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Reader Comments on Radiation-Induced Xerostomia

I wish to offer comments on "Radiation-Induced Xerostomia: How Dry Is Your Patient?" by Susan D. Bruce, RN, BSN, OCN® (Vol. 8, pp. 61–67).

- The author cites dysphasia (multiple times) as an effect of xerostomia. Indeed, difficulty with speech can be a problem. However, dysphagia (difficulty swallowing) is never mentioned in the article. Dysphagia is an almost universal early and late effect of xerostomia and can have a significant effect on nutrition and hydration.
- The author states that pilocarpine (Salagen®, MGI Pharma, Bloomington, MN) usually is used after radiation therapy. The reference is dated 1994. Multiple studies demonstrate efficacy of pilocarpine on radiation-induced xerostomia. In addition, some studies have suggested concurrent pilocarpine and irradiation may be more helpful in reducing xerostomia (Johnson et al., 1993; LeVeque et al., 1993; Zimmerman, Mark, Tran, & Juillard, 1997).
- 3. The author discusses the importance of teaching patients how to perform vigilant oral care and prophylaxis. However, the implications of noncompliance are not outlined clearly. The rationale for intensive, lifelong dental hygiene and surveillance is because patients with xerostomia are chronically at very high risk for dental caries. The most dreaded complication of dental decay in these patients is osteoradionecrosis (ORN). ORN is not reviewed in the article. ORN can lead to nonhealing, necrotic wounds of the mandible and, to a lesser extent, the maxilla that will lead to extensive disability and potentially the need for mandibular reconstruction. Patients most at risk for ORN are those requiring dental extractions after irradiation. Hyperbaric oxygenation, given both before and after postirradiation dental extractions, has been helpful in reducing the risk and severity of ORN (Davies, 1997; Diaz-Arnold & Marek, 2002).
- Xylitol-sweetened gum has decreased the incidence of dental caries because of its ability to decrease levels of oral streptococci mutans. Bruce attributed this information to Mautner, Maher, and Zampini,

but it should have been attributed to Maher (2003). Review of the literature demonstrates multiple references to the efficacy of xylitol and, to a lesser extent, sorbitol in decreasing caries formation (Hayes, 2001; Hildebrandt & Sparks, 2000; Lynch & Milgrom, 2003). The masticatory effect of chewing gum also is helpful in stimulating any remaining functioning salivary acinar cells.

Radiation-induced xerostomia, to the degree it occurs, will be permanent. Xerostomia will result in some functional problems that significantly may impact the ability to perform basic functions. As stated in the article, more studies are needed in the management of xerostomia and quality of life in head and neck cancer survivors. Understanding the multiple implications of xerostomia is an important topic for all oncology nurses.

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References

- Davies, A.N. (1997). The management of xerostomia: A review. European Journal of Cancer Care, 6, 209–214.
- Diaz-Arnold, A.M., & Marek, C.A. (2002). The impact of saliva on patient care: A literature review. *Journal of Prosthetic Dentistry*, 88, 337–343.
- Hayes, C. (2001). The effect of non-cariogenic sweeteners on prevention of dental caries: A review of the evidence. *Journal of Dental Education*, 65, 1106–1109.
- Hildebrandt, G.H., & Sparks, B.S. (2000). Maintaining mutans streptococci suppression with xylitol chewing gum. *Journal of the American Dental Association*, 131, 909–916.
- Johnson, J.T., Ferretti, G.A., Nethery, W.J., Valdez, I.H., Fox, P.C., Ng, D., et al. (1993). Oral pilocarpine for post irradiation xerostomia in patients with head and neck cancer. *New England Journal of Medicine*, 329, 390–395.
- LeVeque, F.G., Montgomery, F., Potter, D., Zimmer, M.B., Rieke, J.W., Steiger, B.W., et al. (1993). A multi-center randomized, double-blind, placebo-controlled dose-titration study of oral pilocarpine for treatment of radiation-induced xerostomia in head and neck cancer patients. *Journal of Clinical Oncology*, 11, 1124–1131.
- Lynch, H., & Milgrom, P. (2003). Xylitol and dental caries: An overview for clinicians. *Jour*nal of the California Dental Association, 31, 205–209.

Maher, K. (2003, May). Late side effects in radiation therapy. Presentation at the Oncology Nursing Society 28th Annual Congress, Denver. CO.

Zimmerman, R., Mark, R., Tran, L., & Juillard, G.F. (1997). Concomitant pilocarpine during head and neck irradiation is associated with decreased posttreatment xerostomia. *Interna*tional Journal of Radiation Oncology, Biology, Physics, 37, 571–575.

Editor's note. Susan D. Bruce, RN, BSN, OCN®, author of "Radiation-Induced Xerostomia," thanks Ms. Maher for her thoughtful comments.

Advanced Nursing Certification to Become Role Specific

In April, the Oncology Nursing Certification Corporation (ONCC) Board of Directors approved significant changes to advanced certification in oncology nursing. Beginning in January 2005, ONCC will offer role-specific advanced practice certification examinations: the Advanced Oncology Certified Nurse Practitioner (AOCNP) and the Advanced Oncology Certified Clinical Nurse Specialist (AOCNS).

In considering the recommendations of the AOCN® Task Force, the board carefully weighed several factors before deciding to make changes, the most important of which were the results of the role delineation study of advanced practice nursing, which was completed in 2003. The study revealed that although oncology nurse practitioners and oncology clinical nurse specialists share a common knowledge base, discernible differences exist in their work responsibilities.

The decisions regarding eligibility criteria for the new advanced examinations were made carefully to ensure that the criteria are rigorous enough to be meaningful yet attainable by most oncology advanced practice nurses. The eligibility criteria for the AOCNP examination are as follows.

- Current, active, unrestricted RN license at the time of application and examination
- Master's or higher degree in nursing from an accredited institution
- Successful completion of an accredited nurse practitioner program
- Minimum of 500 hours of supervised clinical practice as an oncology nurse practitioner. These hours may be obtained

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