



Use of Vacuum Device (ErecAid Esteem) for Penile Rehabilitation in Radical Prostatectomy Patient

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It is well-known fact that many patients develop penile shortening and fibrosis after radical prostatectomy. Studies by Munding, Wessels and Dalkin (1), and Savoie, Kim and Soloway (2) addressed this issue, Fraiman, Lepor and McCullough (3) have investigated the etiology of this phenomenon.

One theory proposed for this frequent post-operative occurrence is the absence of sexual and nocturnal erections and the oxygenated blood that regular erections bring to erectile tissues. Efforts to reestablish erectile tissue oxygenation and prevent this phenomenon has been called, by some, **penile rehabilitation**.

Such rehabilitative efforts have been facilitated by producing erections artificially on a regular basis using oral drugs (Viagra), penile injections, external vacuum devices and intraurethral pharmacotherapy (Muse) (4).

Viagra, penile injections and Muse are all expensive and each has a limited number of "allowable" uses per week. In addition, the erection produced by these therapies often is facilitated by sexual stimulation, something that might not be desired in the recently operated patient.

Other non-sexual uses of a vacuum therapy have been advocated. Lue (5), Wessels (6) and Monorsi (7) all use vacuum-induced tissue stretching techniques in post-up patients undergoing incision of Peyronie's plaque and vein-grafting. Zippe et al (8) have used external vacuum therapy in the early post-radical prostatectomy patient to increase chances of recovery of rigid erections and to enhance penile oxygenation and prevent corporal fibrosis.

Vacuum therapy (without the tension ring) is an inexpensive and effective treatment that can be used once or twice daily in a true rehabilitative fashion in an effort to prevent penile shortening in the patient who has a radical prostatectomy. There also may be soon facilitation of more rapid return to normal erectile function in these patients.

Suggested Protocol (9)

If the patient is continent, at 4-6 weeks post-op, begin rehabilitative program. Using the ErecAid Esteem **without** the tension ring, have patient produce full erection inside vacuum cylinder and maintain for five minutes. Release vacuum pressure for one minute and repeat. This exercise should be preformed twice daily until normal erectile dysfunction (ED) is initiated.

References

1. Munding, M., Wessels, H., and Dalkin, B.: Pilot Study of Changes in Stretched Penile Length 3 Months after Radical Prostatectomy, *Urology* 200, 58(4):567-569
2. Salovie, M., Kim, S., and Soloway, M.: A Prospective Study Measuring Penile Length In Men Treated With Radical Prostatectomy For Prostate Cancer. *J Urol* 2003, 169:1462-1464.
3. Fraiman, M.C., Lepor, H., and McCullough, A.; Changes in Penile Morphometrics in Men with Erectile Dysfunction after Nerve-Sparing Radical Prostatectomy. *Mol. Urol* 1999, 3 (2):109-115
4. McCullough, A.R.; *Urol Clin North Am* 2001, 28(3):613-627.
5. Lue, T.F., and El-Sakka, J., *Urol* 1999, 161:1141.
6. Yurkanin, J. P., Dean, R., and Wessels, H., *J Urol* 2001, 166: 1769-773.
7. Montorsi, F. et al, *J Urol* 1997, 158(4):1408-10.
8. Zippe, C.D. Raina, R., Thurkat, M., Lakin, M. M., Klein, E. A., Agrawal, A., *Curr, Urol Rep* 2001, 2(6): 495-503.
9. Trapp, J.D. 1999, Personal communication.