

Sexual Side Effects in Women With Anal Carcinoma

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J.W., a healthy 50-year-old critical care nurse with no significant medical history, was in her second marriage, postmenopausal, a nonsmoker with remote history of smoking for about one year, and reported occasional alcohol use. She presented to her primary care physician with complaints of an 18-month history of sporadic bright red blood per rectum, particularly when straining to have a bowel movement. J.W. reported having a bowel movement every two to three days and denied anorexia, weight loss, nausea or vomiting, constipation, or diarrhea. A digital rectal examination (DRE) revealed a 1 cm hard anal mass less than 1 cm from the anal verge. The mass was noncircumferential and located predominately at the posterior bowel wall. J.W. agreed that she should have a colonoscopy and gastrointestinal (GI) workup. The colonoscopy revealed an anal lesion that was confirmed by biopsy to be consistent with a nonkeratinizing squamous cell carcinoma.

J.W. was referred to a National Cancer Institute (NCI)-designated comprehensive cancer center where she was evaluated by surgical, medical, and radiation oncologists. She denied any anal carcinoma risk factors, such as smoking, multiple sexual partners, anal intercourse, being HIV positive, being positive for human papilloma virus (HPV), or the presence of genital warts. She became very emotional when questioned about her HIV and HPV status. The physical examination revealed a healthy woman in no acute physical distress. Vital signs, routine laboratory tests, and the physical examination were within normal limits and noncontributory. Her carcinoembryonic antigen was 0.7 ng/ml (normal is less than 2.5 ng/ml in an adult nonsmoker), and HIV screening was nonreactive. Abdominal examination revealed a soft, nontender

abdomen and no palpable adenopathy. A DRE confirmed the presence of a palpable, well-defined 1.5 cm firm indurated lesion inside the anal verge, posterior, consistent with location of the known cancer. Positron emission tomography/computed tomography (PET/CT) revealed hypermetabolic activity in the anorectal area. CT findings correlated with the PET findings. Clinically, J.W. was staged with T3N0MX (stage II) anal carcinoma.

Based on the workup, J.W. was diagnosed at an early cancer stage, and definitive chemoradiation offered an excellent chance of long-term disease control. Salvage surgery would be indicated following chemoradiation if minimal tumor response occurred. A detailed discussion ensued with J.W. and her husband regarding potential acute and chronic complications; physical changes including decreased libido, vaginal dryness, vaginal stenosis, and painful intercourse; changes in her chronic rectal or anal function; skin reaction including desquamation; pain secondary to chemoradiation treatment; abdominal spasms; sacral insufficiency fracture; risk of secondary malignancy; acceleration of menopausal symptoms; and a low possibility of lower extremity edema.

After discussion, J.W. agreed to proceed. She completed 5.5 weeks of chemoradiation, which was complicated by two hospitalizations during her treatment course for anal or groin moist desquamation, nausea, vomiting, diarrhea, dehydration, urinary tract infection, and pain.

Ten months after completing treatment, J.W. showed signs of depression and was referred to the psychosocial clinic. She met clinical criteria for major depressive disorder. She personally felt responsible for her cancer diagnosis,

stated that little support existed in the community for patients with anal cancer, and said that she felt comfortable discussing her cancer with few people. She experienced anhedonia, guilt feelings, difficulty concentrating and focusing her attention, and anxiety related to follow-up visits. She reported significant sexual issues following her cancer treatment, including loss of libido and dyspareunia that she described as "excruciating pain."

Clinical Manifestations of Anal Carcinoma

Anal or rectal discomfort and bleeding are the most common symptoms reported. A sensation of fullness or pressure in the anal or rectal area, anal discharge, itching, abnormal growth in or outside the anal canal, and change in bowel habits all are signs and symptoms of anal carcinoma (Frischia & Fry, 2008). Pain is less frequently reported. Fecal soiling is common, but gross fecal incontinence is uncommon, unless destruction of the sphincter has occurred (American Cancer Society [ACS], 2008a; Chao, Perez, & Brady, 2001; Minsky, Hoffman, & Kensen, 2001).

Key Assessments in Patients With Anal Carcinoma

Essential components for diagnostic workup include a thorough history, review of systems, and physical examination focusing on the extent of the primary tumor and the competence of the anal sphincter. Regional lymph nodes should be palpated, adjacent organs checked for direct invasion, and anogenital areas examined for any concurrent malignancy. If lymph nodes are enlarged, a fine needle aspiration or surgical excision should be performed

to determine if the lymph nodes are enlarged because of inflammation or tumor. Patient history should include health habits, concurrent illnesses, medications, prior treatments, and high-risk behaviors. A DRE is performed to palpate for any abnormal growths or masses and check for hemorrhoids or rectal or anal bleeding. The anus and rectum may be further examined by an anoscope (illuminated endoscope used to examine the anus and lower rectum) or proctoscope (illuminated endoscope used to examine the rectum) for any abnormalities that cannot be detected by a DRE. An endoanal or endorectal ultrasound is performed to provide

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additional visualization of the mass or tumor, and a biopsy of suspicious masses is taken to differentiate between a benign or malignant growth. Chest x-ray or CT of the thorax, abdomen, and pelvis, or combined PET/CT may be conducted to determine the location and tumor size in the anal canal, as well as the extent of disease if the disease has metastasized.

A complete blood count and full metabolic panel, including liver and renal parameters, are obtained. Assessment of HIV and HPV status also is helpful, particularly if high-risk behavior patterns are present (Chao et al., 2001; Minsky et al., 2001).

Possible Treatment Options for Immediate and Long-Term Anal Carcinoma

Patients with T1N0, well-differentiated anal carcinoma, are recommended to undergo local surgical resection. All other early-stage anal carcinomas are treated with a combination of chemotherapy with IV 5-fluorouracil (5-FU)/mitomycin and pelvic radiation (National Comprehensive Cancer Network [NCCN], 2008), which can result in a cure without the need for resection and colostomy (Cummings, Keane, O'Sullivan, Wong, & Catton, 1991; Nigro, Vaitkevicius, & Considine, 1974; Papillon & Chassard, 1992). External beam radiation therapy is commonly used in the United States, whereas brachytherapy is more common in Europe and Canada (Bruna et al., 2006). The outcome depends on three

prognostic factors: location of tumor (anal canal versus perianal skin), size of the primary tumor, and lymph node involvement. Patients who recur locally undergo surgery requiring a permanent colostomy (Minsky et al., 2001).

Acute and Late Effects of Multimodality Treatment for Anal Carcinoma

For women undergoing multimodality treatment for anal carcinoma, acute effects of treatment include skin reactions (including desquamation), pain, abdominal spasms, nausea, vomiting, diarrhea, hair loss, and increased risk of infection. Late effects include vaginal stenosis, changes in rectal or anal function, pain secondary to treatment, sacral insufficiency fracture, secondary malignancy, infertility and acceleration of menopausal symptoms, and a low possibility of lower extremity edema (Chao et al., 2001). Psychosocial effects include depression; embarrassment in revealing the diagnosis to family and friends; anxiety over relationship of anal carcinoma to sexual practices, HIV, or HPV infection; and the possibility of having a colostomy if resection is required (Katz, 2007; Minsky et al., 2001). A decrease in or loss of libido, vaginal dryness, and dyspareunia are common late effects of combined modality treatment for anal carcinoma (Katz).

Nursing Implications in Caring for Patients With Sexual Issues Secondary to Cancer Treatment

Nurses must recognize the need, accept responsibility, and develop skills for assessing sexuality and discussing intimate topics with patients and families. Oncology nurses have frequent contact with their patients while they receive treatments, often resulting in patients feeling comfortable talking about sexuality if the topic is raised by the nurse. Early discussions should include assessment of inter-couple communication during times of difficulty with intimacy. Figure 1 lists talking points for increasing meaningful communication between couples. Patient education can be facilitated by frank and open communication between the nurse and patient regarding sexual issues. Asking specific and pertinent questions relating

to sexual difficulties in a nonthreatening and comfortable manner is imperative (Oncology Nursing Society, 2006). Topics that should be included when talking with patients undergoing treatment for anal carcinoma, their partners, and families include

- The impact of disease, therapy, and side effect management on sexual and reproductive function
- Counseling on reproductive issues including, as appropriate, contraception during chemotherapy, fertility, and reproductive options following therapy
- Alternate sexual practices, resources, and management of sexual side effects such as vaginal stenosis, dryness, or dyspareunia
- Support services, referrals to professional sex therapists, and counselors (Krebs, 2006).

Several models for assessment of and intervention for sexual dysfunction are available to assist nurses in counseling patients. The BETTER model (Mick, Hughes, & Cohen, 2004) and the PLIS-SIT model (Annon, 1976) are the models most frequently used in oncology (Lally, 2006) (see Figure 2). Radiation to the pelvis causes many physical changes

- Good communication helps boost feelings of adequacy and worth.
- Guiding your partner in how to touch and caress is of utmost importance.
- Being up front and honest when sexual stimulation causes pain is crucial.
- Keep an open mind on the many different ways to give and receive sexual pleasure.
- You do not have to have penetration to be sexually satisfied.
- The true measure of your worth as a lover is the pleasure you and your partner find together.
- Changing negative thoughts into positive ones will help with feelings of unattractiveness.
- Focus on the good and not the bad to enhance your sexual experience.
- Seeking professional help from a psychologist who focuses on sexual issues during and after cancer treatment or a sex therapist may help overcome feelings of inadequacy.

Figure 1. Talking Points to Enhance Couples' Sexual Communication

Note. Based on information from American Cancer Society, 2008b; Katz, 2007; Krebs, 2006.

BETTER Model

- Bring up issues of sexuality.
- Explain that sexuality is part of quality of life for many and is important to discuss.
- Tell patients that resources are available and that you will assist them in obtaining needed information.
- Timing is important. Facilitate discussions and provide information when patients and partners desire it.
- Educate patients and partners about potential changes in sexual response and side effects that may affect response or reproduction.
- Record discussions, assessments, interventions, and outcomes in patients' medical records.

PLISSIT Model

- P—Permission to have sexual feelings and relationships
- LI—Limited information about effects of treatment or cancer on sexuality
- SS—Specific suggestions to manage sexual side effects
- IT—Intensive therapy

Figure 2. Assessment and Intervention Models for Sexual Dysfunction Counseling

Note. Based on information from Annon, 1974; Mick et al., 2003.

resulting in a decrease in libido, vaginal dryness, vaginal stenosis, and dyspareunia (Katz, 2007; Minsky et al., 2001). Patients who eventually require a colostomy will need counseling to address aesthetic challenges caused by the presence of the stoma and appliances (Katz). Patient and partner instruction on use of vaginal lubricants, vaginal dilators, Kegel exercises, sexual positioning, touching, oral sex, sexual fantasies, and other ways to give sexual pleasure are important topics that patients or partners may be embarrassed or reluctant to voice (Katz).

The skin is an important sexual organ, as sensual touch often is a part of the sexual encounter. Prevention of skin changes and early treatment for radiation-induced skin damage are essential components of nursing care for patients undergoing radiation therapy (Katz, 2007). Extreme sensitivity to touch often occurs during or after radiation therapy and is difficult to manage. Patients and partners may need guidance in avoiding touch that is experienced as discomfort (Katz). The nurse should encourage positive attitudes and help patients in-

crease their self-image. Self-exploration, particularly if body image has changed, can be suggested. Many patients may need to seek professional help for ongoing sexual dysfunction, depression, and anxiety (ACS, 2008b). Appropriate referrals to licensed sex therapists or support groups can help patients understand that their concerns are shared by other couples facing similar issues (Annon, 1976).

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References

- American Cancer Society. (2008a). All about anal cancer. Retrieved December 5, 2008, from http://www.cancer.org/docroot/CRI/CRI_2x.asp?sitearea=&dt=47
- American Cancer Society. (2008b). Sexuality for the woman with cancer. Retrieved December 21, 2008, from http://www.cancer.org/docroot/MIT/MIT_7_1x_SexualityforWomenandTheirPartners.asp
- Annon, J. (1976). The PLISSIT model: A proposed conceptual scheme for the behavioural treatment of sexual problems. *Journal of Sex Education Therapy*, 2(2), 1-15.
- Bruna, A., Gastelblum, P., Thomas, L., Chapet, O., Bollet, M.A., Ardiet, J.M., et al. (2006). Treatment of squamous cell anal canal carcinoma (SCACC) with pulsed dose rate brachytherapy: A retrospective study. *Radiotherapy and Oncology*, 79(1), 75-79.
- Chao, K.S., Perez, C.A., & Brady, L.W. (2001). *Radiation oncology: Management decisions*. Philadelphia: Lippincott Williams and Wilkins.
- Cummings, B.J., Keane, T.J., O'Sullivan, B., Wong, C.S., & Catton, C.N. (1991). Epidermoid anal cancer: Treatment by radiation alone or by radiation and 5-fluorouracil with and without mitomycin C. *International Journal of Radiation Oncology, Biology, Physics*, 21(5), 1115-1125.
- Friscia, M.E., & Fry, R.D. (2008). Anal pain: Office diagnosis and treatment. Retrieved December 26, 2008, from <http://www.consultantlive.com/display/article/10162/1160225>
- Katz, A. (2007). *Breaking the silence on cancer and sexuality*. Pittsburgh PA: Oncology Nursing Society.
- Krebs, L. (2006). What should I say? Talking with patients about sexuality issues. *Clinical Journal of Oncology Nursing*, 10(3), 313-315.
- Lally, R.M. (2006). Use the BETTER and PLISSIT models to assess sexuality in patients with cancer. *ONS News*, 21(9), 1, 4-5.
- Mick, J., Hughes, M., & Cohen, M.Z. (2004). Using the BETTER model to assess sexuality. *Clinical Journal of Oncology Nursing*, 8(1), 84-86.
- Minsky, B.D., Hoffman, J.P., & Kensen, D.P. (2001). Cancer in the anal region. In V.T. DeVita, S. Hellman, & S.A. Rosenberg (Eds.), *Cancer: Principles and practice of oncology* (6th ed., pp. 1319-1342). Philadelphia: Lippincott Williams and Wilkins.
- National Comprehensive Cancer Network. (2008). *NCCN Clinical Practice Guidelines in Oncology™: Anal carcinoma* [v.2.08]. Retrieved December 8, 2008, from http://nccn.org/professionals/physician_gls/PDF/anal.pdf
- Nigro, N.D., Vaitkevicius, V.K., & Considine, B., Jr. (1974). Combined therapy for cancer of the anal canal: A preliminary report. *Diseases of the Colon and Rectum*, 17(3), 354-356.
- Oncology Nursing Society. (2006). Cancer symptoms: Sexual dysfunction. Retrieved December 10, 2008, from <http://www.cancersymptoms.org/sexualdysfunction/index.shtml>
- Papillon, J., & Chassard, J.L. (1992). Respective roles of radiotherapy and surgery in the management of epidermoid carcinoma of the anal margin. *Diseases of the Colon and Rectum*, 35(5), 422-429.

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Clinical Highlights: Sexual Side Effects of Anal Carcinoma

Definition

Anal carcinoma is a cancer that forms in tissues of the anus and the distal orifice of the gastrointestinal tract and generally is a squamous cell carcinoma. Anal carcinoma is a rare malignancy and is distinct from colorectal cancer, which is more common (Minsky, Hoffman, & Kensen, 2001; National Cancer Institute [NCI], 2008).

Incidence

An estimated 5,070 new cases of anal carcinoma were diagnosed in the United States in 2008, with about 680 deaths (Jemal et al., 2008).

Pathophysiology

The anal canal is 3–4 cm long and extends from the level of the pelvic floor to the anal verge. The inner lining or mucosa is made up of several different kinds of cells. Glands and ducts are found beneath the mucosa. The anal glands produce mucus, which acts as a lubricating fluid. The anal canal leads from the rectum to the anal margin, where the canal exits the body at the anus. About midway down the anal canal is the dentate line, which is where most of the glands empty into the anus. Cells above the anal canal (in the rectum) are columnar, whereas most of the cells in the upper anal canal just above the dentate line are shaped like cubes and are labeled transitional. This area is called the transitional zone. Below the dentate line are flat squamous cells. The anal margin, also called the anal verge, is lined by squamous cells that merge with the perianal skin just outside the anus. The anal canal is surrounded by a sphincter, a circular muscle that keeps feces within the rectum until the sphincter is relaxed during a bowel movement (American Cancer Society [ACS], 2008). Anal cancer typically is a squamous cell carcinoma that arises near the squamocolumnar junction.

Risk Factors

Risk factors for development of anal carcinoma include smoking; certain sexual behaviors or practices, including a history of multiple sexual partners and anal intercourse; and decreased immunity or HIV infection (Minsky et al., 2001). Risk increases in people aged 50 years or older (NCI, 2008).

Clinical Presentation

Bleeding from the anus or rectum is the primary symptom associated with anal carcinoma. This may be associated with pain or a feeling of fullness and pressure in the anal or rectal area. Anal discharge, itching, or pain may be present (Frischia & Fry, 2008). Upon self-examination, a lump may be felt or seen in the anus. A change in bowel patterns may be seen as well (ACS, 2008; University of Pittsburgh Cancer Centers, 2007).

Differential Diagnoses

Both benign growths and malignant tumors can occur in the anal canal. Differential diagnoses include benign growths (inflammatory polyps that follow inflammation or trauma, lymphoid polyps, skin tags, condylomas caused by viruses such as HPV, or hemorrhoids). The most common malignant anal tumor is the squamous cell carcinoma.

Treatment

Following surgical resection, anal carcinoma can often be cured with a combination of chemotherapy with IV 5-fluorouracil (5-FU)/mitomycin and external beam pelvic radiation (Chao, Perez, & Brady, 2001; Minsky et al., 2001; National Comprehensive Cancer Network [NCCN], 2008). Multimodality therapy, including external beam and intracavity irradiation, concomitant chemotherapy, and ¹⁹²iridium implantation as a booster dose was reported to be a valid alternative to radical surgery by Belliere et al. (2003). The outcome depends on three prognostic factors: location of tumor (anal canal versus perianal skin), size of the primary tumor, and lymph node involvement (Minsky et al.). Patients who recur locally undergo surgery requiring a permanent colostomy (NCCN).

Effects of Treatment

For women undergoing multimodality treatment for anal carcinoma, acute effects of treatment include skin reaction (including desquamation), pain, abdominal spasms, nausea, vomiting, diarrhea, hair loss, and increased risk of infection. Late effects include vaginal stenosis, changes in rectal or anal function, pain secondary to treatment, sacral insuffi-

ciency fracture, secondary malignancy, acceleration of menopausal symptoms, and a low possibility of lower extremity edema (Chao et al., 2001).

Sexual dysfunction is a common late effect of combined modality treatment for anal carcinoma (Katz, 2007). Patients and their partners need sensitive assessment and comprehensive counseling by the oncology nurse or referral to a licensed sex therapist to prevent long-term issues within the relationship.

References

- American Cancer Society. (2008). All about anal cancer. Retrieved December 5, 2008, from http://www.cancer.org/docroot/CRI/CRI_2x.asp?sitearea=&dt=47
- Belliere, A., Chapet, O., Coquard, R., Romestaing, P., Ardiet, J.M., & Gerard, J.P. (2003). Brachytherapy in carcinomas of anal canal and rectum: Techniques and results. *Cancer Radiotherapie*, 7(1), 24–32.
- Chao, K.S., Perez, C.A., & Brady, L.W. (2001). *Radiation oncology: Management decisions*. Philadelphia: Lippincott Williams and Wilkins.
- Frischia, M.E., & Fry, R.D. (2008). Anal pain: Office diagnosis and treatment. Retrieved August 26, 2008, from <http://www.consultantlive.com/display/article/10162/1160225>
- Jemal, A., Siegel, R., Ward, E., Hao, Y., Xu, J., Murry, T., et al. (2008). Cancer statistics, 2008. *CA: A Cancer Journal for Clinicians*, 58(2), 71–96.
- Katz, A. (2007). *Breaking the silence on cancer and sexuality*. Pittsburgh, PA: Oncology Nursing Society.
- Minsky, B.D., Hoffman, J.P., & Kensen, D.P. (2001). Cancer in the anal region. In V.T. DeVita, S. Hellman, & S.A. Rosenberg (Eds.), *Cancer: Principles and practice of oncology* (6th ed., pp. 1319–1342). Philadelphia: Lippincott Williams and Wilkins.
- National Cancer Institute. (2008). Anal cancer treatment. Retrieved November 21, 2008, from <http://www.cancer.gov/cancertopics/pdq/treatment/anal/HealthProfessional>
- National Comprehensive Cancer Network. (2008). *NCCN Clinical Practice Guidelines in Oncology™: Anal carcinoma [v.2.08]*. Retrieved December 10, 2008, from http://nccn.org/professionals/physician_gls/PDF/anal.pdf
- University of Pittsburgh Cancer Centers. (2007). Anal cancer. Retrieved October 21, 2008, from http://www.upmc.cancercenters.com/pdq_xml/cancer.cfm?id=3