

# Oral Cancer: A New Epidemic Can Be Foreseen In Pakistan

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Cancer of the oral cavity in Pakistan is among the highest in the world which is attributed to the local custom of chewing tobacco products such as paan, gutka and naswar.<sup>1</sup> These things are widely used in Pakistan mainly by the lower socioeconomic group. They pose a high risk for oral cancer. The continuous exposure to corrosive condiments causes abrasions of oral mucosal surface making it more susceptible for virulent strains to gain entry into the basal cells.

In this issue, we have two reports showing the evidence of HPV being the cause of precancerous and cancerous lesions of the oral cavity.

Zil-a-Rubab and colleagues<sup>2</sup> report in this issue of the journal the results of descriptive study examining the consequences of this habit regarding one of several precancerous conditions, trismus. The authors report the high frequency of HPV in oral cavity in subjects with trismus suggesting risk of oral squamous cell carcinoma (OSCC). Mechanism of development of trismus in HPV tobacco chewers is discussed from a new aspect which is hallmark of this study. Authors describe the inflammatory effects of arecoline, an active alkaloid present in the betel nut. These inflammatory changes cause increased collagen production leading to fibrosis which is a well known precancerous condition of OSCC.<sup>3-4</sup> The victims of submucous fibrosis suffer from trismus at advanced stages.

As convincing as these data appear, upon closer evaluation, HPV is positive in only 19.25% subjects with trismus probably because the samples collection from mouth was difficult and good quality oral rinse along with cells from subjects with trismus is difficult to obtain.

Furthermore, Baig and colleague<sup>5</sup> provide worldwide statistics of more than 481,000 new cases of oral cancer every year in their short communication. They have especially emphasized on the tobacco chewing habits of the people in Asia. One more interesting finding in this communication is the different areas of cancer development in the oral cavity in Asian and western population relating to different basis of cancer formation. The cancer development in Asians is mostly in the buccal mucosa (cheeks) compared to the Western countries where tongue and the floor of the mouth are the primary sites and less common sites are gingiva, labial mucosa, and hard palate. Areca nut, part of almost all of these chewable products, has been implicated in oral leukoplakia and submucous fibrosis, both of which are potentially malignant in the oral cavity.

Another alarming observation by the researchers is the misconception in the users that the nicotine present in these products is harmless, whereas, chewing tobacco comes direct in contact with oral mucosa and dumps more nicotine into blood. Highlights of this study are the recommendations made by the researchers. The point of reference of this communication is the collection of oral rinse samples from the masses through setting up camps in ethnically diverse areas in Karachi, known as mini-Pakistan. Karachi portrays an ethnically and linguistically assorted population of the four provinces. Many researchers are working on this project checking on the biochemical and genetic aspects.

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## REFERENCES

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- <sup>1</sup> Merchant A, Hussain SS, Hosain M, Fikri FF et al. Paan without tobacco: an independent risk factor for oral cancer. *International journal of cancer*. 2000; 86(1):128-31.
- <sup>2</sup> Zil-e-Rubab, Mughal AM, Baig S, Lucky MH, Khan MA. Relationship of Human Papilloma Virus with Trismus in Chewable Tobacco Users. *Pak. J. Med. Dent*. 2013.
- <sup>3</sup> Westra WH. The changing face of head and neck cancer in the 21st century: the impact of HPV on the epidemiology and pathology of oral cancer. *Head and neck pathology*. 2009; 3(1):78–81.
- <sup>4</sup> Kaste LM, Dolecek TA. Patterns and Trends in HPV-Related Oral Cancer and Other HPV-Associated Cancers. *HPV and Cancer* [Internet]. Springer; 2012 [cited 2013 Mar 22]. page 107–30. Available from: [http://link.springer.com/chapter/10.1007/978-94-007-5437-9\\_5](http://link.springer.com/chapter/10.1007/978-94-007-5437-9_5)
- <sup>5</sup> Baig S, Zil-e-Rubab. Oral Cancer - A Looming Epidemic. *Pak. J. Med. Dent*. 2013