

Areca Nut Chewing and Oesophageal Cancer: Need for Public Health Measures

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Oesophageal cancer remains an important public health problem worldwide. It is currently the 8th most common human cancer and 6th most common cause of cancer-related deaths [1]. Annually about half a million new cases of oesophageal cancer and about same the number of related deaths occurs worldwide. Of these oesophageal cancer cases and related deaths, approximately 84% occur in less developed countries particularly in Asia [1]. Most people diagnosed with oesophageal cancer die within five years. The most common histologic types of oesophageal cancer are squamous-cell carcinoma and adenocarcinoma. Globally oesophageal squamous-cell carcinoma is the most common (90%) subtype, specifically in Eastern countries [1]. Cigarette smoking, high-alcohol intake, low intake of raw fruits and vegetables, ingestion of coarse and raw foods are recognized risk factors for oesophageal squamous-cell carcinoma in western populations and together may account for up to 98% of the oesophageal carcinoma cases [1]. However, epidemiologic profile of oesophageal cancer varies across the globe depending upon lifestyle and nutritional factors.

Areca nut is used as masticatory substance by approximately 600 million people worldwide. It is estimated that 10 -20% of the world population chew areca nut in some form [2]. Areca nut is a common component of many chewable preparations including betel quid, gutka, pan masala etc., and widely marketed and consumed in Asian countries and their immigrants elsewhere in the world. These preparations are not appropriately labeled and do not carry any potential health risks messages. Furthermore, in many South Asian communities, these areca nut preparations are readily accessible by children and teenagers. In fact, consumption of these areca nut preparations is an integral cultural tradition in Asia. It has been shown that areca nuts' alkaloid -arecoline is a precursor for at least four N-nitrosamines and two of which are carcinogens. Carcinogenic nitrosamines derived from the areca nut are formed in the saliva of chewers. Also, areca nut has been shown to be an independent risk factor of oral cancer [3]. During the last decade, epidemiologic studies have been able to measure the independent effect of areca nut chewing on

oesophageal cancer after accounting for the effects of chewable tobacco, cigarette smoking and alcohol drinking. Additionally, several pathways leading to oesophageal carcinoma by the constituents of areca nut have been proposed. In fact, there is now sufficient evidence that areca nut causes oesophageal squamous-cell carcinoma in Asian populations, wherein it's chewing and accounts for up to 70% of the cases [4-7]. Therefore, there is an urgent need for mass health education about ill-effects of areca nut chewing. Although it has been previously argued that an outright ban on areca nut processing, products formulation and marketing will probably prove to be counterproductive [3], yet in the backdrop of low literacy rate, high prevalence of areca nut use and oesophageal carcinoma incidence in many Asian countries aforementioned step seems to be the only pragmatic option. Therefore, enactment and effective enforcement of legislation completely restricting the preparation and sale of areca nut and/ or other formulations from it seems to be need of the hour.

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