Rehabilitation of Postprostatectomy ED

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Cavernous nerve injury is a frequent complication of radical pelvic surgery such as radical prostatectomy and cystoprostatectomy as well as low colon/rectum resections. Refinements in surgical technique and a host of new medical treatments for erectile dysfunction (ED) have been helpful in reducing the burden of post-operative ED. Nevertheless, post-surgical ED remains a very common and difficult to treat problem which dissuades some men from electing potentially life saving therapies.

A therapy that restores the natural erectile capacity of the penis and obviates the need for any sort of intervention (even one as simple as taking a pill) prior to sexual activity would be an improvement over existing therapies. Development of a more efficacious therapy for ED would also likely lead many more men to seek treatment which may be of great benefit to their quality of life and quality of life for their partners.

In laboratory research of cavernous nerve injury animal models, a number of therapies have been shown to enhance recovery of erectile function. These include brain derived neurotrophic factor (BDNF), Neurotrophin (NT) 3 & 4, vascular endothelial factor (VEGF), erythropoietin, growth hormone, Insulin–like growth factor (IGF)–1, growth differentiation factor (GDF)–5, Immunophilin, stem cells etc. Two small clinical trials with immunophilins were conducted but the results were not impressive. Therefore, more research on pathophysiology and neurogenesis are urgently needed.

In clinical practice, phosphodiesterase type V inhibitors, vacuum erection devices, penile injections and urethral insert have all been reported to improve spontaneous erections after radical prostatectomy. However, even a study of using sildenafil daily for almost a year only helped 27% of men recovered normal potency. Nevertheless, a majority of men can be treated with the standard ED treatment on an as needed basis. Up to now, the timing, regimen and role of “rehabilitation” in postprostatectomy ED remain controversial.