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"Ignorance" is not always bliss-Tobacco pouch keratosis

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Abstract

Introduction: Over a decade tobacco and various forms of tobacco have instant gratification for its users. Tobacco chewing & smokeless tobacco habits are an epidemic in our country. Snuff dipping and tobacco chewing are habits that are rapidly gaining popularity in our country.

The main etiological factors responsible for transformation of normal mucosa to a cancerous disease include tobacco and alcohols abuse. The duration of its exposure to such agents since many years lead to malignancies.

Background: Early Oral lesions are often subtle and asymptomatic. Hence such patients with tobacco pouch keratosis should be observed with suspicion, if tobacco use with alcohol abuse is present. Here we present the cases of Tobacco related lesions observed over a period of 1year (Jan – Dec 2015) in the Department of Oral Pathology and Microbiology, PDM Dental College and Research Institute. Bahadurgarh, Haryana.

Material: The study population consisted of 30 males between the age group of 18-35 years who visited the department of Oral Pathology &Microbiology, PDM Dental College.

Method: History of the patient with regard to their consumption habits of smokeless tobacco were obtained after taking their consent on the duly singed patient's consent form for this study. Intra-oral Figs were taken, and incisional biopsies were performed to compare the chronicity of the lesion.

Conclusion: Here we try to emphasize that if the patient is educated and convinced regarding the dire future consequences of these lesions in the intial stage itself, then the process of cancerous transformation of these lesions can be nipped in the bud.

Keywords: Tobacco Pouch keratosis, Smokeless tobacco, mild dysplasia, oral cancer

1. Introduction

Over the past 500 years, tobacco in its various forms has provided powerful and immediate stimulation for its users. Snuff dipping and tobacco chewing are habits that are rapidly gaining popularity in our country. A quid is a smaller portion of smokeless tobacco that is held in the mouth for dipping or chewing. Many persons dip or chew during most waking hours; some persons keep a quid in place for 24 hours a day [1].

According to the recent Government of India's National Sample survey data, there are 184 million tobacco consumers in India. About 40% of them use smokeless tobacco. Smokeless tobacco use includes pan masala and chewing of tobacco in different forms.

While breast, lung and cervical cancers get a fair share of discussion, one group of cancers-oral, head and neck cancers-find very little space. Yet the number of cases are huge, particularly in India. 57.5% of global head and neck cancers occur in Asia. Head and neck cancers in the subcontinent account for 30% of all cancers, and 60-80% of patients are diagnosed at the advanced stage, compared to 40% in developed countries. According to the Indian council of Medical Research, about 200,000-250,000 new head and neck cancer patients are diagnosed each year [3]. In India, cancer of the mouth and tongue are more common as compared to head and neck cancers. Moreover, it has been observed that males are more commonly affected than females. On an average, it is estimated that 8-8.5% men and 4-8.1% women could develop oral cancer in their life time in developing countries [4].

Early Oral lesions are often subtle and asymptomatic [5]. Hence such patients with tobacco pouch keratosis should be observed with suspicion, if tobacco use with alcohol abuse is present. Here we present the cases of Tobacco related lesions observed over a period of over a period of 1year from Jan-Dec 2015 in the Department of Oral Pathology and Microbiology, PDM dental college and research institute. Bahadurgarh, Haryana.

It is now known that even clinically normal appearing mucosa in a patient harboring a precancerous lesion may have dysplasia on the contra lateral anatomic site or molecular aberrations in another oral mucosal sites suggestive of a pathway to malignant transformation, and that cancer could subsequently arise in apparently normal tissue [6, 7].

2. Materials and methods

30 Cases who presented with no signs and symptoms of pain but had a tobacco chewing habit since 5-6 years, were selected randomly from PDM dental college OPD. All the above cases were between the age group of 18-35 years. Most of the patients were habituated to keeping the tobacco quid either in the labial or buccal vestibule for long hours. All these patients had no complaint regarding the oral lesions. They had come for

some other dental problems.

Out of the 30 patients 18 had developed a whitish patch, but only 11 patients gave consent for biopsy. During the programme, patients were explained the process of transformation over a period of time from precancer to cancer due to tobacco chewing.

The patient counselling was done by showing charts and videos of oral cancer cases arising due to tobacco use. The patients were motivated to discontinue the habit. A follow-up was done after every 3 months. Intraoral Figs were recorded before cessation and after cessation of the tobacco habit. The intraoral Figs showed a marked difference in patients who had discontinued the habit.

Fig 1: Habit of keeping tobacco quid since 6 years

Fig 2: Showing patient after cessation of tobacco habit (3 months)

Fig 3: Habit of keeping tobacco quid since 4 years

Fig 4: Showing patient after cessation of the tobacco habit (6 months)

Fig 5: Habit of keeping Tobacco quid since 3 years

Fig 6: Showing patient after cessation of the tobacco habit (9 months)

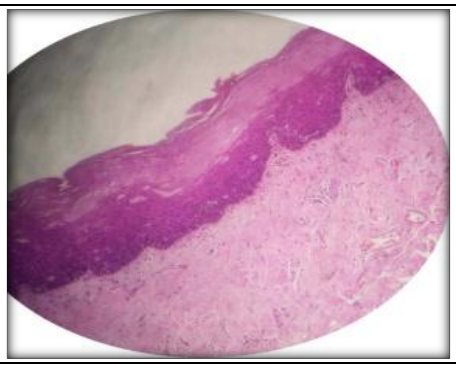

Fig 1: Showing Hyperkeratosis

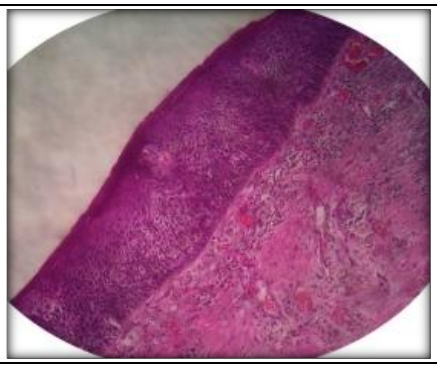

Fig 2 Showing Mild Dysplasia

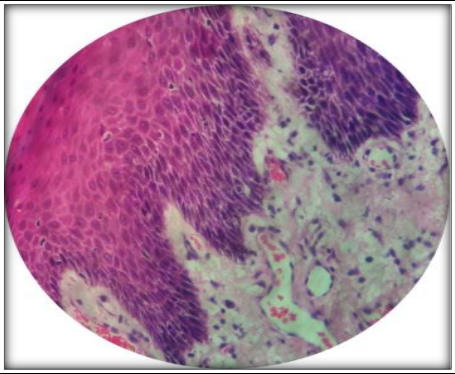

Fig 3 Moderate Dysplasia

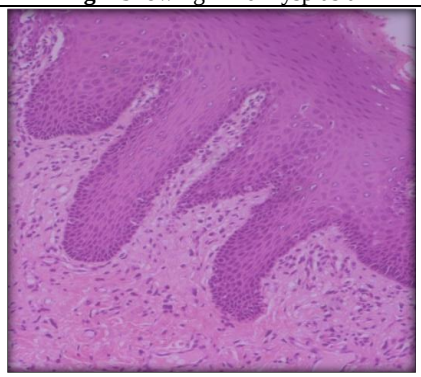

Fig 4 Mild Dysplasia

3. Discussion

The placement of tobacco quid, regardless of the type, in direct contact with the oral mucosa produces a thickened layer of keratin on the oral epithelial surface that occurs directly in the anatomic site where the Smokeless tobacco is placed.

The most regular and consistent findings in smokeless tobacco pouch cases are increase in the total thickness of the epithelium, which is either hyper parakeratinization or hyper orthokeratinization, and acanthosis. Mild to moderate dysplasia was seen in 3 cases. The connective tissue stroma comprised of moderately dense bundles of collagen fibers, fibroblast, fibrocytes and chronic inflammatory infiltrate chiefly consisting of lymphocytes and neutrophils.

Vascularity was in the form of endothelial lined blood vessels and extravasated RBCs. Overall histopathological picture was suggestive of mild dysplasia.

According to Anderson et al, increased mitotic rate and basal cell hyperplasia increase with higher clinical grades. However he has also emphasized that there is no clear cut difference between each of the clinical degrees either clinically or histologically [8]. This holds true for our findings also. Chevron pattern which is a unique histological feature of smokeless tobacco induced lesion was not found to be present in all our cases.

4. Conclusion

Oral cancer continues to be a deadly disease for more than 50% of the cases diagnosed every year. This is due to the fact that most of these cases are diagnosed when they have already progressed to the advanced stage. Detection of oral cancer in its initiation phase is important as there is a direct correlation between survival and the stage of the disease at the time of diagnosis. Also early detection provides the patient with the best opportunity for successful management and positive cure and is crucial to improve the patient's survival rate [9]. Having cancer is in itself tragic, having it at a younger age is disastrous [10].

Though restrictions have been imposed on the sales and use of tobacco use in public places, what matters most is strict observation and control of such restrictions. The effectiveness of tobacco intervention programmes is extremely difficult considering the economic disparity, illiteracy, unemployment and homelessness in Indian societies [11]. Psychosocial factors have an important role to play in the initiation of this habit.

The present study is a small project whose results are not applicable in India. More such similar studies are needed, particularly among rural residents as prevention strategies vary accordingly. In our study project, by the end of 1 year only 6 patients responded to recall visits. The remaining patients were reluctant to come for follow-up after a few months.

Hence we want to emphasize that educating the young population about oral cancer and its association with tobacco use is the need of the hour to combat mortality and morbidity arising out of it. New clinical protocols could improve the quality of life and help the younger generation who succumb to peer pressure, to quit the tobacco habit before it is too late.

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