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Penile Rehabilitation Post-Prostatectomy

Source: Nandipati K, et al. *Int J Impot Res.* 2006;18:446-451.

After prostatectomy, many men lose erectile function. It has been recently noted that penile stimulation that actively produces cavernosal dilation may reduce the likelihood of loss of function. Simplistically, it appears that with protracted periods of not infusing the cavernosal sinusoids with freshly oxygenated blood, the lack of endothelial stimulation ultimately results in some degree of fibrosis and/or subsequent refractoriness to stimulation. Tools such as vacuum constriction devices or PDE5 inhibitors (eg, sildenafil) when employed post-prostatectomy have shown promise in reducing development of post-surgical erectile dysfunction.

A combination of treatments might further enhance likelihood of return of sexual function. Nandipati et al prospectively studied patients who underwent bilateral nerve-sparing prostatectomy. Postoperatively, patients received sildenafil 25-50 mg QD beginning at hospital discharge. At 3 weeks postoperatively, patients were instructed in the technique of penile intracorporeal injection (ICI), and advised to perform this 2-3 times weekly, stopping if spontaneous erections returned.

During mean followup of 6 months, 95% of patients were able to resume sexual activity. The active induction of penile erection with combination pharmacotherapy provides the opportunity for most men to resume sexual activity post-prostatectomy. ■

Sunburn in the United States

Source: Brown TT, et al. *J Am Acad Dermatol.* 2006;55:577-583.

In 2004, there were almost 8,000 deaths from malignant melanoma. When combined with squamous cell carcinoma and basal cell carcinoma, skin cancers are the most common malignancy in the United States. UV light is a primary risk factor for induction of actinic keratosis and non-melanoma skin cancers; malignant melanoma is almost twice as common in individuals with sunburn history.

The Behavioral Risk Factor Surveillance Survey (BRFSS) is a representative sample of the adult US population who agreed to be interviewed about health issues. In 2003, subjects who provided information about sunburn (n = 248,042) formed the population from which these data are derived.

Overall, when queried about the previous 12 months history, 39% of adults reported having had at least one sunburn, with 26% indicating two or more sunburn experiences, and 24% having 3 or more sunburns in less than one year's time. There was a definite relationship between age and sunburn experience: young adults (18-24 years) reported the highest sunburn frequency. Men experienced sunburn about 30% more frequently than women. Utilization of alcohol and smoking also correlated with sunburn prevalence.

Young adults apparently do not appreciate the risks associated with sunburn. Increased educational efforts, combined with enhanced skin protection techniques, are in order to curb the burgeoning burden of skin cancer. ■

What is the Best Diagnostic Test for Onychomycosis?

Source: Lilly KK, et al. *J Am Acad Dermatol*. 2006;55:620-626.

Of all nail disorders seen in primary care, onychomycosis (ONYC) is the most common. Since ONYC increases in prevalence with age, clinicians are destined to see the disorder with greater frequency. There are numerous potential ways in which the ONYC diagnosis may be confirmed, but the gold standard is generally considered to be culture. Lilly et al compared 7 different diagnostic tests using toenail tissue from 204 patients with a clinical diagnosis of ONYC. Patients were excluded if they suffered other nail dystrophies or had recently used antifungal medications (topical or systemic).

Cost-effectiveness was the primary end point. Methods compared were KOH wet mount (lab-technician interpreted), KOH wet mount (dermatologist interpreted), KOH+DMSO wet mount, KOH + Chlorazol black E wet mount, periodic acid-Schiff staining (PAS), and two different culture methods (dermatophyte test medium and Mycobiotic and Inhibitory Mold Agar).

PAS was the most sensitive test (98.8%), but the least cost effective, with a typical price for PAS histology more than $100. The KOH wet mount with Chlorazol black E was the most cost effective. The authors suggest that for persons not experienced with the KOH/Chlorazol black E microscopy, even though PAS is more expensive, it may be a reasonable choice because of its high sensitivity and the fact that it is generally considered 'operator independent.' ■

A Novel Approach to Stroke Rehabilitation: Constraint Therapy

Source: Wolf SL, et al. *JAMA*. 2006;296:2095-2104.

More than three fourths of ischemic stroke survivors experience hemiparesis, with the majority of victims continuing to suffer long term limitations in functional use of their upper extremities. Recently, Constraint-Induced Movement Therapy (CIMT) has been studied as a method of late intervention (1 year or more post-stroke) for residual paresis.

The CIMT approach recognizes that in the face of functional deficit, it is a natural tendency to use the more agile arm to perform everyday tasks of living. Hence, the paretic limb undergoes further 'learned nonuse' dysfunction. CIMT involves placing the more functional limb in restraint for 2-3 weeks, with supervised practice in the use of the paretic limb.

The EXCITE Trial enrolled individuals who had sustained a stroke and were felt to have achieved a stable level of maximum recovery, but still suffered upper extremity functional deficits. Patients were assigned to a 2-week CIMT group or usual care group, and followed for 1 year afterwards (n = 222).

The Motor Activity Log measures capacity to perform 30 common daily activities. When measured at 12 months, the CIMT group was statistically significantly improved compared to usual care as measured both by the Motor Activity Log and the Wolf Motor Function Test (which measures improvements in rapidity of functional motion, strength, and quality of movement). Although this is the first large randomized trial of CIMT, the results support its use as a rehabilitative method, even late in the course of post-stroke dysfunction. ■

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Is Carbohydrate Really a 'Bad-Guy'?

Source: Halton TL, et al. *N Engl J Med*. 2006;355:1991-2002.

Despite bookshelves in modern bookstores brimming with advice about diet, ascertaining just what constitutes the 'best' dietary structure remains elusive. Proponents of low versus high carbohydrate, fat, or protein provide intellectually appealing rationale to support their particular 'fad' diet, but little science is available to confirm most assertions about an optimum diet.

The Nurses Health Study began in 1976 with an initial enrollment of over 121,000 nurses. Since 1980, dietary information has been included in survey questionnaires.

Based upon surveys returned by 82,000 women over a 20 year period of observation, stratification tables by percentage of energy derived from carbohydrate were developed. Incident coronary heart disease (CHD) was then correlated with dietary pattern.

Over 20 years of followup, persons on a low-carbohydrate diet did not show an effect on the incidence of CHD. Amongst women who followed a low-carbohydrate diet, those who preferentially consumed protein and fat from vegetable sources had lower risk for incident CHD than those in the same group whose source of fat and protein was primarily from animal sources. Although the dietary carbohydrate intake patterns in this population did not closely match the Spartan restriction seen in the Adkins diet, the lowest decile of carbohydrate intake did not demonstrate reduced CHD risk. This data would suggest that in women, the choice of fat and protein is more impactful than level of carbohydrate intake. ■

Can D-dimer Establish Best Duration of Anticoagulation?

Source: Palareti G, et al. N Engl J Med. 2006;355:1780-1789.

The appropriate duration of anticoagulation after an episode of unprovoked thromboembolism is uncertain, although in general "longer is better." The most dramatic benefit of anticoagulation is seen early in treatment, ie, the first 3 months. Because the risk-benefit relationship between bleeding versus the reduction of future thromboembolic episodes becomes progressively less favorable over time, it would be valuable to have some way to discern which individuals merit longer anticoagulation. D-dimer may be useful in such a setting, the premise being that an elevated D-dimer reflects ongoing thrombotic tendency.

Patients (n = 608) who had experienced a first episode of idiopathic DVT (or pulmonary embolus) received "traditional" treatment with Coumadin for 3 months. At that point, D-dimer levels were measured, and those individuals with an elevated D-dimer (DIM+), comprising 37% of the total group, were then randomized to receive continued anticoagulation or placebo. Persons with a normal D-dimer received no further anticoagulation.

The rate of new thromboembolic events over the next 16 months in DIM+ subjects was 15% in the untreated group, versus 2% in the treated group. In the DIM- group, new DVT occurred in 6.2%. Even though the risk for recurrent DVT was more than twice as great in DIM+ individuals than DIM- individuals over a 16-month period of observation, the event rate of the latter "low risk" group is still substantial (6.2%), corroborating the authors' comment: "The optimal course of anticoagulation in patients with a normal D-dimer level has not been clearly established." ■