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The Consumption of smokeless tobacco products and the spurge in the rate of oral cancer across India

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“We have to make sure that we empower people to assist them Quit or Switch”

With a large disease and economic burden due to tobacco harm, India is among the top countries with a high rate of oral cancer. India sees around one lakh new cases of oral cancer each year with more than 90 percent of these attributed to tobacco use Smokeless tobacco products (SLTs) account for over one?third of all tobacco consumed in India. It wouldn’t be surprising to know that oral cancer incidence rates are at an all time high of 20 per 100000 population. Oral cancer now accounts for about 30% of all types of cancers in India. Chewing betel quid containing tobacco is a well established cause of oral cancer in India. Apart from this traditional form of smokeless tobacco, tobacco with lime, tobacco tooth powder and other new branded products have gained popularity recently, especially in the backdrop of the gutka ban in several states across India. Nilesh Jain, Managing Director, Harm Reduction Research & Innovation Centre unveils the enormous harm caused by SLTs and the importance of harm reduction intervention for better public health.

What do you feel about the addiction of SLT among people in India?

According to the available literature25.9% of adults use smokeless tobacco in India. People often perceive “smokeless as harmless” and these products are often promoted and marketed as a less harmful alternative to smoking. The most consumed SLT in India is the chewing form of smokeless tobacco which contains nicotine, the factor responsible for tobacco addiction.
Some chewing tobacco products contain microscopic abrasives which increase the rate of absorption of nicotine and carcinogens into cell membranes. Another factor is the disparities found in the tobacco market due to socio-demographic

neighborhood. Lower-income societies often become victims of tobacco marketing. The adults are often induced to start using harmful substances through innovative marketing strategies or through cultural influence. Apparently, women are most commonly found using SLT products. They use their children to purchase tobacco for them, thus exposing children at a very young age resulting in early initiation and addiction. Due to less knowledge and awareness in such communities the usage of smokeless tobacco products is higher. In addition to this, low socio-economic groups also lack the resources required to combat the ill effects or morbidities associated with tobacco consumption making it a clear case of an “addiction crisis”.

How does the consumption of SLT impact oral health?

For smokeless tobacco users, the risk of cancer to the cheek and gum is nearly 50 times greater than non-users. 60-78% of smokeless tobacco users have been found to have oral lesions. Smokeless tobacco products are known to contain more than 28 constituents that are carcinogenic in nature. The most harmful compounds in smokeless tobacco are tobacco- specific nitrosamines (TSNAs) and their levels are directly related to the risk of cancer. The commonly consumed SLT products like Khaini, Mishri, etc. have a high concentration of TSNAs and have been detected in the saliva of tobacco chewers. Studies state that based on the behavioral differences in the usage of SLT products, the risk of oral cancer is higher among females than in males. Carcinogens present in SLT products are ingested and processed, leading to metabolic activation of carcinogens. Chewing tobacco consists of areca nut, slaked lime, and tobacco which elevates generation of reactive oxygen species (ROS), cellular turnover, collagen synthesis, causes damage to DNA, fibroblast and even chromosomal which overall contributes to oral mucosa fibrosis and ultimately oral cancer. In addition to oral cancer, women also experience increased risk of infertility, pregnancy complications, premature births, low birth weight infants, and stillbirths. Most of the oral cancer cases are diagnosed in the advanced stages and the disfigurement as well as dysfunctionality caused by the treatment further affects the quality of life apart from imposing a financial burden.

What do you think is the remedy?

I believe we need further evidence-based published literature on SLT cessation at par with smoking cessation. Vast amounts of data convincingly demonstrate their presence in various forms of smokeless tobacco, but products available in India have been examined in only scattered studies. Studies assessing the efficacy of SLT cessation interventions must be carried out. Another way to address this will be public education for awareness building on behavioral change on Tobacco consumption and the introduction of harm reduction concepts. Also, there should be an integrated health-care delivery mechanism under the National Health Mission framework working at the district / rural level that is focused on curbing TB, oral cancers and COPD.

How can harm reduction interventions reduce the lethal impact of SLT?

The ability of the person to succeed in quitting substances completely depends on the balance between the individual's motivation to quit substance use and his level of dependence on the substances. We have to make sure that we empower people to assist them to quit or switch to a healthier alternative. For any harm reduction intervention to be effective, the motivation of the substance user is indispensable. Also, the method of intervention is directly related to the assessment of nicotine dependence. Public health professionals can use the Fagerstrom Test for Nicotine Dependence to assess nicotine dependence for referrals and appropriate interventions in the outreach programs. Training related to the well being of the health after substance use through social workers, NGOs and health professionals through cessation techniques and tools can help users understand Reduced Risk Products like proven Swedish Snus. Setting-up and strengthening of cessation facilities including the provision of pharmacological & other RRP treatment facilities at the district level can help us address the issue at the grassroot level. SLT cessation intervention-based research needs to be encouraged, especially in the low-income group countries which have weak tobacco cessation support. Organizations like Harm Reduction Research & Innovation center are actually working towards tobacco cessation and adopt an evidence-based approach to support the policymakers, social planners and product developers to deliver innovative harm reduction techniques and further reduce individual drug-related harm.