Researchers discover link between oral cancer and ethnicity

November 14 2007

Clinicians from the USC School of Dentistry unravel connection between the incidence of oral cancer and race and ethnicity-- as part of first epidemiological study of oral cancer in California. Dr. Satish Kumar and Dr.Parish Sedghizadeh, clinical professors in the school's Division of Diagnostic Sciences, gleaned through 20 years of records from the California Cancer Registry (CCR)—the state's cancer surveillance database—for the incidence rates of invasive squamous cell carcinoma, the most common form of oral cancer.

Their findings will be published in an upcoming issue of the journal Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology and Endodontology and are currently available online at www.ooooe.net .

Kumar and Sedghizadeh theorized that groups who engaged in these high-risk behaviors would also experience higher rates of oral cancer. The researchers discovered that different ethnic groups living in California manifest the disease very differently. African Americans and Caucasians, who have the highest oral cancer rates, are most likely to develop cancer of the tongue. Among Asian populations, Koreans had the highest incidence of tongue cancer, while Southeast Asians were more likely to develop the disease in the buccal mucosa, or inner cheek. Filipino women have the highest incidence of cancer of the palate.

The research team theorized that cultural habits are to blame. From what we know of how the cancer develops, we can extrapolate that cultural habits and lifestyle choices are directly linked to the prevalence of oral

cancer in certain groups," Kumar says. They were right.

For example, African American and Caucasian men, with the highest rates of cancer of the tongue, also have the highest rates of cigarette smoking in the state. In Asian groups, Koreans have the highest cigarette smoking rates. The practice of chewing tobacco, or areca nut, most common in South Asian cultures, may account for that group's likelihood of developing the disease in the inner cheek. The high rate of palatial cancer among Filipino women could be attributed to the practice of reverse smoking, when the lit part of the cigarette is concealed inside the mouth "Smoking is still considered taboo among Philippine women," Sedghizadeh says. "The lit part of the cigarette contains the most carcinogens and if held near the palate, could account for these statistics."

Up to two-thirds of oral cancers are caused by tobacco or alcohol use, according to the Oral Cancer Foundation. Though the cancer will claim the lives of 7,500 Americans this year, it is the most diagnosed cancer in many developing countries—including India, China and Vietnam—where its populations engage in these high-risk behaviors.

The study represents the first effort to analyze the epidemiology of oral cancer from statistics gathered by the CCR. "Basically we had a trove of information that had never before been accessed," says Sedghizadeh. "People have looked at breast and prostate and other types of cancers, but no one had mined this field for oral cancer statistics."

The research team hopes their findings can help tailor oral cancer prevention messages aimed at particular ethnic groups. "If we are aware that certain subsets are getting a particular kind of oral cancer, we can develop educational materials tailored to that particular risk activity and that particular group," Sedghizadeh says. "Ultimately we realize that need to increase awareness not just for the individual," Kumar says, "but

for their entire community as well.

Source: University of Southern California