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Assessing the Oral Cancer Risk of South-Asian Immigrants in New York City

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Abstract

Increasing immigration from South Asia, where oral cancer is one of the most common cancers in adults, suggests that this disease will probably pose a serious public health problem in the United States. According to the 2000 Census, there are approximately 1.9 million South Asians in the U.S., and their access to dental care is limited. The morbidity and mortality associated with oral cancer can be reduced by primary prevention and early detection. South Asians are not a homogenous group, and areca, and important risk factor for oral cancer, has religious and cultural significance in some South Asian communities. In order to develop culturally relevant preventive and educational interventions, it is important to assess risk behaviors according to ethnic and religious subgroup identity. In this report, the author provides an overview of oral cancer risk factors among SouthAsian immigrants in the U.S., and describes a recently funded pilot study designed to assess oral cancer risk behaviors in South Asian seniors. The data collected will be used to develop risk profiles of South Asian religious and ethnic sub-groups. It is hoped that medical and dental providers will be able to use the risk profiles to target early-detection and risk-reduction services in this population.

Keywords

Asian American Network for Cancer Awareness, Research, and Training; Asian; oral cancer; tobacco; cross-sectional study

Oral cancer, which is the most common cancer in South Asia, includes cancers of the tongue, floor of the mouth, soft palate, tonsils, salivary glands, oropharynx, and lips.[1] This highly morbid disease, the sequelae of which include pain, loss of function, diminished quality of life, often disfiguring impairment, and death, accounts for 40% of all malignancies in the Indian subcontinent.[2] According to the World Health Organization, of 267,000 newly diagnosed oral cancers worldwide, close to 40% (108,843 cases) occurred in India, Pakistan, Bangladesh, and Sri Lanka.[3] Furthermore, oral cancer incidence and mortality rates in South Asia are almost twice those of global rates.[3]

Historically, oral cancer has not received much national attention in the U.S. because of its low relative prevalence and incidence (30,000 new diagnoses per year). However, given increasing immigration from South Asia, oral cancer will probably pose a serious public health problem in the near future: According to the 2000 Census, there are approximately 1.9 million South Asians in the U.S,and access to care, especially dental care, is limited in this population. Furthermore, studies conducted in Malaysia,[4,5] the U.K.,[6] Australia,[7] and South Africa[8] indicate that individuals of South-Asian heritage are at higher risk for oral cancer than

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indigenous populations; and recent data from the U.K. and Australia suggest that South-Asian immigrants continue high-risk behaviors in the host country.[9] Despite these trends, to our knowledge the oral cancer risk among South Asians in the U.S. has not been documented.

Although the prevalence of commercial cigarette use in South Asia is relatively low, the high incidence of oral cancer in South Asia is attributed to the use of indigenous tobacco products, such as bidis (handmade, pure tobacco cigarettes), chewing tobacco, and the culturally ingrained[10] use of areca products,[11–13] which are used as stimulants, to prevent nausea and as postprandial digestive aides.[10] The areca nut, popularly known as the "betel nut," can be chewed alone or as a quid. The quid, which consists of the areca leaf, areca nut, lime, condiments, sweeteners, and flavoring agents, may or may not have tobacco added to it. Although it is believed that the added tobacco plays the primary etiologic role in the development of oral cancer, recent studies have suggested that areca products may have an independent etiologic effect.[10,14] In addition to nuts and quids, a number of commercial products are also used that contain dried areca nuts to which tobacco and other ingredients are added. Areca products are available widely in the U.S. through ethnic grocery outlets and through the Internet.

Given that South Asians are not a homogenous group, there are distinct differences in the prevalence of risk behaviors by religious and ethnic subgroup identity—areca products bear special religious and cultural significance among Hindus,[15,16] and there are differences in the prevalence of tobacco and alcohol use among subgroups. Breakdown of disease prevalence by ethnic subgroup in India shows a greater incidence of oral cancer in Hindus than in Muslims, with Christians having the lowest incidence of the disease.[9,16,17] Differences in intraoral site by religious and ethnic subgroup identity, which may reflect differences in the method of use of suspected carcinogens, also have been documented.[17–19]

The increasing oral cancer rates in countries to which South Asians have migrated in large numbers, coupled with easy access to tobacco and areca products and difficulties accessing the healthcare system, suggest that a comprehensive approach to oral cancer assessment and prevention in South-Asian immigrants is imperative. In this respect, the Asian American Network for Cancer Awareness, Research, and Training recently received funding from the National Cancer Institute to conduct a pilot study examining the oral cancer risk of SouthAsian seniors in New York City. This cross-sectional study will assess oral cancer related knowledge, opinions, and practices in a convenience sample of 150 South-Asian adults age 60 years and older living in New York City. The rationale for assessing risk in older adults is that they are most likely to be first-generation immigrants and, thus, are more likely to continue traditional practices. Participants will be recruited primarily from religious and cultural institutions through community leaders, a method of recruitment that has worked well in previous studies with this community. Participants will complete a face-to-face survey at these institutions during health fairs and specified senior activity days. The survey will be designed to assess past and present use of tobacco, alcohol, and areca products; knowledge of oral cancer risk factors and disease signs and symptoms; perceptions of disease morbidity; sociodemographics (age, gender, religion, primary language, country of origin, time in the U.S., income, education, and insurance status); and access to and utilization of dental and medical services.

The morbidity and mortality associated with oral cancer can be reduced by primary prevention and early detection. It is anticipated that the data collected in this study will be used to both of these ends. Because the use of areca and tobacco products has cultural and religious significance, the assessment of variations in risk behaviors by ethnic and religious group identity will allow for the development of culturally relevant educational and preventive interventions targeted at specific subgroups within the South-Asian population. Oral cancers

occur at sites that are accessible easily to a painless, noninvasive examination, making early detection relatively simple. However, because the disease is asymptomatic in the early stages, it is important for healthcare providers to be aware of the risk profiles of their patients to target secondary prevention. It is hoped that data from this study can be used to develop risk profiles of South-Asian religious and ethnic subgroups that will be useful to medical and dental providers in targeting early-detection and risk-reduction services for this population.

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