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Culley C. Carson III

Recovery of Erectile Function After Robotic Prostatectomy: Evidence-Based Outcomes

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Philipp Dahm, Diana Kang, Taryn L. Stoffs, and Steven E. Canfield

Several reported advantages of the robotic-assisted laparoscopic approach to the treatment of clinically localized prostate cancer include superior results for erectile function as one of the critical outcomes of radical prostate surgery. This article provides a critical assessment of the evidence that exists for erectile function outcomes based on a systematic literature review. We found that the low methodological and reporting quality of existing studies did not appear well suited to guide clinical practice. A new framework of prospective investigation using validated patient self-assessment instruments would seem critical to the future advancement of this field.

Penile Rehabilitation After Prostate Cancer Treatment: Outcomes and Practical Algorithm

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Clarisse Mazzola and John P. Mulhall

The number of patients diagnosed with prostate cancer was estimated to be 192,000 in 2009 according to the American Cancer Society. The prevalence of reported erectile dysfunction after radical prostatectomy has significant variance. Among the studies in which the nerve-sparing status was described, erectile function recovery adequate for sexual intercourse was achieved in 50% of patients. This article reviews the animal and human studies in this field and provides a useful penile rehabilitation algorithm.

Testosterone and Prostate Cancer: What are the Risks for Middle-Aged Men?

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Abraham Morgentaler

With increased recognition of the benefits of testosterone (T) therapy for middle-aged men, there has been a concomitant reexamination of the historical fear that raising T will result in more prostate cancer (PCa). Studies have failed to show increased risk of PCa in men with higher serum T, and supraphysiologic T fails to increase prostate volume or prostate-specific antigen in healthy men. This apparent paradox is explained by the Saturation Model, which posits a finite capacity of androgen to stimulate PCa growth. Modern studies indicate no increased risk of PCa among men with serum T in the therapeutic range.

Erectile Dysfunction and Depression: Screening and Treatment

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Michael A. Perelman

The comorbid conditions erectile dysfunction (ED) and depression are highly prevalent in men. Multiple regression analysis to control for all other predictors of ED indicate that men with high depression scores are nearly twice as likely to report ED than nondepressed men. Depression continues to be among the most common comorbid problems in men with ED, both in the community and in clinical samples. This article reviews the current knowledge about the relationship between ED and depression, the effect of treatments for depression on ED, ways to improve screening for depression, and treatment of ED in patients with this comorbidity.

Stanley E. Althof and Rachel B. Needle

Male sexual dysfunctions, including erectile dysfunction, hypoactive sexual desire disorder, premature ejaculation, and delayed ejaculation, are a complex amalgam of interrelated biological, psychological, and contextual variables that can combine to produce distressing symptoms both for the male diagnosed with the dysfunction and for his partner. This article describes the assessment process for identifying the psychological concerns associated with the man's sexual complaint, and presents a stepwise algorithm for treating mild to moderate psychosocial issues. Physicians' awareness of psychological and interpersonal issues will help them better manage patients' ongoing medical treatment and limit discontinuation of efficacious therapies.

Doppler Blood Flow Analysis of Erectile Function: Who, When, and How

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Timothy J. LeRoy and Gregory A. Broderick

The underlying processes in vasculogenic erectile dysfunction (ED) are arterial insufficiency, venoocclusive disease, or combinations of both. Doppler blood flow analysis is a diagnostic modality useful in elucidating the cause of ED and the magnitude of its severity. This article describes the procedural techniques, typical findings, and relevant pathophysiology for in-office Doppler studies. Specific conditions include arterial insufficiency, venous occlusive disease, Peyronie's disease, and priapism.

Newer Phosphodiesterase Inhibitors: Comparison with Established Agents

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Erin R. McNamara and Craig F. Donatucci

Erectile dysfunction is defined as the consistent or recurrent inability to attain or maintain penile erection sufficient for sexual performance. Self-reported erectile dysfunction has increased significantly as men seek effective therapy, such as oral phosphodiesterase 5 inhibitors (PDE5i). PDE5i are now the drugs of choice in the initial therapy of erectile dysfunction. This review compares the currently available PDE5i with the second-generation PDE5i, which are soon to be available.

Central Nervous System Agents and Erectile Dysfunction

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Rajeev Kumar and Ajay Nehra

Several centrally acting agents have shown potential to improve erectile function in men with ED. They still lack adequate data in efficacy and tolerability. Nasal formulations of apomorphine and bremelanotide seem to be the most likely candidates for future approval. They may play a role, specifically in men who fail phosphodiesterase 5 (PDE5) therapy, are unable to take PDE5 inhibitors because of side effects, or are on nitrate therapy. This article reviews the centrally acting agents and the data on their efficacy.

Testosterone Deficiency and Risk Factors in the Metabolic Syndrome: Implications for Erectile Dysfunction

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Andre T. Guay and Abdulmageed Traish

The most common cause of erectile dysfunction (ED) is penile vascular insufficiency. This is usually part of a generalized endothelial dysfunction and is related to several

conditions, including type 2 diabetes mellitus, hypertension, hyperlipidemia, and obesity. These conditions underlie the pathophysiology of metabolic syndrome (MetS). Hypogonadism, or testosterone deficiency (TD), is an integral component of the pathology underlying endothelial dysfunction and MetS, with insulin resistance (IR) at its core. Testosterone replacement therapy for TD has been shown to ameliorate some of the components of the MetS, improve IR, and may serve as treatment for decreasing cardiovascular and ED risk.

Priapism: New Concepts in Medical and Surgical Management

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Arthur L. Burnett and Trinity J. Bivalacqua

Advances have recently been made in both medical and surgical management of priapism, and these offer improvements in the level of care afforded such patients. Further developments can be expected based on ongoing progress, particularly in the area of molecular science, which is the primary source for driving novel therapeutic approaches. Continued action to address the health care administrative concerns of those most commonly affected by priapism, specifically individuals with sickle cell disease, is also appropriate. All successes in these arenas ensure that afflicted individuals avoid the health burdens of priapism and preserve sexual function.

Peyronie's Disease: Review of Nonsurgical Treatment Options

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Stephen M. Larsen and Laurence A. Levine

The purpose of this article is to review the contemporary literature on nonsurgical therapies for Peyronie's disease (PD); focus on randomized, placebo-controlled trials; and review the latest guidelines for the management of PD from the International Consultation on Sexual Medicine. A combination of oral agents or intralesional injection with traction therapy may provide a synergy between the chemical effects of the drugs and the mechanical effects of traction. Until a reliable treatment emerges, some of the nonsurgical treatments discussed can be used to stabilize the scarring process and may result in some reduction of deformity with improved sexual function.

Peyronie Disease: Plication or Grafting

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Joshua P. Langston and Culley C. Carson III

Peyronie disease (PD) is an incurable, sexually debilitating disease resulting in penile deformity, coital failure, and significant psychological stress for patients and their partners. Appropriate treatment should be individualized and tailored to the patient's goals and expectations, disease history, physical examination findings, and erectile function. After medical therapy is considered and the disease has stabilized, surgical correction, including tunical shortening or lengthening procedures, is an excellent option for patients with functional impairment caused by PD. Outcomes are satisfactory when proper treatment decisions are made, with the goal being expected return to normal sexual function following PD treatment.

Penile Prosthesis Implantation in the Era of Medical Treatment for Erectile Dysfunction

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Drogo K. Montague

Penile prosthesis implantation, the oldest of the modern treatments for erectile dysfunction (ED), still plays an important role despite the advent of less invasive alternatives. For some men with ED, penile prosthesis implantation is the only

effective or acceptable treatment. Penile prosthesis implantation remains a viable option in the contemporary management of ED as evidenced by annual penile prosthesis implantation cases in the United States rising from 17,540 in 2000 to 22,420 in 2009. Improvements in prosthesis design and implantation techniques have resulted in significant increases in device survival and patient satisfaction.

Penile Prosthesis Infection: Approaches to Prevention and Treatment

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J. Patrick Selph and Culley C. Carson III

Epidemiologic studies have estimated that more than 50% of men ages 40 to 70 have some form of erectile dysfunction. Penile prosthesis implantation remains a mainstay for treatment of erectile dysfunction unresponsive to other less-invasive methods. Improvements in penile prosthesis design have extended the long-term survival of implants. As the improved design of prostheses has led to their increased mechanical survival, other complications, such as infection, have emerged as the leading causes of implant failure. This article focuses on approaches to prevention and treatment of penile prosthesis infection.