available.

Maher C, Feiner B, Baessler K et al: Transvaginal mesh or grafts compared with native tissue repair for vaginal prolapse. *Cochrane Database Syst Rev* 2016; **2: CD012079.**

There are possibilities to improve transvaginal surgery outcomes. New techniques to reduce the incidence of bacterial infection, do (and improve) repairs with native tissues or use mesh that is fully absorbable, in theory should reduce infection and erosion rates.

Data were abstracted from the Cochrane Database to compare mesh vs native tissue repair. Transvaginal permanent mesh was associated with higher rates of surgical success compared to native tissue but it was also associated with higher rates of reoperation for prolapse, stress urinary incontinence and mesh exposure. The authors concluded that the risk-benefit profile indicated that vaginal mesh has limited usefulness in primary surgery.

Native tissue repairs may have lower surgical success rates but they are associated with far fewer erosion and infection problems. The surgeon will have to weigh these factors when determining what is best for a particular patient. The data for absorbable mesh vs native tissue suggested some surgical benefits for mesh but were too limited for other outcomes to draw meaningful conclusions. It may well be that fully absorbable mesh does have a real future in the treatment of incontinence and POP.

The bottom line is that it is neither the surgical technique nor the type of incision used that results in mesh outcome failures, but rather it is the vaginal bacteria. Recognition of this issue is critical to understanding why surgical failures now plague transvaginal mesh and also helps guide the way for the development of new methods to resolve them.

Snyder PJ, Bhasin S, Cunningham GR et al: Effects of testosterone treatment in older men. *N Engl J Med* 2016; **374: 611-624.**

The use of testosterone replacement therapy in older men has been increasing and may provide real benefit. The physician has to weigh the risks and benefits for each patient, primarily considering the issue of prostate cancer. Objective data supporting the beneficial effects of testosterone would be quite helpful in this process.

This research study was a 1-year, multisite, double-blind study of 790 subjects comparing men on testosterone therapy vs a placebo. There were 3 separate trials that evaluated 1) sexual function (by questionnaire), 2) physical function (walking trial for 6 minutes) and 3) vitality (questionnaire). Testosterone for the participants was raised to the mid range level for young males. In the sexual function trial sexual desire and erectile function significantly increased for men on testosterone. In the physical activity trial the ability to walk further was not increased for testosterone subjects but when all participants in the trial on testosterone were included, the testosterone group was significantly better vs the placebo group.

Overall vitality scores were not better on testosterone, but the men on testosterone reported significantly better mood and lower severity of depression. While this is a relatively small and short-term study, the data do provide scientific evidence for the beneficial effects of testosterone replacement therapy for older men. ♦

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