BCAN Patient WEBINAR SERIES

Questions & Answers about Sexuality and Intimacy after Bladder Cancer

A Valentine's chat with Dr. Trinity Bivalacqua

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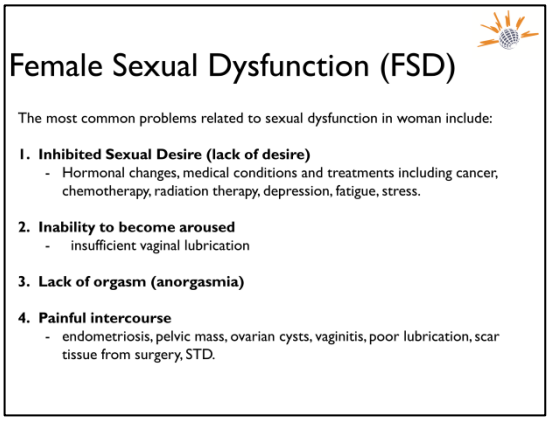
Part II: Female Sexual Dysfunction

Presented by

Dr. Trinity Bivalacqua *is the Christian Evensen Professor of Urology and Oncology and the Director of Urologic Oncology at the James Buchanan Brady Urologic Institute. He joined the Johns Hopkins Urology Department after completing his general surgery and urology training at Johns Hopkins Hospital. He also completed an American Urological Association (AUA) Foundation Post-Doctoral Fellowship from the AUA Care Foundation. Dr. Bivalacqua has an active clinical practice in Urologic Oncology and Sexual Dysfunction. As a member of the Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins, he participates in multidisciplinary approaches to the treatment of a variety of genitourinary cancers. He has a special interest in cancers of the prostate and bladder with an emphasis on organ sparing therapies, minimally invasive techniques and orthotopic bladder substitution (neobladder). He has recently been acknowledged for his accomplishments in research with several grants including a Career Development Award from the National Institute of Health (NIH), Greenberg Bladder Cancer Institute, and the AUA "Rising Star" Award.*

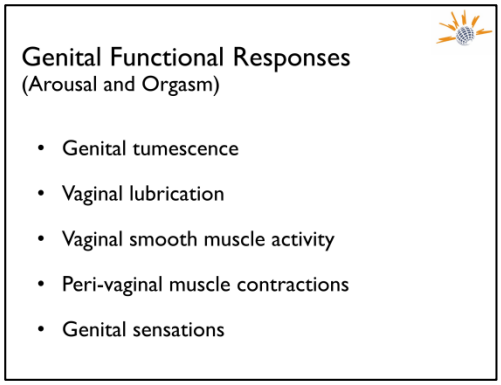
Now, this slide is not meant to be funny. It's just to sort of point out that there is a clear difference in how men and women respond to intimacy and sexuality. This is meant to be exaggerated, in that a man has an on and off switch, whereas a woman has a lot of complexity to their female sexual response. If we dive into this, we can see that female sexual dysfunction is something that includes a number of different disorders. I'll be very honest with you. It's extremely difficult for urologic oncologists, medical oncologists, or radiation oncologists to really delve into this. With erectile dysfunction in men, you can give a simple questionnaire that will state if a man has sufficient erections for intercourse, or if they're able to sustain their erection for intercourse.

Whereas with female sexual dysfunction, it is a lot harder to diagnose. I will state right now that this is something that will require some expertise, and unfortunately, we as urologic, medical, and radiation oncologists sometimes will have a hard time both discussing this with patients, as well as delving into the real cause.



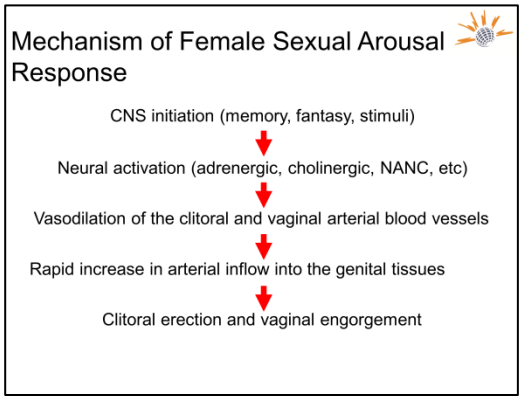
If we look at some of the more common problems related to sexual dysfunction in women, we see very similar things to men. Inhibited sexual desire, a lack of desire. When we look at risk factors for a hypoactive sexual disorder in women, we see that there are hormonal changes. As women get older, or post-menopausal, they'll have a decline in their desire. Ongoing medical conditions and treatments, including cancer treatments, will contribute to this. Depression, fatigue, and stress. These are all risk factors in both men and women. Another factor in women is inability for the vagina to become lubricated. Now, this is something that is related to both hormones, innervation, or the nervous system that is intact, as well as blood flow to the vagina. You can imagine that if a woman, as they get older, they will have a decline in hormonal stimulus due to being postmenopausal, which will affect both the vagina's lining, in which they become atrophied, and then following different surgical treatments, you can develop impairment in blood flow, as well as innervation, or neuroactivation. We'll talk a lot more about that shortly.

Anorgasmia, or lack of orgasm, is something that is also related to, believe it or not, innervation to the clitoris, as well as blood flow. However, another major factor of orgasm in women is related to emotional stress and connectivity with their partner. Oftentimes, when women have problems with orgasm, they will need to seek sexual counseling to discuss sort of the factors that may contribute to that. That brings me to another reminder, in that when you think about sexual dysfunction, it goes beyond that of just organic cause or surgical causes. That is, a relationship status is extremely important. Most departments or institutions or private practices that are seeing men and women with sexual dysfunction, what they will often have is a counselor to be able to talk to the couple. Once again, going back to the fact that this relates to both men and women, as well as relationship. Another problem with women is painful intercourse, or dyspareunia. Now this could be related to problems with endometriosis. Believe it or not, bladder cancer, ovarian cancer, cyst, vaginitis, lubrication, as well as scar tissue from surgery, which we'll talk about shortly.



When we think about genital function responses in women, and this mostly relates to arousal and orgasm, there are a number of things that must occur. The vagina and clitoris must become tumescent. It's just like the same erectile tissue that is in the penis. The clitoris must become aroused. It must become erect. This can only occur if there's an intact nervous system or blood flow to the vagina and clitoris, which follows with blood flow and innervation, and is actual lubrication of the vagina. If there is a lack of lubrication or innervation, the smooth muscle can become atrophied and actually can no longer become dilate, can dilate or contract, and you can develop pain with intercourse. The pelvic floor also contributes to this, as well as sensation to the vagina, which we'll talk about shortly as well.

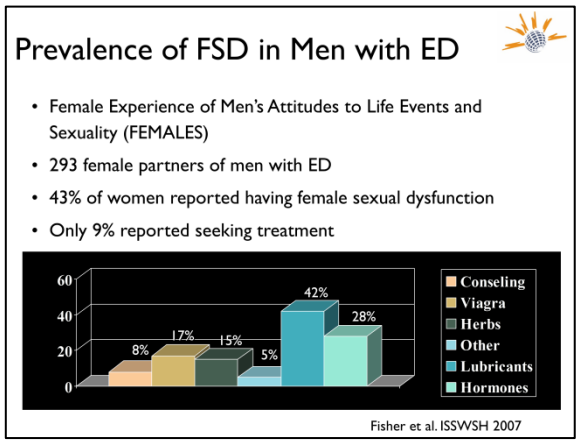
The mechanism of female sexual arousal response is almost the exact same mechanism of male sexual arousal response. This schematic is just a drawing about what happens physiologically in men and women. You have stimulation from the central nervous system. Now, as you can imagine, this is just a man or a woman becoming aroused. This starts off in the central nervous system. This then travels down the spinal cord, where it activates the spinal roots in the sacrum, which then sends a signal through the nerves that innervate the penis as well as the vagina and clitoris. We'll go over the detail and mechanism of that shortly. Then what you have is, you have clitoral and vaginal arterial blood vessels dilate. You get arterial inflow into the genital tissue, and then you get clitoral erection and vaginal engorgement. You can imagine, as I point here, if you have a problem where there is no neuronal activation, or there is no blood flow, then you will have impairment of erection and vaginal engorgement, and therefore have female sexual dysfunction.



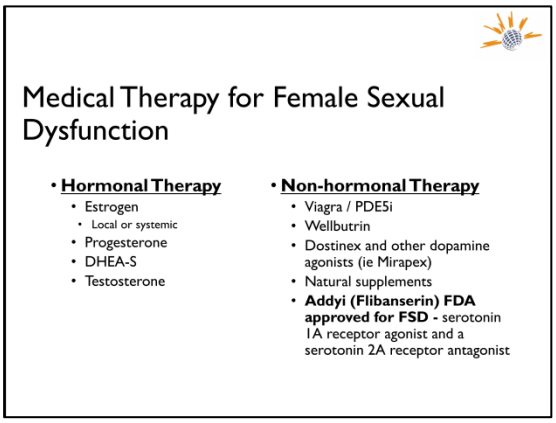
One of the things that you can do to help prevent this, and this goes beyond that of just female sexual dysfunction as it relates to bladder cancer treatment such as surgery, you can have lubricants. These can be bought over the counter. They are things like KY Jelly, and there are special lubricants that can be utilized. Additional things such as sex therapy, this relates to relationships. Weight loss, biofeedback and pelvic floor exercising. What this does is, this teaches a woman how to control their pelvic floor so they can actually improve blood flow. Relaxation techniques to help improve both the stimulation of the vagina and clitoris is important. Smoking cessation and various medications can also influence female sexual arousal and orgasm. The last thing to point out here is, is that if you have a woman that suffers from female sexual dysfunction, you have to remember there is the partner, and it's very possible that the man may also suffer from erectile dysfunction, and therefore you have to treat the male as well. That goes the same if you're seeing a man that has erectile dysfunction. You have to consider their

partner, which is their woman, which is the woman that is also involved in the relationship. You can't forget to ask questions about the male and female partner.

Stephanie: Can I just point out just one other thing in terms of being more inclusive, that you can always just assume also that it's not the sex partner, but it is the partner, whether it's the same gender or not, that should be included in the development of any kind of solutions to it, right?



Dr. Bivalacqua: Absolutely. One thing I'd be happy to comment to that, obviously that's something that we all ask when talking about this. Male, male, female, female, these are somethings that must be asked at the initial consultation, when considering treatment. For some partners, it's less important to have, for example, penetrative intercourse. These are things that must be asked, and thanks for pointing that This is actually an example of a study that was actually performed many years ago, which looked at female partners of men with erectile dysfunction. What they found was, in this study, was that 43% of women had sexual dysfunction. The cause of this was actually never even delineated or determined in this study. The reason why was, is because it's extremely challenging to point at to what the cause is. In this study, they did not delineate what the exact cause of female sexual dysfunction was. The reason why I point this out is, is that only 9% of women were actually seeking treatment. These are just examples of the types of treatments that they were using. The most common treatment was lubricants, hormones, and there was actually some women that were using medications like Viagra, which we'll talk about next.



What are the medical treatments for female sexual dysfunction? Well, I think we can break this down into hormonal therapy or non-hormonal therapy. When it comes to hormonal therapy, local estrogen use both systemically or locally is often utilized, and can help with lubrication. I will tell you that it is oftentimes not used systemically in patients that have ongoing cancer treatments, both due to the effects on both the cancer as well as on additional treatments. Oftentimes we will just use local treatment to the vagina itself. This is oftentimes used once a week ... Excuse me. Daily, for a week. Then we put a woman on a maintenance therapy a couple of times a week to help with lubrication.

Other things like testosterone, DHEA and progesterone are utilized. However, I will say that this is only prescribed by physicians that have experience in treating female sexual dysfunction. I wouldn't expect your urologic oncologist or radiation or medical oncologist to be prescribing these medications. Non-

hormonal therapies such as Viagra were used both in the mid to late 90s as well as early 2000s, but what I will tell you is, is that the results were not very promising or even effective. Other medications like Wellbutrin, other dopamine agonists such a Mirapex, and natural supplements have been utilized. However, once again, the effect on arousal and orgasm are at best minimal, and really it's hard to use these effectively in patients. However, last year, or actually two years ago, the FDA approved the first medication for female sexual dysfunction, which is a serotonin receptor agonist, or a mixed antagonist, which is called Flibanserin. This is oftentimes used by practitioners that see patients with female sexual dysfunction.