CE

HOSPICE AND PALLIATIVE CARE

Head, Neck, and Oral CANCER UPDATE

Although the overall incidence of head, neck, and oral cancer has been decreasing, oral and neck cancer caused by the human papillomavirus (HPV) has risen. This article discusses statistics, risk factors, causes, pathophysiology, treatments, and the home healthcare and hospice nursing implications for these patients. A real-life patient's journey through neck cancer caused by HPV is presented.

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Introduction

Annually, an estimated 650,000 new cases of head and neck squamous cell carcinoma (HNSCC) are diagnosed worldwide (American Cancer Society, 2012a; Callaway, 2011; Westra, 2009). Oral, head, and neck cancer is the 4th most common malignancy and the 10th most common diagnosis of cancer in males worldwide (Callaway, 2011; Jemal et al., 2011).

There are two distinct pathways for the development of oral cancer. One is by the use of tobacco and alcohol (85% of total) and the other is through exposure to human papillomavirus (HPV), a newer identified etiology, and the same one responsible for the majority of cervical cancers in women (Head and Neck Cancer Alliance, 2011). Specific statistics (Table 1) provide the current picture of head, neck, and oral cancer. For a case study, see Box 1.

Risk Factors

Understanding major risk factors (Supplemental Digital Content 1, http://links.lww.com/HHN/A27) is vital in assisting with prevention and early treatment leading to an improved prognosis. Tobacco, including smokeless tobacco, and alcohol use are the most important risk factors (National Cancer Institute, 2009). Almost 90% of HPV-related oropharyngeal cancers are due to infection with HPV 16 subtype. Oral sexual behaviors as well as open mouth kissing are the riskiest behaviors that result in exposure to HPV infection. Continued exposure to the HPV virus may lead to genetic damage and alter the immune system, leading to probable cancer (American Cancer Society, 2012b).

HPV

Some papillomaviruses cause warts or papillomas, which are benign and have no association with cancer (American Cancer Society, 2012b). However, more than 100 types of HPV are known to produce epithelial tumors of the skin and mucous membranes. People with multiple sexual partners and those who already have persistent HPV infection are at an increased risk for acquiring additional HPV strains (American Cancer Society, 2012b).

Most people are aware of the connection between HPV and cervical cancer. HPV can lay dormant without symptoms for years and require no treatment. Prevalence of oral HPV infection with dominance of HPV 16 was similar for male and female youth, but among female youth, infection was more common for those who had co-occurring genital HPV infection (American Cancer Society, 2012b).

Over the past decade, an increasing number of young nonsmokers have developed mouth and throat cancer associated with HPV. Physicians and researchers believe this might be because of an increase in oral sex as part of early sexual experience (Head and Neck Cancer Alliance, 2012). HPV DNA is now found in about two thirds of oropharyngeal cancers. Survival rates for HPV-related oropharyngeal cancers are generally higher than for those involving smoking or alcohol (American Cancer Society, 2012b).

Pathophysiology

The oropharynx is the part of the throat just behind the mouth. This includes the back one third

Table 1. Oral, Head, and Neck Cancer Statistics

40,000 newly diagnosed with oral cancer in 2012 in United States
3.2 billion spent in United States on oral, head, and neck cancer yearly
Every 10 min someone is diagnosed
Every 45 min someone dies
One half of newly diagnosed have advanced stages (3 or 4) leading to high death rate occurrence of 45% at 5 years from diagnosis
Late stage diagnosis issue: Lack of national oral screening protocol and public awareness
Have an 80% to 90% survival rate if diagnosed and treated early
Around 63% of oropharyngeal cancers may be caused by HPV
HPV population: young, White, nonsmoking, male
Caucasians have the highest incidence but African Americans the highest mortality
Mostly attributed to those over 40
Men are affected around twice more than females

Note: HPV = human papillomavirus.
Sources: Data from American Cancer Society, 2012a; Centers for Disease Control and Prevention, 2012a, 2012b; Head and Neck Cancer Alliance, 2011; Oral Cancer Foundation 2012c.

of the tongue, the soft palate, the tonsils, and the side and back walls of the throat. Cells that line the mouth and the throat are called squamous cells (American Cancer Society, 2012c). These cells are also very similar with the type of cells that line the vagina and cervical areas.

Head and neck cancers often spread to the lymph nodes of the neck (Head and Neck Cancer Alliance, 2011). The cells break away from the original tumor and attach to tissues thus forming a metastatic site.

Signs/Symptoms

The most common signs and symptoms associated with oral, head, and neck cancers are sore in mouth that does not heal, constant pain in mouth, lumps or patches (white or red) in mouth, pain around teeth, changes in voice, lump in neck, or the presence of frequent acid reflux affecting the esophageal lining. Because of the location of oral, head, and neck cancer, there are often problems with breathing, eating, speech, and appearance (Head and Neck Cancer Alliance, 2011).

However, some oral, head, and neck cancers have specific signs and symptoms associated with the precise site and the cancer. Monitoring for specific signs and/or symptoms could enhance the diagnosis and prognosis of the exact cancer mode (Supplemental Digital Content 2, http://links.lww.com/HHN/A28).

Diagnosis

There are several ways to assist in the diagnosis of head, neck, and oral cancer. Staging is important to the prognosis and determination of cancer

Box 1. Case Study

B. P. is a 46-year-old White male with a negative smoking and alcohol history. The following include excerpts taken directly from a personal journal.

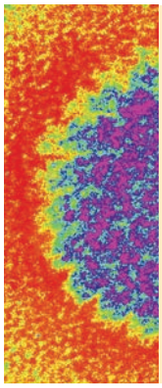
Early in 2008 I felt a little pea-size nodule in my neck. In July it had doubled in size and was painful to touch. My doctor felt it and ordered an ultrasound of my neck area. Initially, an ultrasound and neck CT scan are ordered. My doctor further ordered a full abdomen CT scan and chest x-ray. The full abdomen scan done results were negative, thus a biopsy was scheduled. A 1 cm square of tissue was taken. I was diagnosed with Stage 3 cancer. It is first diagnosed as squamous adenocarcinoma. The primary source was never found. With further tissue examination, squamous carcinoma was diagnosed.

On September 18th I have my first dose of chemo per an inserted port-a-cath. There are three separate chemo drugs given along with steroids and non-nausea medication. The first one is Taxotere and it was administered IV for 2 hours. The second is cisplatin (the bad boy drug) and that was given IV over two hours. The third one is Fluorouracil which was administered IV over 96 hours through a portable pump.

There were three chemo treatments that span over 21 days. First I got constipated, then diarrhea. By the 4th day I got very nauseated. My blood pressure went down and I could not take my blood pressure medication. I got my first radiation treatment on December 1st. I only ended up receiving one Carboplatin treatment and amifostine for three weeks due to side effects. I received 39 radiation treatments. As the radiation treatments progressed I became much weaker. Also, my throat became more irritated and eating became harder. I lost almost 60 pounds over two months. At night I had to apply fluoride treatments to my teeth. This became a problem after 4 weeks of the radiation since I could not apply the treatments without vomiting. Dry mouth became another side effect from radiation.

After going through radiation and Chemo, I am not sure which was worst. Three months after the radiation treatments ended, my mouth is still very dry and I am constantly drinking water. I am having issues eating. During my recovery I have struggled with getting stronger.

Note: IV = intravenous.



Home healthcare and hospice nurses will be caring for a newer demographic of patients with more complex issues regarding physical, financial, and psychosocial, and other issues. Updated education on the causes, risk factors, pathophysiology, treatments, and nursing implications are critical to effectively meet the needs of patients with head and neck cancer.

treatment. The Tumor–Node–Metastasis (TNM) staging system is the most widely used staging systems (National Cancer Institute, 2010b) (Supplement Digital Content 3, http://links.lww.com/HHN/A29). Grading is also another common component in the diagnosis as it classifies cancer cells in terms of how abnormal the cells are from normal cells (National Cancer Institute, 2010a) (Supplemental Digital Content 4, http://links.lww.com/HHN/A30).

The healthcare provider will perform a physical examination to assist with identifying signs and symptoms and size and location of the tumor. X-ray procedures as computed tomography (CT) scans, magnetic resonance imaging scans, and positron emission tomography scans can be used to determine specific location, size, and metastasis of the cancer. Laboratory testing can be done on blood, urine, and other fluid and tissues. Testing using specific tumor markers may assist with providing information about the process. Tissue biopsies will be performed to analyze the involved tissue and cells of the suspected area. Finally, surgery will allow for actual visualization of the area of concern and specific findings (National Cancer Institute, 2009).

Treatments

Surgery, radiation therapy, and chemotherapy are the most common treatments (Head and Neck Cancer Alliance, 2011). Taxotere in combination with cisplatin and fluorouracil is indicated for the induction treatment of patients with locally advanced HNSCC (Sanofi Oncology, 2012) (Supplemental Digital Content 5, http://links.lww.com/HHN/A31). Patients must be included in deciding about these different forms of treatments, as they may have a major impact on the resulting disfigurement and dysfunction that the patient may encounter.

Adverse Effects

Like other patients, the adverse effects from cancer drugs, surgery, and radiation therapy can impact the oral, head, and mouth cancer patient. Such responses as skin rashes, diarrhea, speech problems, swallowing difficulties, aspiration, lymphedema, and changes in body image, weight loss, loss of functioning in neck and shoulders with stiffness and pain may occur (Deng et al., 2011; National Cancer Institute, 2009). Anxiety and depression are frequently experienced (Ahlberg et al., 2011) (Supplemental Digital Content 5).

Nursing Implications/Practices/Education

By asking the right questions, nurses can assist in phases of prevention and treatments, especially focusing on pretreatment counseling and preparations. There are no specific noninvasive screening tests for HPV-related oral cancer like the Papanicolaou (PAP) test to identify cervical cancer. Thus, nurses must focus on risk factors and oral sexual health behaviors.

One of the most affected areas in nursing care is related to swallowing. Overall, the nutritional status of the patient's needs must be identified on initial diagnosis, using a nutritional status scale, and continued throughout care and treatment interventions as swallowing difficulties tend to make adequate nutrition difficult.

Because of oral swallowing problems, use of nonoral methods will need to be used for supplemental feedings (Nugent et al., 2010; Oates et al., 2008). Nasogastric and percutaneous endoscopic gastrostomy tubes tend to be a more effective method of supplying high protein and intakes of energy to maintain weight (Nugent et al., 2010).

Oral mucositis is a major complication of chemotherapy and/or radiation therapy. Early identification of mucositis, incorporating effective interventions, and determining proper evaluation is one of the roles of the team members. Oral care can consist of routine care, measures to prevent dehydration of the mouth, use of bland mouthwashes such as sodium chloride, sodium bicarbonate solutions or plain water, and a soft diet. Pain can be controlled by mouthwashes containing lidocaine to coat the oral cavity (Li & Trovato, 2012).

Regularly scheduled dental visits are recommended before and after radiation treatments as they can cause cavities, mouth sores, dry mouth, taste changes, and stiffness in the jawbone. High doses of topical fluoride are often given pre- and postradiation therapy to prevent tooth decay and reduce damage to teeth and gums. Dentures should be assessed for proper fit to decrease development of skin irritation. Avoiding acidic, spicy, or crunchy foods is critical to maintaining health in the oral cavity (Li & Trovato, 2012; National Cancer Institute, 2009).

Oral, head, and neck cancers are associated with high levels of emotional stress for the patient and family. Patients and family cope with significant self-image issues such as feeding tubes and body disfigurement. Psychosocial care addresses the fear and uncertainty of the diagnosis, treatments, and rehabilitation (Semple & McCance, 2010). Use of effective education, emotional support, and psychotherapy is needed (Semple et al., 2011). Patients want self-control management including implementing an advanced directive, treatment decisions, hospice care, and final funeral plans (Volker & Wu, 2011). Spiritual care involves all religious beliefs (Oral Cancer Foundation, 2012a).

Wells et al. (2007) studied a nurse-led clinic, which provided care to patients receiving radiotherapy. Findings indicated the nurses were able to focus on a holistic care approach. Weekly, or more often sessions were available if needed. Patients in the nurse-led group had better outcomes in preventing oral care complications, decreased weight loss, more knowledge about care, and better social interactions.

Rehabilitation

The rehabilitation process should begin upon diagnosis to reduce functional impairments (Kulbersh et al., 2006). Support groups and financial assistance are helpful to assist the patient and family in dealing with the treatment and rehabilitation costs (National Cancer Institute, 2009; Semple et al., 2011).

The role of home healthcare team is an important component of the rehabilitation process. Home healthcare nurses may be needed for wound care, dressing changes, nutritional support, education, and family support. Speech therapy may be appropriate to assist with swallowing/voice issues. Physical therapy may be needed to strengthen the mobility of the patient. A social worker can assist with psychosocial issues and impediments to the plan of care.

Palliative and Hospice Considerations

Incorporation of the features of palliative care is seen by anticipating, preventing, and alleviating the suffering of progressive and chronic illness while improving the quality of life (National Consensus Project for Quality Palliative Care, 2012). Incorporation of physical, social, emotional, and spiritual needs of the patient and family are offered (Sherman & Cheon, 2012). Palliative care is implemented when the patient is continuing to use lifesaving measures such as chemotherapy, radiation, and surgery, but still allows the patient to have choices while obtaining relief from pain and symptoms of the disease process (Oral Cancer Foundation, 2012b; Sherman & Cheon, 2012).

In hospice, the patient has determined that lifesaving measures are no longer feasible. A collaborative team will define a holistic approach and individualized care plan to allow the patient to die with dignity while surrounded by loved ones (Cancer*Care*, 2006; Oral Cancer Foundation, 2012a). Using a family-centered approach allows both the patient and family to make decisions on the quality of life rather than the length of life (Oral Cancer Foundation, 2012a). Further research in different variables such as coping styles, personality, and social support is needed to provide comprehensive holistic care to head and neck cancer patients (Oral Cancer Foundation, 2012a).

Summary

With the changing demographics of head and neck cancer, there will be a younger population needing a different type of care. More focus on preventive educational measures will be needed to combat

Table 2. Cancer Resources

Head and Neck Cancer Resources
American Head & Neck Society: 310–437–0559; http://www.headandneckcancer.org
Head and Neck Cancer Alliance: 866-792-4622; http://www.headandneck.org
Support for People with Oral and Head and Neck Cancer: 800-377-0928; http://www..spohnc.org
Oral Cancer Foundation: 949-646-8000; http://www.oralcancerfoundation.org
General Cancer Resources
American Cancer Society: 800-227-2345; http://www.cancer.org
Cancer*Care*: 800-813-4673; http://www.cancercare.org
Cancer Support Community: 888-793-9355; http://www.cancersupportcommunity.org
People Living with Cancer: http://www.plwc.org
Medical Information
National Cancer Institute: 800-422-6237; http://www.cancer.gov
National Institute of Dental and Craniofacial Research: 310-496-4261; http://www.nidrc.nih.gov/HealthInformation/DiseasesAndConditions/default.htm
Cancer.Net: 888-651-3038; http://www.cancer.net

the growing HPV-related cause. Home healthcare and hospice nurses will be caring for a newer demographic of patients with more complex issues regarding physical, financial, and psychosocial, and other issues. Updated education on the causes, risk factors, pathophysiology, treatments, and nursing implications are critical to effectively meet the needs of patients with head and neck cancer. Education on smoking cessation along with teaching of identification of signs and symptoms of recurrence of the disease process, need for routine healthcare provider follow-up visits, patient education of the condition, and overall self-care interventions will be needed to provide effective patient-centered care (Wells et al., 2007). For a list of cancer resources, see Table 2. ☗

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