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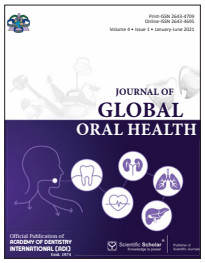

Letter to the Editor

Areca nut an ignored carcinogen of Asian continent in a nutshell

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Areca nut is the fruit of *Areca catechu* palm tree mainly grown in South East Asia and Pacific islands. Areca nut is chewed by approximately 600 million people worldwide (10–25% of world's total population). Most of the chewers are concentrated in the Asian continent such as India, Nepal, and Pakistan, wherein chewing betel quid and areca nut are considered as a part of custom and tradition in some of the communities, affecting approximately 20% of the native population.[1,2] The report of the GATS for India showed betel quid with tobacco which was used by 7.5% men and 4.9% women, and mixtures of areca nut and tobacco, without betel leaf (Gutka and Mawa) used by 13.1% men and 2.9% women.[3] It is the fourth most common psychoactive substance used globally.[1,3] Areca nut is chewed in various forms; plain supari, sweet supari, pan masala and in the form of gutkha. The independent role[4] of areca nut in oral cancer as well as synergistic effects with alcohol and tobacco is well documented in the literature and the International Agency for Research on Cancer in 2004 has classified areca nut as Group I carcinogen.[2] Realizing the carcinogenic effects of tobacco government of India have impleted the cigarettes and other tobacco products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003 can in to force which prohibits smoking in public place, direct, and indirect advertisement of tobacco products, sale of tobacco products to minors and nearby educational institutions; mandates depiction of pictorial health warnings on all tobacco packs. However, there is no similar act for areca nut yet; moreover, areca nut is considered as a food product category and only positive thing is that it cannot be mixed with tobacco and sold legally under food safety and standards Act, 2006 which states: "Tobacco and nicotine shall not be used as ingredients in any food products."

Areca nut's key ingredient arecoline along with other alkaloids can cause blanching of the oral mucosa even at 1 time use some times; further, it can lead to oral submucous fibrosis (OSF) which has malignant potential.[4] Areca nut affects almost all organs of the human body, fetus in pregnancy, lowers immunity, and cause hormonal imbalance, leading to hypothyroidism, prostate hyperplasia, and infertility.[5] It also causes or aggravates pre-existing conditions such as neuronal injury, myocardial infarction, cardiac arrhythmias, hepatotoxicity, asthma, central obesity, Type II diabetes, hyperlipidemia, metabolic syndrome, and others.[5] The areca nut chewing can cause various forms of oral manifestations ranging from periodontitis, chewers mucosa, premalignant conditions to oral, and oropharyngeal carcinomas. The incidence of OSF from betel nut ranges from 0.9% to 4.7% in China, whereas in India, it is almost up to 0.4–10%[5] and malignant transformation rate of 7.6% in an Indian cohort over a period of 17 years; while in Pakistan, the rate is quite more.[6] In a review study including studies primarily from India, it was concluded that there is significant increase in risk of pre cancer and cancer of head and neck in users of areca nuts, its products, even without tobacoo.[2] In the Western countries, the cancer of tongue and

floor of mouth is common, whereas in Indian subcontinent, the cancers of gingival and buccal mucosa are common due to placement of tobacco quid in the oral cavity. This cancer of gingivobuccal complex is termed as Indian oral cancer.[3] Various reasons such as addictiveness, cheap price, easy availability, no government regulations, peer influence, aggressive marketing, glamorization by some of the film stars, and unawareness regarding its serious harmful effects, have led to its popularity among the very young generation. Even school and college going children are being attracted and have started using areca nut in some form, especially the sweet supari used as mouth fresheners which have a target population of young children due to perception and proclamation by the manufacturers of areca nut products for it to be harmless in any way, even to kids. The effect of this unawareness is that practically in many parts of India, areca nut is served in social functions, hotels, and restaurants, where everyone from young to old consumes it without any hesitation. Strict laws like banning is necessary to regulate the production of commercial preparations and selling of areca nut. In the interest of over 100 million users among the general public,[6] there is an urgent need to recognize areca nut as a harmful food substance by the policy makers, prohibit its advertisement, open selling without warning in public places all over India and also should start awareness programs for it.

Declaration of patient consent

Patient's consent not required as there are no patients in this study.

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Conflicts of interest

There are no conflicts of interest.

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