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CASE REPORT

Gutka Chewing (Spit Tobacco): A Common Cause for Teeth Discoloration in India

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ABSTRACT

Gutka has been in use for decades in many parts of the world particularly in the Asian region. The potential to persuade excitation and delight have made it very tempting among its users. The staining effect; however, both extrinsically and particularly intrinsically have not been thoroughly understood. This is a case report of a 40-year-old Indian male who presented to the department of periodontology, complaining of generalized discoloration. Subsequent examination and history revealed that the discoloration was due to chronic use of gutka.

Keywords: Gutka, Staining, Tobacco.

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INTRODUCTION

Mouth acts as a window to lot of systemic diseases and serves as a port of entry of the various infections that can alter and affect the immune status of the person. Good oral hygiene is the fundamental for oral integrity as it greatly affects the quality of life.[1] Deleterious effects of areca nut on oral soft tissues are published extensively in the dental literature. Its effects on dental caries and periodontal tissues, two major oral diseases are less well researched. Areca-induced lichenoid lesions, mainly on buccal mucosa or tongue, are reported at quid retained sites. In chronic chewers a condition known as betel chewer's mucosa, a discolored areca nut-encrusted change, is often found where the quid particles are retained. Areca nut chewing is implicated in oral leukoplakia and submucous fibrosis, both of which are potentially malignant in the oral cavity. Oral cancer often arises from such precancerous changes in Asian populations.[2]

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Gutka or Gutkha is a preparation of betel nuts and tobacco intended to be chewed. It originated in the Indian subcontinent, where its utilization is extensive today and spread from there to areas with a huge Indian population. Like other tobacco products, gutka is potentially addictive and cancerous. In addition to betel nuts and tobacco, gutka also includes an extract of acacia called catechu and slaked lime, which is intended to catalyze a chemical reaction when gutka is chewed, releasing alkaloids in the blend to make it more potent. It is also usually blended with spices and seasonings, which can make it sour, hot, or sweet. Although gutka is largely unregulated in India, many officials became concerned about widespread use of the substance in the early 2000s, and for a brief period of time, there was actually a ban on it. Regulation of gutka will most likely focus on making it harder for children to obtain, and encouraging labeling to indicate its carcinogenic and addictive properties. In some regions of India, education campaigns have been launched to teach children about the dangers of chewing it, but such programs primarily reach children who are actively in school, excluding children who lack access to education. Classically, gutka comes in the form of a loose powder that is inserted into the mouth, chewed, and eventually spat out. Like other betel nut chews, it is highly staining, leaving a characteristic reddish to orange stain on the lips, tongue, and teeth, and it also stains the streets and sidewalks when people spit it out.

CASE REPORT

A 40-year-old male presented to the department of periodontology, Pravara Institute of Medical Sciences, Loni, Maharashtra, India, with chief complaint of complete teeth discoloration. His medical and dental history was reviewed. His medical history had no positive findings and his dental history indicated that he had never visited a dental office before. The patient said that he was chewing gutka 6 to 7 times on a daily bases for the last 10 to 15 years for pleasure and enjoyment. Upon clinical examination, the soft tissue showed no indication of noticeable abnormality. All teeth were present except the upper third molars and all teeth were fully erupted. Grossly caries was detected on the 16 and root pieces were seen with 25, 26, 45 and 46. Tenderness positive was seen with 25 and 26 (Figs 1 and 2). Gingival recession was seen with 33 and there was sensitivity in teeth for hot and spicy food. The patient was finally diagnosed with generalized chronic periodontitis. A panoramic and four

Fig. 1: Clinical view of dental stains

Fig. 2: Clinical view of oral cavity

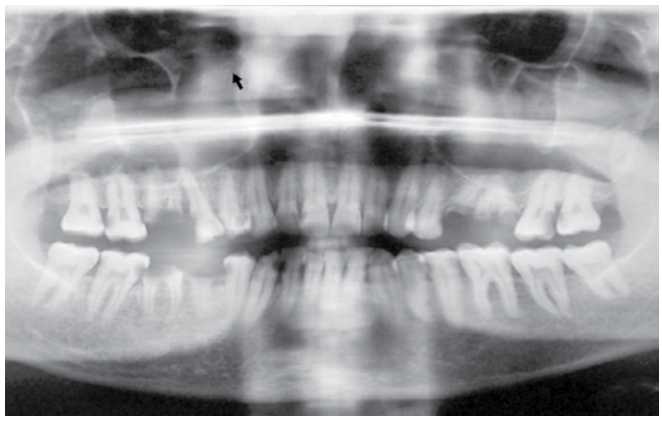

Fig. 3: Panoramic radiographic view

bite wing X-rays were taken and the radiographs showed no hard tissue abnormality with the exception of slight to moderate generalized bone loss noticed especially in the mandibular posterior teeth (Fig. 3). Percussion and palpation were performed to rule out possible nonvital teeth. The result was negative. Periodontal probing depth was 2 to 3 mm with no bleeding observed. All teeth were discolored on the buccal, lingual and interproximal areas. The mandibular first molars and anterior teeth showed faucet wear due to continuous chewing of the gutka. The discoloration range was from dark-yellowish to black.

DISCUSSION

According to the 2009 to 2010 survey by Global Adult Tobacco Survey, 53.5% of Indians use tobacco products and gutka chewing makes up the majority of those figures with 48.07% of Indians using them. Gutka use can begin at a very young age. Due to its often flavorful taste, easy availability, and cheapness, it is popular with poor children, who can exhibit precancerous lesions at a very early age as a result. Symptoms of cancer often appear by high school or college age. Social custom does not permit children in India to smoke cigarettes, so gutka use, being all but invisible to others, is the method of choice. Gutka is also used by many as an alternative to cigarettes and is claimed to curb the need to smoke, but eventually becomes another habit tough to quit.[3] In India, gutka is chewed for variety of reasons, such as stress reliever, mouth freshener, concentration improver and a digestive following food. Being an addictive substance, its withdrawal symptoms are mood swings, anxiety, and irritability, loss of concentration, sleep disturbance and craving. Stain associated with teeth is caused by the presence of chromophores (colored agents). Chromospheres arise from two chemical sources: organic compounds (i.e. carotene), inorganic transition metal ions (i.e. iron and tin), and combinations (i.e. blood that has both iron and the colored prophyrin ligand). These stains can be extrinsic stains on the surface of the teeth and/or intrinsic stain within the teeth. Extrinsic stains can be removed through abrasion and/or bleaching. However, intrinsic stains (in the tooth) are bonded within the structure of the tooth, and hence cannot be reduced by brushing or any abrasive process, but can only be reduced with penetrating bleaching agents.

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