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Use of Smokeless Tobacco in Medical Students and Hypertension

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To Editor,

Tobacco is being used in various forms including cigarette, shisha, cigar and bidi smoking and smokeless tobacco. Smokeless tobacco constitutes various forms of tobacco i-e paan/ betel quid, tobacco with lime, naswar, gutka, qiwam, tobacco tooth powder, minpuri, areca nut (supari) [1,2]. Qiwam consists of thick paste of boiled tobacco mixed with powdered spices such as saffron, cardamom, aniseed and aroma, while paan/ betel quid is a mixture of the leaf of the Piper betle vine, aqueous calcium hydroxide paste [slaked lime] [1,2]. Smokeless tobacco is commonly used in South Asia, where it has become part of South Asian culture. Furthermore, South Asia is a major producer and exporter of tobacco and over one-third of tobacco consumed in South Asia is smokeless [2]. Traditional forms like, tobacco with lime; betel quid and tobacco tooth powder are commonly used among South Asian population [2]. With the passage of time, tobacco usage is increasing not only among men but also among women of reproductive age, children, teenagers, medical and dental students [2].

Tobacco was introduced into South Asia by European in the 1600s initially in the form of pipe smoking and also as snuff. It was habit of South Asian residents to chew betel quid, areca nut as a part of their habit and that that was gradually included into their social and cultural life later on. This was followed by administration of tobacco as a new ingredient in betel quid (pan), which became the most common form of smokeless tobacco and its use varies from one part to the other part of the globe. It is estimated that around 600 million people uses betel quid globally and around 100 million of these users belong to India and Pakistan [2]. Multiple factors determine the use of smokeless tobacco in the population continuously. These factors include its affordability, ease of purchase and misconception that it has the beneficial effect on tooth ache, nausea, improvement of oral hygiene, headache, and elevation of mood, relieve of morning motions, improves concentration and also postpones the hunger [1,3].

Chewing of these substances usually starts early in life leading to a multiple problems in adulthood. Various medical problems attributed to smokeless tobacco include oropharyngeal cancers, laryngeal cancers, and esophageal cancers emerging epidemic of oral sub mucous fibrosis (attributed to areca nut), asthma, diabetes, hypertension, dyslipidemias and low birth weight deliveries [1,2,4].

According to existing literature smokeless tobacco is considered as an important risk factor for hypertension and dyslipidemias [5]. Hypertension occurs because of sodium and nicotine content of smokeless tobacco and glycyrrhizinic acid [5]. The extract of Glycyrrhiza glabra root, present in many chewing tobaccos has potent mineralocorticoid activity and may cause high blood pressure and in

some people hypokalemia, alkalosis, sodium and water retention and suppressed plasma renin activity [6]. It was found in the study done on tea garden workers that consumption of locally manufactured alcohol, excessive intake of salt and usage of khaini (tobacco, lime, water menthol, oil, spices contains added flavors) posed the workers at increased risk of hypertension [7]. Another study found that after chewing betel quid with tobacco for 15-30 minutes, there was rise in heart rate and blood pressure, while the same findings were not observed after chewing betel quid without tobacco [8].

Smokeless tobacco is also commonly consumed by medical students who are the future ambassadors of the health. A cross-sectional study done in Pakistan found that 21.5% students used tobacco in some form (smoked or smokeless) during their life time. While 6.4% were life time users of smokeless tobacco, 1.3% were daily users and 1.8% were the established users [1]. Thus, use of smokeless tobacco cannot be ignored among medical students of Pakistan too. Doctors are considered as role models for the society and main source of public health awareness across the world. If these doctors are engaged in such type of behavior, they will be least likely to counsel the patients about the hazards of tobacco. Thus, Government needs to plan some actions to reduce the use of smokeless tobacco. Simultaneously medical colleges should also take some actions like incorporating the hazards of tobacco use in the medical college curriculum and to make other possible efforts to ban tobacco use in the medical colleges.

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