The hazards of gutka chewing

To the Editor:

The review by Javed et al. addresses a very important health problem: gutka chewing, facing the populace of the Indian subcontinent and migrants thereof. It was interesting to read the concepts put forth, especially where the authors have focussed on gutka as a form of smokeless tobacco, thereby giving an impression that areca nut is only a secondary component. However, we would like to point out that gutka is primarily an areca nut–based product with processed additives that also include tobacco. Oral submucous fibrosis (OSF) is mentioned to be more common in gutka chewers than in nontobacco chewers, an erroneous comparison, because it has been conclusively proven that OSF occurs because of areca nut consumption and is not associated with tobacco. If tobacco had been a causative factor for OSF, then other forms of tobacco usage, such as raw tobacco chewing and cigarette/beedi/cigar/pipe smoking should manifest OSF; however, clinically it is never seen in individuals practicing exclusively tobacco abuse. By the same yardstick, the explanation of nicotine causing synergistic damage to fibroblasts does not hold true, as fibroblast damage in exclusive tobacco usage has never been reported. It is well known that fibroblast metabolism is altered owing to activation of procollagen genes, elevation of procollagen proteinase levels, and up-regulation of lysyl oxidase activity brought about by chewing areca nut, leading to increased fibrosis in the oral submucosa. In the discussion, the authors state that cessation of the habit may help to reduce the severity of the condition. Again in the context of OSF, the fibrotic bands once formed do not regress by just cessation of the habit, although the progression may be halted, but the risk of malignant transformation still exists.

The review has relied chiefly on articles based on case-control studies, which although they provide very valuable information, tend to have an element of selection bias that is under the control of the investigators depending on the decided/set inclusion and exclusion criteria. Moreover, these studies appear to have been conducted in tertiary care establishments that may not be as accessible to the people of the Indian subcontinent as compared with their western counterparts, and thereby may not represent the true picture of the ground reality in the community at large. Population-based studies that have been reported from India shedding light on the ill effects of areca nut, surprisingly, have been not considered. Many areca nut–related studies have been conducted in various centers throughout India. Unfortunately, most of these studies do not get published or are published in nonindexed literature because they are not of primary interest to readers from the western world. Therefore, this information remains largely unavailable to the rest of the scientific community.

The authors have made a very laudable recommendation for greater roles to be played by health authorities in displaying hazard warnings on gutka packets and restricting its sale to avoid use by minors. The public awareness that they speak of is the only solution to this epidemic problem of gutka chewing and its consequent effects.

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In reply:

Thank you for your interest in our publication. Our article focused on “oral mucosal disorders among gutka chewing...
chewers” and not merely on oral submucous fibrosis (OSF) in these individuals; therefore, it was essential to comprehend the role of all the major components of gutka to attain a better understanding of the mucosal disorders associated with the chewing abuse. Indeed, areca nut is an essential component in gutka and is responsible for the development of OSF in gutka chewers; however, the role of other components, such as powdered tobacco and slaked lime, which have been associated with oral ulcerations, malignant changes in oral mucosa, and periodontal inflammation, cannot be disregarded.1-4 It is known that gutka is chiefly a mixture of powdered tobacco, areca nut, and slaked lime. In this context, the powdered tobacco is an integral component of gutka; therefore, we labeled gutka as a form of “smokeless tobacco,” which is in accordance with other studies.1-3

We would also like to point out that synergistic effects of nicotine on fibroblasts have been reported. In their experimental study, Argentin and Cicchetti5 investigated the response of human gingival fibroblasts to nicotine exposure. The results showed that cultures exposed to nicotine showed an increase of reactive oxygen species and fibroblast damage. Similar results have been reported by Costea et al.6

Patients with OSF present with a limited mouth opening primarily because of the presence of dense fibrous bands in the oral mucosa. Even after cessation of the chewing habit, the bands persist; however, it has been shown that cessation of the chewing abuse with active treatment can reduce the severity of OSF and facilitate mouth opening to some extent. In their study, Maher et al.7 reported that a 1- to 3-year vitamin supplementation can significantly reduce the symptoms of OSF (including intolerance to spicy food, burning sensation in mouth, and limited mouth opening).

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