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Erectile Dysfunction (ED): The latest advances in the prevention, diagnosis, and treatment in the US – An interview with Dr. Natan Bar-Chama

with Nihal Mohamed

Erectile dysfunction (ED) affects millions of men in Europe and the USA and is associated with increasing age and such common conditions as Diabetes, Hypertension, and obesity (Dean, 2005). Approximately 25 million American men suffer from ED and more than 600,000 American men aged 40-69 develop ED annually. Recent advances have lead to a greater understanding of male sexual health and the development of new treatment options. The European Health Psychologist discussed the latest advances in the prevention, diagnosis and treatment of erectile dysfunction with Dr. Natan Bar-Chama, MD, associate professor of urology at the Barbara and Maurice Dean Prostate Health and Research Center at Mount Sinai Medical Center in New York.

ehp: *What are the types of sexual problems that men may face? And is it likely that men could have more than one of these sexual problems at the same time?*

NB-C: There are several sexual problems a man may face. These sexual problems include low libido which is having little or no sexual drive or interest in sex, ejaculatory difficulties which can include premature ejaculation (reaching ejaculation too soon) or delayed ejaculation, and erectile dysfunction (ED) which is defined by the National Institutes of Health (NIH) as the persistent inability to get or maintain an erection firm enough for satisfactory sexual intercourse (Thompson, Tangen, Goodman, Probstfield, Moinpour, & Coltman, 2005). A man may have one or more than one of these conditions at the same time.

ehp: *Could you explain what tools are available to help diagnose men with ED?*

NB-C: The Sexual Human Inventory for Males (SHIM) questionnaire with its 5 items was developed and validated as a brief diagnostic tool of ED. This scale can be easily used and incorporated into the patient's routine medical history. Studies that applied the SHIM have shown that this scale has high a sensitivity and specificity in assessing different levels of ED [scoring: >22 = no ED, 17-21 = mild ED, 5-16 = moderate/severe ED]. Many health care providers have indeed incorporated the SHIM scale in to their screening test. For example, the examination centre for career servicemen of the Israel Defense Force incorporated the SHIM into a computerized

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questionnaire used to collect patients' medical history (Heruti, Yossef, & Shochat, 2004). These kinds of periodic examinations offer maximum privacy and highlight the importance of sexual health as a fundamental component of general health, while addressing sexual dysfunction as an early indicator of underlying disease. The concept of adding an ED questionnaire to a screening program may encourage more men to seek treatment, not only for their ED, but also for the underlying disease.

ehp: *Research and anecdotal reports have shown that psychological and social problems such as anxiety, depression, and conflict and dissatisfaction with the partner can affect men's sexual performance. What are the biological causes of ED? And is ED an inevitable result of aging?*

NB-C: There are many possible causes of ED. ED could be caused by psycho-social factors as you mentioned biological factors, or a combination of these two factors. The psychosocial factors may include an array of emotion- and communication-related factors such as marital/relationship conflict, depression, anxiety about sexual performance, and job-related stress. The biological causes of ED include diabetes, elevated cholesterol levels, hypertension, and obesity. Sexual function does not need to decrease with age. In fact, many men ►



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enjoy their sexual relationships well into their senior years. However, some health problems that men tend to have as they age such as diabetes mellitus and heart disease can affect men's sexual activities and cause ED.

ehp: *Can having ED indicate a presence of or having a risk factor for Coronary Artery Diseases (CAD)? What kind of medical evaluations or referral to other health care providers that you would suggest in this case? And what are the implications of this condition on practice?*

NB-C: Today, urologists as well as the broader medical community better appreciate the linkage between ED and cardiovascular diseases (CVD). ED is often a manifestation of endothelial dysfunction and is now considered an independent risk factor for future adverse cardiovascular events. Therefore, we need to promote awareness of these associations to our patients and medical colleagues. We, urologists, should acknowledge our limitations; we are not trained to treat CVD. However, we can proactively establish the diagnosis of dyslipidemia, hypertension, and endothelial dysfunction in our ED patients. We can say, "Look it's obvious you are overweight, your blood pressure is elevated, you are not exercising, and according to my ED evaluation your cholesterol level and your BMI are abnormal". Our medical colleagues and our patients often respond better to an abnormal lab test than to vague warning about overall health.

ehp: *You mentioned that ED could be a manifestation of endothelial dysfunction that increases the risk of CVD. What role does endothelial dysfunction play in ED?*

NB-C: Endothelium is the layer of cells surrounding the entire vasculature (i.e., the vascular system of the body or any part of it). Endothelial dysfunction is an integral component of the pathogenesis of CVD and ED, and has been shown to be an independent predictor of future cardiovascular events. Once a patient has endothelial dysfunction, its manifestations are broad and can include CVD, diabetes, and ED. We are currently screening patients for endothelial dysfunction in the office using an FDA-approved computer-based device called the Endo-PAT 2000, made by Itamar Medical Ltd. This new technology assesses endothelial function by measuring Reactive hyperemia before and after brachial artery compression. The test takes about 30 minutes to perform by a trained nurse or medical assistant. We have recently presented data that 50% of men with ED have abnormal endothelial function. All men with ED should undergo risk stratification

regarding cardiovascular disease which may include blood pressure, cholesterol profile, Framingham risk score, and assessment of endothelial function.

ehp: *Research also established links between ED and health behaviour such as smoking, alcohol consumptions, poor nutrition, and physical exercise. Should urologists counsel patients about these issues? And what kind of intervention if any a urologist can/would suggest to help patients change or modify the risk behaviour.*

NB-C: The urologist should find out if the patient is smoking and exercising. If the patient is overweight and need help with diet, referral to a nutritionist should be made. The next level of testing may be to assess lipid abnormalities, early diabetes, and endothelial dysfunction. At this point, however, we're entering an arena where it would be helpful to have another medical discipline involved. Very few urologist practices are set up to perform such comprehensive assessments. We should look at treating ED patients as an opportunity to establish referral relationships with the primary care providers (PCPs) and other specialists. At Mount Sinai Men's Wellness Program, we are able to expand our ED evaluation as part of a comprehensive workup. I see patients together with an internist/endocrinologist one day a week. It comforts me to know that my ED patients are being evaluated for diabetes, hypogonadism, and cardiovascular risk by a physician who lives and breathes these diseases, and can offer state-of-the-art testing and treatment. A urologist who does not currently have such an arrangement could suggest to a PCP colleague that he or she come into their office one afternoon a month to see patients who would benefit from this comprehensive approach to treating ED.

ehp: *Depression is common among patients with diabetes, cardiovascular diseases, and is also a major cause of ED (both depression and its treatment). Should urologists monitor and treat depression in ED patients?*

NB-C: Every patient with ED has a psychological issue. The notion that there is a clear split between organic and psychogenic is outdated medicine. I work closely with a psychologist and psychiatrist, and offer their skills routinely to my patients. We can often initiate successful PDE-5 inhibitor therapy first, and then the patient ability to deal with the psychological issues will be markedly enhanced. ►

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Urologists are result-focused; we anticipate that the next time we see our ED patient, he will have made progress. If a tangible improvement is observed, a referral to the psychologist has a better chance of success. However, there are situations where intervention by a psychiatrist or a psychologist is needed immediately, and the referral should not be delayed. These cases tend to be exceptions.

ehp: *Some patients might refrain from discussing ED and other sexual problems with their care providers. How can a urologist break the communication barriers?*

NB-C: When dealing with personal issues like sexual function, it's important to establish an understanding of the individual's expectations and relationship status so you can offer effective therapy. On my intake from and in my discussions, I routinely inquire about these issues. Patients are asked, "Do you have a steady partner? How many years have you been together? Is your partner interested in having sexual issues treated? How often are you sexually active? What are your expectations of the ED therapy?"

ehp: *What are the state-of-the-art treatments of ED? And how successful are they in treating ED and what implications do these treatments have on other ED-related diseases?*

NB-C: The PDE-5 inhibitors such as (i.e., Viagra, Cialis, Levitra) are first line therapy for ED. They have revolutionized the perception of this disease entity and are the mainstay of the global treatment of ED. The medications are being used in other therapeutic areas, such as pulmonary hypertension and lower urinary tract syndromes (LUTS). In addition, all three PDE-5 inhibitors have demonstrated improvement in endothelial function. Furthermore, Research has shown that the benefits of the drugs on endothelial function persist even after the patients discontinue use of medications (Rosano, 2004). One can foresee the possibility of a new algorithm whereby an ED patient with endothelial dysfunction will not only be referred for a more aggressive cardiologic evaluation but the treating urologist will consider initiating chronic PDE-5 therapy to treat ED as well as achieve overall improvement in endothelial function.

ehp: *You lead the Mount Sinai Men's Wellness Program. Could you tell us about the services provided by this program?*

NB-C: The Mount Sinai Men's Wellness Program is a non profit educational organization dedicated to promoting men's overall health. Men die on average six years earlier than women. They are also more likely to die from heart disease and cancer. If you look at the statistics, from health and longevity perspective, men might be viewed as the weaker sex. To address these issues we recognized that it was important to create a multidisciplinary approach that utilizes the expertise of a variety of specialist to look beyond simply urological problems and treat male patients as a whole. The program was designed to look beyond the boundaries of specific medical specialties in order to provide comprehensive, multidisciplinary care for men with low testosterone, ED, osteoporosis, andropause (male menopause), prostate diseases and prostate cancer, and many other urologic and metabolic conditions. Men wellness is best achieved this way where urology is integrated with other specialties including internal medicine, cardiology, endocrinology, and psychology. ■

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Disclosure: Professor Bar-Chama has undertaken research and consultancy for companies including Pfizer, Bayer, GSK, Lilly, Solvay, Itamar Medical.