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Review article

Sexual health and relationships after age 60

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ABSTRACT

A commonly used phrase describing aging is "60 is the new 40". Although in many aspects of life this may be correct, in discussing sexual health, challenges to maintaining excellent sexual health become more common around age 60. Biological aging challenges physical sexual activity and responsiveness. We commence by briefly surveying the extensive coverage of 'normal' physiological aging. We primarily focus on issues that arise in distinct disease and or pathophysiological states, including gynecological and breast cancer, as well as those associated with partners of men who are either prostate cancer survivors or who have taken therapy for erectile dysfunction (ED). Regrettably, there is a very modest literature on sexual health and associated possible interventions in older patients in these cohorts. We discuss a variety of interventions and approaches, including those that we have developed and applied in a clinic at our host university, which have generally produced successful outcomes. The extended focus to sexual relationship dynamics in partners of men with either prostate cancer or ED in particular is virtually unexplored, yet is especially timely given the large numbers of women who encounter this situation. Finally, we briefly discuss cross-cultural distinctions in older couples' expectations, which exhibit remarkable variation.

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1. Introduction

The appearance of the paper "A Study of Sexuality and Health among Older Adults in the United States" in 2007 was greeted by much press enthusiasm and a sense of surprise among many health care providers. By providing data on over 3000 adults, ages 57–85, the authors reported on the sexual activity, behaviors and problems

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in this somewhat older cohort. 73% of the 57–64 year old, 53% of the 65–74 year old, and 26% of the 75–85 year old were sexually active, and half of the respondents reported at least one bothersome sexual problem [1]. In a much more recent report, published in 2015, almost 60% of women over the age of 60 who are in committed relationships are sexually active, while 13% of women who do not have a steady romantic partner are also sexually active [2]. As life expectancy at age 60 is approximately another 25 years, this data is extremely relevant.

Fortunately, the majority of women and men over the age of 60 are basically healthy. The ubiquitous impact of declining sex hormone levels already has been extensively discussed in the literature for both genders for many years, and accordingly, herein we do not recapitulate a long list of well-known findings on this topic. Instead, we start our review by briefly summarizing and highlighting the subset of findings that we consider particularly essential to a study of sexual satisfaction, and in the process, identifying many of the primary references to (normal) 'Physiological Aging'.

Unfortunately, older adults also have a higher prevalence of many types of cancers and other chronic diseases, which can have a significant impact on sexual health. The most common cancers diagnosed in women in the United States (breast cancer, at 232,000 in 2014) and men (prostate cancer, at 233,000 in 2014) [3], both directly impact the sexual health of our patients. Prostate cancer is the second most common cancer diagnosed world wide (after breast cancer)-in 2008, 889,102 cases were diagnosed [4]. Equally important is to emphasize the high percentages of survivors: there were less than 30,000 prostate cancer deaths, and 40,000 breast cancer deaths in the United States in 2014 [5]. Among the 5.9 million women who are cancer survivors, the majority have breast or gynecological cancer [6].

Many studies of survivorship emphasize the importance of sexual well being to quality of life. The vast majority of articles on sexuality focus in on either breast or gynecological cancer survivors, or in a distinct literature, prostate cancer survivors. Below, we take a broader view across several axes. We discuss both the male and female cancers together, and notably, the relationship aspects that ideally should actively involve both partners, independent of the genesis of the insult. This focus on sexuality in (older) survivors and their partners forms the central corpus of this review. Necessarily, these considerations encompass significant cross-disciplinary treatment.

Indeed, the survivorship quality of life academic literature is scattered across multiple strata, including medicine, psychology, sociology and even anthropology. We will also briefly consider cultural aspects; ideal treatment must relate to cultural norms and expectations, and as discussed below, these can vary remarkably from the canon put forth in the United States and much of western Europe.

We aim to address the big picture relationship dynamic, not just an organ system or even one individual. Not surprisingly, given the heterogeneity of the cancer survivorship cohorts, there are very few studies of the efficacy of a particular protocol to "restore" sexual relationships towards a "normative baseline", as it is difficult to establish what such a baseline should be? Many survivors want to resume their lives as completely as possible and desperately seek treatment and counsel as how best to approach the resumption of normalcy.

The sheer number of patients requesting medical help has expanded greatly over the past 15 years, due to the volume of procedures and to their ostensible success rates, with life expectancies almost that of the age matched population. This has led to the recent emergence and formation of several clinics to treat the multifaceted aspects of recovery of sexual well being, one of which I have founded at our institution, described briefly below. We emphasize that such clinics are only approaching a mature infancy, and will continue to develop as providers continue to attend to their patients' needs.

2. Physiologic aging

The Study of Midlife Development in the United States was intended to examine the prevalence of sexual activity by age; it also was designed to look at sexual satisfaction. The most significant predictor of sexual activity was, as suggested by many previous studies, a partner (married or cohabitating). Also significant were higher prior sexual satisfaction, lack of depression, younger age, and lower body mass index. Absence of dyspareunia was important to sexual satisfaction, but age and menopausal status were not related to sexual satisfaction [2]. Good communication was associated with higher sexual satisfaction. In a review of "Sexual function in elderly women," Ambler et al. encourage practitioners to "dismiss taboo and incorrect thoughts on sexual function, and spark better management for patients, allowing them to live more enjoyable lives," [7].

It is interesting to note that menopause itself does not necessarily correlate with a decline in sexual satisfaction. Multiple studies, such as the REVIVE study, have shown that vulvovaginal atrophy (VVA) interferes with overall healthy sexual functioning [8]. The CLOSER study showed that VVA related painful sex negatively affected relationships for both the woman and her male partner [9]. Trials of the drug ospemifene have shown that the medication does improve dyspareunia [10] and women treated with ospemifene do show improvements in their FSFI scores (Female Sexual Function Index) [11]. Any evaluation of a menopausal woman requires an evaluation for VVA [12].

Unfortunately, given the modest extent of menopause education in American obstetrics and gynecology residency programs, we can anticipate an ongoing deficiency of treatment of couples' sexual health, at least in the United States. Currently, only 20% of residents are being educated with a formal menopausal medicine learning curriculum [13]. Furthermore, world wide there has been a marked decline in the use of systemic hormonal therapy since the publication of the Women's Health Initiative findings in 2002. As pointed out in surveys as recently published as this year [14], we are failing to treat menopausal symptoms appropriately. Despite appeals from the North American Menopause Society to the FDA to remove the black box warning from low dose vaginal estrogen therapy [15], no actions have yet been taken, and clinicians must help symptomatic women to disentangle safety profiles of totally different products [16].

3. Our special needs patients

3.1. Gynecologic and breast cancer survivors

It is only recently that the needs of breast and gynecological cancer survivors have been regularly addressed. Indeed, in 2015, the authors of "a manifesto on the preservation of sexual function in women and girls with cancer" emphasized that to this day, "female patients who are treated for cancer receive insufficient counseling, support, or treatment to preserve or regain sexual function after cancer treatment," despite the fact that even most menopausal oncology patients who have a partner "are sexually active in the year before treatment" [17]. In a survey of women, mean age 55, attending a gynecological oncology clinic for routine followup in 2008, 7% had sought advice or medical help for problems related to sexuality, while over 40% were interested in receiving care to address sexual issues [6].

A committee of multidisciplinary specialists reported in 2010 that "Cancer and its management have a significant impact on

sexual function and satisfaction," which can be ameliorated by "understanding prediagnosis sexual functioning level, counseling, careful treatment choices, and when indicated, therapy post treatment using educational, psychological, pharmacologic and mechanical modalities" [18]. The addition of psychotherapeutic interventions to hormonal and non hormonal medications can improve arousal, satisfaction and overall well being, while decreasing depression [19].

Recognition of these issues of Sexuality, Intimacy and Menopause for cancer survivors (SIMS) prompted the establishment of such a clinic in Yale's gynecological oncology center. Our team consisted of a gynecological oncologist, menopause specialist, and psychologist dealing with chronic diseases, and trainees in these departments. Operating such a clinic within the purview of the oncology section sanctions the recommendations of the group; many patients will be concerned that recommendations, particularly for hormonal interventions, might activate a cancer. We regularly recommend that all BRCA + women opting for oophorectomy be counseled in our SIMS clinic pre-operatively [20].

Given that generalists today often do not understand the complexities of the climacteric, a menopause expert can offer counsel on interventions for symptoms, and also on the risk benefit ratio of supplementing or avoiding hormonal interventions. The presence of psychologists has proven instrumental. These clinicians can help the patient approach the interpersonal relationships in a partnership, and deal with the stressors of the cancer diagnosis. Given that there are many clinicians available for medication prescriptions, we have not found it necessary to involve the psychiatric service on a routine basis (however, if our psychologists feel that psychiatric referral would be beneficial, we arrange for that). We routinely follow patients up in three months, with ongoing care as needed; we encourage all of our patients to continue routine checkups. The psychologists often meet with patients weekly as needed until any acute issues are resolved; routine followup is then arranged. The success of the program which was initiated for gynecological cancer survivors mandated its expansion to include survivors of all cancer diagnoses.

As noted in the REVIVE study [8], looking at over 3000 basically healthy women with VVA, only 7% of the patients had been questioned by their health care providers on VVA symptoms. Given the very high prevalence of VVA issues in the realm of gynecological cancer survivors, all should be queried about the presence of symptoms associated with VVA. Many gynecological cancers have no association with estrogen contraindications, and both systemic and topical estrogen therapy could be considered [19]. Even in women treated for early endometrial cancers, many gynecological oncologists will consider systemic estrogen therapy [21].

Options for breast cancer survivors are more limited. In a recent review in the Journal of Personalized Medicine, Lester et al. provide a comprehensive look at the questions of "Atrophic Vaginitis in Breast Cancer Survivors: A Difficult Survivorship Issue," [22]. Breast cancer survivors have a very high incidence of VVA, and ongoing hormonal therapy for them may exacerbate the problem [23]. Even among women who are no longer on anti estrogenic therapies, 80% of women in the age range of 50–59 report sexual symptoms [24]. Among women over the age of 70, one third of the women in the Australian cohort had vasomotor or sexual symptoms. Breast cancer survivors must be queried on their symptoms, and the risk/benefit ratio of available solutions needs to evaluated on a case by case basis. In this instance a discussion between the medical oncologist and the gynecologist can be helpful.

Although debilitating vaginal dryness and painful intercourse are problematic for many women, sexual complaints also include changes in sexual desire, arousal, and orgasmic intensity [25]. In a recent internet evaluation study, 63% of women reported that their ovarian cancer diagnosis had negatively changed their sex life, with a lack of interest in sex as their first complaint [26].

We also know that irradiation in women with pelvic cancers (including radiation to the pelvis administered in therapies for certain gastrointestinal cancers) can lead to significant scarring. These women often have impaired vaginal elasticity, and early therapy with vaginal estrogens and dilators [27] can mitigate these problems; early intervention is preferable.

3.2. Partners of prostate cancer survivors

Probably the least understood cancer survivor group who deal with gynecologists albeit indirectly are prostate cancer survivors. Gynecologists receive minimal training about prostate cancer, which as mentioned is the most common cancer diagnosis in men in the United States. All of the currently available therapies for this disease: namely radical prostatectomy, external beam radiation therapy, and brachytherapy-pose significant potential side effects which have sexual impact. These include erectile dysfunction, dry ejaculation, leakage of urine with orgasm, penile shrinkage, urinary incontinence, and bowel dysfunction [28]. Although some couples do adapt well, many couples experience "significant disruption in their sexual relationships."

The urology literature displays an "abundance of confusing information about efficacy rates and side effects of various treatments" which makes it difficult for the female member of the dyadic couple to query her physician about her partner's options. Many men experience a "lack of communication between the patient and his physician", and even with detailed information about potential side effects, some men may not believe that they will experience the side effects, or underestimate the impact that the side effects will have on their lives" [28]. Also, the "majority of men disclose little about their prostate cancer to others" [29]. Many women are nevertheless also significantly affected by the changes in their partners' sexuality.

The majority of prostate cancer survivors will try at least one assistive aid for erectile dysfunction [30], however, over half of the men who try these aids discontinue their use after trying them. Men often time did not anticipate that the more invasive methods would be so difficult to use (as compared to a noninvasive treatment such as Sildenafil). Erectile dysfunction aids also do not address relationship quality and other potential life stressors. Men do not seem to "adjust" to erectile dysfunction, leading experts to recommend evaluation early in this population [31]. And from "partners' perspectives, prostate cancer therapy has negative impact on sexual relationships, and appears to worsen over time" [32].

Other issues such as urinary incontinence and bowel dysfunction may affect sexuality through a "preoccupation with personal hygiene, fear of embarrassment, avoidance of physical contact, and shame" [33]. Many men are unaware of their partners' sexual needs or needs for support, and discussion of these can be very helpful [34].

Unfortunately, reviews of the literature do not show clear cut improvements from many interventions designed to cope with the sequelae of prostate cancer and treatment related symptoms. A review of psychosocial interventions for men with prostate cancer to improve the quality of life and in reducing distress, uncertainty and depression was done by the Cochrane Database [35]. No clear evidence of benefit was found with most interventions for general health quality of life, distress, or depression. Other areas of sexuality are affected beyond erectile dysfunction, including "sexual interest, sexual desire, level of sexual activity, and degree of bother associated with sexual function" [4]. However, men who are followed in a dedicated survivorship clinic may show significantly higher sexual functions scores than men receiving routine follow-up care [36].

Although counseling of partners of men who has been treated for prostate cancer has not typically been our provenance, we can certainly minimize the partner's potential for VVA and dyspareunia, easing potential therapies with mechanical erectile dysfunction aids. We do know that intervention early there is appropriate, given the lack of significant improvement over time with these symptoms. Studies have confirmed that female sexual function (of partners' preoperatively) correlates with greater male compliance to penile therapy post radical prostatectomy [37].

4. Erectile dysfunction

Fortunately, most of our patients are not cancer survivors. Nevertheless, many of our female patients may be experiencing sexual issues as a consequence of erectile dysfunction (ED) in their male partners, and accordingly, will ask for our input on their partners' conditions. We need to be aware that men presenting with ED need to be screened for cardiovascular disease; in men ultimately presenting with coronary artery disease, symptoms of ED present on average three years earlier [38]. Men with ED have more than double the odds of having undiagnosed diabetes [39].

Once their partner has undergone cardiovascular evaluation and been cleared for therapy, our patients need to understand the different modalities of ED therapies. PDE5 inhibitors are the most commonly prescribed, and our patients need to know that several are available, including those that are prescribed on an as needed basis (such as sildenafil), and those that are prescribed on an ongoing basis (tadalafil). "The interdepence of sexual function and sexual satisfaction measures between member of couples consisting of men with ED and sexually healthy women reporting infrequent satisfactory sexual intercourse underscores the importance of including partners in ED treatment discussions" [40]. The majority of women tend to prefer tadalafil as partners' therapy, because of "feeling more relaxed, experiencing less pressure, and enjoying a more natural or spontaneous sexual experience". However, some women noted that their partners had a more satisfying event on the sildenafil, and thus preferred that approach [41].

However, ED therapy will not cure all sexual ills in a relationship; the South Australian couples sildenafil study [42], investigating individual and dyadic impact of sildenafil on couples over a 6-month time period showed significant improvement in erectile function but no difference in relationship functioning.

Another consequence of PDE5 inhibitor therapy has been the suggestion of greater likelihood of partner infidelity in the post sildenafil era [43], with a significant increase in gonorrhea diagnoses after the introduction of sildenafil. All of these issues need to be taken into account in discussing sexual issues with our patients.

5. Should hormone therapy in breast cancer survivors be reconsidered?

Very few medical oncologists today [44] would ever consider the administration of estrogen therapy to breast cancer survivors. Yet, in pointed contrast, there is some substantive investigation in the urology literature on the efficacy of administration of testosterone in prostate cancer survivors. The androgen hypothesis (that testosterone was the responsible cause of prostate cancer) was promoted in the 1940s based on data that showed improvement in men with metastatic prostate cancer who were castrated or received estrogen therapy. Men with high testosterone levels, however, do not seem to be at higher risk of developing prostate cancer, and some men with untreated prostate cancer have received testosterone without evidence of progression of their tumors [45]. The current construct is that prostate cancer is extremely sensitive to variations in androgens at low concentrations yet indifferent to variations at normal and high concentrations [45]. Urological oncologists refer to this as a "saturation model".

In a review of SEER data (Surveillance, Epidemiology, and End Results-Medicare data) from 1992–2007, 149,354 men (ages 65 and over) with prostate cancer were identified. 1181 Men were identified in this cohort who received exogenous testosterone therapy. In a multicenter review, testosterone replacement therapy was not associated with overall or cancer-specific increased mortality [46].

"Clearly no solid recommendations are possible until data are available from randomized controlled trials", notes one urologist proponent of consideration of testosterone therapy for prostate cancer survivors with hypogonadism [47]. However, given the aforementioned findings, it would seem quite worthy to explore analogous, parallel approaches in (female) breast cancer survivors, with the hope that we could possibly identify subsets or cohorts of survivors for whom such estrogen therapy might be both efficacious (particularly to quality of life), yet low-risk.

6. General observations

We have recognized a few additional themes in both our clinic and in related consultations that cut across the categories delineated above. First, some clinicians typically assume that their patients are sexually active. We should ask our patients about their sexual issues, while determining their preferred baseline extent of (sexual) activity. Breast and prostate cancer survivors have concerns about satisfying their partners sexually and how their bodies work sexually [48]. Erectile dysfunction after prostatectomy often leads to lower partner satisfaction and men's concomitant distress, diminished feeling of masculinity, and anxiety about performance. [49].

Additionally, in none of these disease processes are over the counter remedies for women such as moisturizers and lubricants, or vaginal dilators, contraindicated [50]. If our patient's significant other has been diagnosed with prostate cancer, we should encourage her to consider intervention to facilitate intercourse, if desired by the couple.

Finally, we note that in both ED and in prostate cancer constructs, both older men and even young men are willing to talk about sexual issues. Nonetheless, studies have confirmed that they prefer the health care provider to initiate the conversation [51]. Sets of standard protocols should be developed as to the interplay between gynecologist, urologist, (possibly oncologist), and psychologist, in both solo and couple discussions, to best facilitate a means to restore sexual activity to a feasible and preferential state. Quite evidently, this will require flexibility to individual comfort levels, as well as a high degree of cooperation and integration among care providers.

7. Cultural considerations

We all need to realize that cultural norms are very significant in assessing sexual function and dysfunction. In Japan, many older men "located the peak of their sexual lives in the past", while their spouses "downplayed the importance of desire as the source of their wellbeing and vitality" [52]. Moore reports that Japanese couples describe "sibling-like relationships as couples grow older". Such attitudes are very different in other Asian countries. Researchers in China report "attitudes concerning later life sex are much more liberal than their behavior" [53]; practices tend to be more conservative. In Ghana, sex is often viewed as a matter of "strength", confirming the vitality and status of the elder [54], but when it is practiced at an advanced age it should be "orderly, restrained and respectful".

Even within the United States, different ethnic groups showed significant differences in sexual domains [55]. Black women studied in the SWAN study reported higher frequency of sexual intercourse; Hispanic women reported lower physical pleasure and arousal; and Chinese and Japanese women noted less arousal. Therefore, it is crucial in evaluating sexual issues to account for cultural norms and belief structures of our patients, and to tailor our suggestions and possible interventions accordingly.

8. Final thoughts

We must be cognizant that a very significant percentage of our older patients either still participate in or wish to re-engage in continuing sexual activity. At the same time, we should recognize the additional relationship stressors imposed on our older patients in the form of physiological difficulties associated with menopause or aging. Moreover, these patients are also likelier to have been diagnosed with a medical illness, such as cancer, whose therapy significantly (further) compromises their sexual functionality or interest.

There is good documentation in the literature that women and men prefer their caregivers to initiate conversations about sexual health issues, which can then lead to increased patient satisfaction. Patients appreciate our interest, and as health care providers interested in menopausal health, we can directly counsel and treat, or refer to appropriate urological or psychological consultants to deliver the best in patient care. In the current era of fractionated care, it is increasingly important for providers of menopausal care to be educated on the needs of these burgeoning populations, and to be able to advocate for maintenance of high quality of life for all of our patients and their significant others.

Contributor

Mary Jane Minkin, MD did all of the work on the manuscript, including study design, research, commentary, and conclusions.

Conflict of interest

Mary Jane Minkin, MD consults for Novo Nordisk Inc., USA; Noven Pharmaceuticals; Bayer; Shionogi; Enzymatic Therapy; Pfizer Inc. These consultations did not affect the preparation, analysis, or choice of content of this review.

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