Treatment Adherence in Head and Neck Cancer Patients Undergoing Radiation Therapy: Challenges for Nursing

■ Maura Fulham Edmonds, RN, MSN, CRNP, BC; and Deborah B. McGuire, PhD, RN, FAAN

ABSTRACT: **Supporting and encouraging patients to adhere to their chosen treatment protocol is a constant challenge for nurses and other healthcare providers. In order to achieve optimal adherence, nurses must be aware of the many challenges facing their patients. This article seeks to provide nurses in the radiation settings with a review of these challenges as they relate to head and neck cancer patients. It focuses on defining the treatment-related side effects and possible nursing interventions aimed at improving patient adherence and, therefore, increasing the likelihood of positive outcomes.**

Adherence to treatment in the head and neck population has received little attention in the literature but the work that has been done identifies many challenges related to treatment and its side effects, the disease process, and individual patient-related challenges. This article reviews the importance of evaluating patient understanding of the importance of adherence, the physical and economic barriers to adherence and the need for effective symptom management in the successful, timely completion of treatment. It also stresses the pivotal role of nursing in the issue of adherence. By identifying these issues, nurses can better prepare patients for the treatment experience. Lastly, it stresses to need for a greater understanding of this phenomenon in order to improve adherence and future outcomes for this patient population. (J Radiol Nurs 2007;26:87-92.)

INTRODUCTION

Adherence to treatment is an issue at every stage of the health care continuum. Whether considering preventive strategies, medication, or active treatment of disease, adherence is a constant challenge for health care workers and their patients. In 2003, the World Health Organization identified the importance of adherence and the importance of training health care workers in adherence management. It defined adherence as, "the extent to which a person's behavior-taking medication, following a diet, and or executing lifestyle changes, corresponds with agreed recommendations from a healthcare provider." (Sabate, 2003, p. 3).

Adherence is viewed as an active process that must involve an effective treatment relationship and one in which the patient and provider work together to negotiate a course of action (Sabate, 2003). All nurses have probably witnessed a patient's inability or refusal to follow prescribed medical advice. As individuals, nurses can also probably remember a time when they neglected to complete a course of antibiotic, did not take a multivitamin, or conveniently forgot when they were due for an annual check-up.

Nurses are often critical of patients for not doing what they, as medical professionals, believe to be the

Maura F. Edmonds, RN, MSN, CRNP, BC and Deborah B. McGuire, PhD, RN, FAAN, are with the School of Nursing, University of Maryland, Baltimore, MD.

Address reprint requests to Maura F. Edmonds, School of Nursing, University of Maryland, 2401 Pennsylvania Avenue Suite 1201, Wilmington, DE 19806-1419. E-mail: Medmo001@umaryland.edu

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best course of action. As individuals, nurses know that it is rarely as easy as it sounds. After all, how many actually exercise 60 min a day, 6 days a week, eat a low-fat diet, and always wear sun block? Even though these activities may seem trivial compared to a patient's decision to complete or not complete potentially curative treatment for a life-threatening illness, there are common threads and barriers which apply to both these situations. By examining their own behaviors, nurses can often gain insights into the minds and behaviors of their patients. For those caring for head and neck cancer patients, this identification may be more difficult and common ground less obvious, as the challenges of the disease and its treatment far exceed the average frame of reference. Nurses must use their clinical expertise and professional experiences to further guide their assessment of the possible barriers separating these patients from achieving successful outcomes.

Nonadherence to treatment regimens is one of the barriers separating head and neck cancer patients from successful outcomes. The issue of adherence becomes increasingly complex as the picture of this patient population becomes clearer. To better understand adherence, a review of the disease, its treatments, and their side effects will illustrate the complexities facing these patients and set the stage for the rest of the discussion. The purpose of this paper is to outline the state of the science related to treatment adherence in head and neck cancer patients, with a focus on defining the issues and delineating the possible nursing interventions which could help to improve patients' experiences during treatment, and, hopefully, their ability to adhere to and complete treatment.

HEAD AND NECK CANCER

Every year, approximately 40,000 people are diagnosed with cancer of the head and neck in the United States (including the oral cavity, pharynx, paranasal sinuses, nasal cavity, and larynx) and half a million people worldwide (Kim & Califano, 2004). In 2006, the American Cancer Society (ACS) estimated that there will be 30,990 new cases of oral and pharyngeal cancers. The incidence rate in men is twice that of women, with men over 50 years being at the highest risk (ACS, 2006). Additionally, African American men have the highest incidence and are considerably less likely to be diagnosed at an early stage. Five-year survival rates for all stages combined are 59%, which decreases to 48% survival rate at 10 years (ACS). However, there is a distinct difference when looking at survival based on race, with a 60% 5-year survival in whites and a 36% 5-year survival in African Americans (Clarke & Dropkin, 2006). In addition to the poor long-term survival, the effect on the patient's quality of life and ability to function is profound. Both the disease and its treatment can impede or destroy the patient's ability to speak, chew, swallow, and breathe. Both treatment and disease can also cause facial disfigurement and difficulty in communicating which can be extremely stressful for patients, caregivers and clinicians alike. Multiple treatment options exist including surgery, chemotherapy, radiation therapy, and a combination of concurrent radiation and chemotherapy.

COMMON TREATMENT OPTIONS

Radiation therapy has a role in the treatment of most head and neck cancers. It is valued for its organ- and function-sparing abilities (Rieger, Zalmanowitz, & Walfraadt, 2006). The treatment consists of daily doses of external beam radiation, delivered over a period of 5 or 6 weeks with fractionation of between 1.8 and 2.0 Gy fractions with a total of 70 Gy over the time allotted (Abeloff, Armitage, Niederhuber, Kastan, & McKenna, 2004). It can be used with either curative or palliative intent and can be aimed at the primary tumor, the metastasis, or both. Radiation can be used before surgery to reduce the tumor bulk and preserve organ function, concurrently with chemotherapy, or after surgery, to eradicate any remaining cancer cells (Abeloff et al.).

Chemotherapy in these patients is most commonly used in combination with radiation therapy. Recent meta-analysis has shown a significant improvement in overall survival of these patients when chemotherapy is used with radiation therapy, an improvement not seen in patients receiving it as neo-adjuvant (before radiation) or adjuvant (after radiation) therapy (Licitra, Lacati, & Bossi, 2004). At present, there is a growing body of literature which supports the use of concomitant chemoradiotherapy as the best approach for local-regional control and organ preservation. The most effective agents used are a combination of fluorouracil (5FU) and cisplatin or carboplatin, given weekly while the patient is undergoing once daily radiation therapy. Using this schedule, the chemotherapy agents provide an increased sensitivity to the radiation, theoretically resulting in a greater response to treatment.

The toxicities of these treatments are numerous, many resulting in potentially treatment delaying sequelae (see Table 1). They can negatively affect the patient's ability to eat by impairing the ability to taste and swallow, and can increase the risk of pain and infection from treatment-related mucositis.

In recent years, treatment for these diseases has evolved to include less invasive surgical techniques and improved methods of delivery for radiation therapy, including intensity-modulated radiation therapy and hyperfractionated methods of delivery. In each of these treatment approaches, the goal has been to