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Preface

Arnold Melman

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The Epidemiology of Erectile Dysfunction

Alexandru E. Benet and Arnold Melman

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In the last several years, significant advances have been made in the understanding of male erectile dysfunction. However, more epidemiologic research is essential to further understand the distribution and the prevalence of erectile dysfunction in certain ethnic groups, chronic conditions, and as a result of surgery and trauma. These studies will help to improve diagnostic skills as well as therapeutic options.

Sexuality and Aging

Raul C. Schiavi and Jamil Rehman

711

Because aging is frequently associated with medical conditions likely to impair sexual performance, there is a tendency to view sexual changes in older men as the result of pathology, overlooking the effect of natural processes of aging in sexuality. This article discusses the sexual responses in the aging male, the physiologic aspects of aging male sexuality, psychologic aspects of aging and sexuality, studies on aging male sexuality, a psychobiological investigation of healthy aging men, medical causes of erectile dysfunction in elderly men, and the effect of medications on the sexual functioning of aging men.

The Penis as a Vascular Organ: The Importance of Corporal Smooth Muscle Tone in the Control of Erection

George J. Christ

727

The intrinsic biological complexity of penile erection and the multifaceted nature of erectile dysfunction are just beginning to be fully appreciated. This article describes how mechanistic studies of the local control of penile erection, with specific emphasis on the primary role of the corporal smooth muscle, contribute to the improved understanding, diagnosis, and treatment of erectile dysfunction.

Neural Control of Penile Erection

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François A. Giuliano, Olivier Rampin, Gérard Benoit, Alain Jardin

Local mechanisms responsible for penile erection are mainly controlled by the autonomic nervous system. Parasympathetic outflow conveyed by the pelvic autonomic nerves and sympathetic neural fibers present in the paravertebral sympathetic chain play a proerectile and an antierecile role, respectively. Reflexive erections are mediated at the spinal cord level and this reflex loop is under supraspinal control. The role played by the brainstem nuclei and diencephalon, particularly the hypothalamic medial preoptic area is described. Present concepts about neurotransmission at peripheral, spinal, and supraspinal levels are reviewed. Attempts to place erection in its context are proposed.

Psychological Issues in Diagnosis and Treatment of Erectile Disorders

767

Leonore Tiefer and Doris Schuetz-Mueller

Psychological issues are salient in every case of erectile dysfunction because sexual function is a psychosomatic process. The best overall assessment is made through separate psychosocial interviews of patient and partner. Interview technique requires comfort and a nonjudgmental attitude. A combination of psychological and physiological treatments offer the best outcome for many cases.

Use of Nocturnal Penile Tumescence and Rigidity in the Evaluation of Male Erectile Dysfunction

775

Laurence A. Levine and Eric L. Lenting

The role of nocturnal penile tumescence monitoring in helping to distinguish psychogenic from organic impotence has been the subject of research for several decades. Tumescence monitoring alone, while it does provide useful information, imposes limitations on the diagnostic inferences that can be drawn concerning the adequacy of erectile function. This led to the development of nocturnal penile tumescence and rigidity monitoring (NPTR). Although there is no single test that enables physicians to diagnose the precise etiology and degree of impotence, NPTR provides useful information in a rather noninvasive and inexpensive manner allowing one to direct patients to the appropriate treatment.

Diagnosis and Management of Endocrine Disorders of Erectile Dysfunction

789

Joel Zonszein

Organic causes of erectile dysfunction with androgen deficiency may be associated with aging, systemic illness, and a number of specific endocrine disorders stemming from pituitary, thyroid, and adrenal dysfunction. Central hypogonadism is the main mechanism in the majority. Erectile dysfunction in diabetes mellitus is caused by chronic complications due to poor metabolic control. Diagnosis and management of these disorders are discussed, as is the need for tight glycemic control in men with diabetes.

Investigation of Erectile Dysfunction: Diagnostic Testing for Vascular Factors in Erectile Dysfunction

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Eric J. Meuleman and Willem L. Diemont

This article reviews the literature on vascular testing in erectile dysfunction. Current vascular tests are described. A purpose-directed choice of tests is advocated.

Jacob S. Sharaby, Alexandru E. Benet, and Arnold Melman

Penile revascularization surgery to correct penile vascular insufficiency has undergone several modifications since its introduction. Further improvement in the surgical success rate will be achieved with improved understanding of erectile physiology, diagnostic methodology, and both microsurgical and radiological techniques.

Intracavernous Injection Therapy for Male Erectile Dysfunction

833

Bernard Fallon

Intracavernosal injection therapy has consistently produced erections in 60% to 70% of patients in whom it is tried. About 70% of patients enter long-term therapy and there is a dropout rate of 20% to 50% within the first year. The most effective current regimen is a mixture of papaverine-phen-tolamine and prostaglandin E1, that also seems to have a relatively low incidence of priapism and fibrous nodule formation. Patient education is vitally important to the success of a program. Patient satisfaction rates are high.

Long-Term Results of Penile Prosthetic Implants

847

Ronald W. Lewis

This article is intended to provide the implanting surgeon with information that can be used as a guideline for proper informed consent for the patient who is to have a penile prosthesis. The modern penile prostheses are quite reliable with an approximate 5% mechanical failure rate for the inflatable prosthesis after being in place for 5 years. Although approximately 90% of patients will have a functioning device at 5 years, only 70% will be completely satisfied with the device and this satisfaction rate is about the same for the partners. Late infection is possible and the use of prophylactic antibiotics during the time that infection risk might be possible is recommended.

Use of Penile Prosthetic Implants in Patients with Penile Fibrosis

857

L. Dean Knoll

For a subset of impotent patients with penile fibrosis, the implantation of a penile prosthesis is their only therapy for restoration of erectile function. A careful preoperative evaluation is imperative and should include a detailed history, physical examination, selected diagnostic studies, selection of a prosthesis, and extensive patient and partner counseling. Techniques for managing fibrosis are outlined, and in many cases, additional reconstructive procedures may be required. These surgical techniques permit highly motivated patients not to terminate their sex lives at an unacceptably early age.

A Practical Approach to the Evaluation and Treatment of Erectile Dysfunction: A Private Practitioner's Viewpoint

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Neil Baum and Donald Rhodes

The evaluation of impotence can be easily accomplished in the office environment with minimal expense and equipment. In most instances a practical workup can be completed in 2 office visits. Using this practical methodology, your impotent patient can achieve an evaluation and begin treatment in a cost effective fashion.

Oral and Topical Treatment of Erectile Dysfunction: Present and Future Alvaro Morales, Jeremy P. W. Heaton, Brenda Johnston, and Michael Adams	879
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A great deal of progress has been made in the pharmacological treatment of erectile dysfunction. At present, however, the most effective therapies require intracavernosal injections with a number of associated drawbacks. An increasing number of oral and transdermal agents have been introduced clinically or are at various phases in their development. It is evident that severe end-organ disease probably will not result in successful systemic therapy. Nevertheless, in men with intact or mildly dysfunctional erectile mechanisms, noninvasive treatments can offer some measure of success. Further study of individual and synergistic activity of available compounds is underway.

Augmentation Phalloplasty Gary J. Alter	887
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Aesthetic procedures can increase the girth and visual length of the penis. Dermal-fat grafts increase penile circumference without the complications that result from fat injections. Release of the suspensory ligaments with skin advancement may increase flaccid penile length. Suprapubic lipectomy and Z-plasty of a penoscrotal web enhance penile appearance. Accurate diagnosis and meticulous technique are mandatory.

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