

Restoring Quality of Life: Managing Side Effects/Pain Control

Optimizing Erectile Function After Prostate Cancer Treatment

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This is a brief overview of the incidence of erectile dysfunction after various forms of prostate cancer treatment. The incidence of erectile dysfunction post-surgery is between 27-43%, and somewhat higher when men undergo radiotherapy. Of the three forms of radiotherapy, conventional radiotherapy, 3D conformational radiotherapy, and intensity modulated radiotherapy, IMRT tends to have a lower incidence of erectile dysfunction since radiation is more focused on the prostate and less so on the penile bulb. Brachytherapy, or seed implants, show similar rates of incidence of erectile dysfunction, between 30-53%. There is no difference based on seed type used, whether iodine or palladium. Overall, men will experience some form of ED regardless of what treatment option is undergone.

Lately, there has been a focus on penile rehabilitation, which incorporates preventative measures to preserve and restore erectile function after prostate cancer treatment. Penile rehabilitation improves oxygenation to the cavernosa, or the body of the penis; it protects and promotes endothelial protection, an anti-inflammatory response; and it prevents cavernosal nerve injury induced structural changes.

Realistic expectations must be set whenever anyone undergoes penile rehabilitation. Erectile function is usually not restored until at least 10-14 months post-treatment; full recovery may not be seen until two years post-treatment. The patient should be told that recovery may take a while but will occur.

The various treatment options include phosphodiesterase (PDE) V inhibitors, the oral agents including Viagra, Levitra, and Cialis; vacuum assisted erection device (VED); intraurethral suppositories; intracorporeal injections; and surgery, which is penile prosthesis. All these treatments are interrelated: one therapy may be needed, or a combination of therapies may be needed to restore a man's erection. Also, it is very important that the spouse be involved. Looking at the structures of the PDE V inhibitors, the difference between Viagra and Levitra is simply the placement of a double bond; otherwise, the agents look similar to one another yet different from Cialis. Cialis is considered to be a 36-hour pill, while Viagra and Levitra work for a shorter period.

The vacuum erection device is a cylinder placed over the base of the penis; using negative pressure, it allows blood flow into the penis to create an erection. The intraurethral suppository is more invasive; it is a small device placed into the opening of the penis, which releases a medicated pellet that is then reabsorbed by the penile corporeal bodies. Intracavernosal injection therapy is an injection directly into the corporeal bodies of the penis, putting medication directly into the corporeal bodies, rather than via absorption, to allow blood flow and create a man's erection. Surgery is with the inflatable penis prosthesis. It is a multicomponent device containing three parts: a bulb within the man's scrotum, the inflatable prostheses, and a fluid-containing reservoir. Essentially, for a man to create an erection, he hits the bulb which allows fluid to come out, and as a result, a flaccid state moves to an erect state. The erect state lasts as long as the man needs in terms of for intercourse. Afterwards, there is a button that is pressed right there, the fluid comes out, goes

back into the reservoir, and the penis returns to the flaccid state. Over 90% of men who undergo this surgery are very satisfied with this procedure.

The following success rates are seen with penile rehabilitation for men undergoing radical prostatectomy. PDE V inhibitors showed a 86% potency rate and a five times better chance of being able to have a successful erection for intercourse compared to men who did not take medication. VED does help increase penile length; in 17% of men, it will create a spontaneous erection for satisfactory intercourse. The intraurethral suppository showed that 74% of men who used the suppository prior to intercourse had successful intercourse. Lastly, the intracorporeal injection therapy showed that 52% of men were able to have satisfactory intercourse or erectile function. Different therapies exist to help treat and restore erectile function after surgery. Only small studies have been done to date; multicenter trials are needed to show what is effective or not. At Hackensack University Medical Center, penile rehabilitation incorporates all five treatment options.

In response to an audience question, couples should be reminded they are being treated for prostate cancer; having intimacy restored is important. ED is not a man's issue; it is a couple's issue.