Original Article

Oral Submucosal Fibrosis in Rural Sindh

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ABSTRACT

OBJECTIVE: To determine the frequency of complications in Oral Submucus Fibrosis and to evaluate the major risk factors involved in OSF.
STUDY TYPE: Observational Descriptive study.
SETTING AND DURATION: Dr. Moula Bux Jaffery Memorial Hospital Badin, Sindh from January 2010 to September 2011.
METHODOLOGY: Two hundred and eighty cases of OSF diagnosed on clinical base, detailed history and proper clinical examination of all the patients was conducted in ENT clinic and functional fibrosis grading system had applied in study, all the related information was documented on prescribed proforma.
RESULTS: Majority of patients was related with more youthful age bunch with male prevalence. Most of the patients found 2nd and 3rd stage fibrosis. 99% patients had a history of taking Paan, CHHALIA and Gutka, 29% patients had developed recurrent mouth ulcers and 2% patient had developed neoplasia while 85% patients have history of recurrent throat infections.
CONCLUSION: Major cause of OSF is use of Pan CHHALIA and Guttka. Young age group is more vulnerable. Recurrent throat infection is another burden over society.

KEY WORDS: OSF, Mouth ulcers, Trismus.

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INTRODUCTION

Initially OSF was termed as AI mucosa oris by Schwartz in 1952[1] later on Joshi in 1953 has replaced the term as OSF.[2] Submucous fibrosis is a known long standing and disabling condition of oral mucosa resulted from severe abuse by chewing Paan, CHHALIA and Gutkka characterized by an inflammatory process followed by hardening of the submucosal tissue as a result the person is unable to open the mouth properly.[3,4] The condition shows a significant malignant potential due to regular oral abuse. As a habit of chewing tobacco there is habitual sucking of Areca Betel nuts, Paan, CHHALIA and Gutkka is exteremly common in India and Bangladesh also seen in Pakistan for many years. Betel quid locally known as PAAN having tobacco or without tobacco is frequently used in the South Asian region, significantly in China and Taiwan along with New Guinea and Thailand.[5] Like other factors for example genetic, immunological and decreased nutritional status also contribute towards fibrosis.[4,6,7,8]

It is Internationally observed that nearly 2.5 million peoples are sufferer of oral sub mucous fibrosis with high incidence noted in south India.[3] An abrupt rising graph in the occurrence of fibroses mucosa was noticed along with the introduction of CHHALIA and tobacco related material which is continues on rise. OSF is a great community health related issue in several parts of the world, like. England, SE Africa, and numerous other countries of SE Asia resulting from immigrants.[9]

Treatment of these lesions mostly depends upon the stage and extent of the disease invasion. When condition is diagnosed at early stage, giving up to use of such harmful material is sufficient. Usually the patients with such lesions present at the stage when moderate or severe degree of invasion is found than fibrosis is usually difficult to reverse. Medical therapy is mostly symptomatic and the aim is to restore the movement of the oral structures.

Pathologically these lesions are classified according to depth of disease or invasion from surface mucosa to deep tissue.

- Stage 1: Signs of inflamation
- Stage 2: Fibrotic changes
  a- initial lesions shows alteration in color of membrane.
  b– chronic lesions shows straight and rounded fibrous bands, palpable inside the cheeks and lips, having cloudy appearance of the mucus membrane.
- Stage 3: Sequelae of fibrosis
  a- white patches
  b- Articulation and listening problems

Associated with clinical staging, in1995 grading system was introduced by Andrade and Khanna for the treatment of occlusion of jaws.

- Grade I: In this grade mouth opening is nearly normal, with an inter-incisal space more than 35mm.
- Grade II: Here mouth opening is restricted and inter-incisal space is 25-35 mm.
- Grade III: In this grade moderate degree of lesions are seen. Here inter-incisal space is 15-25 mm. hard bands of fibrous tissue are seen at the palate,anterior pillars and cheeks.
- Grade IVA: Severe Trismus is found in this grade, with an inter-incisal space less than 15 mm and diffuse fibrosis all over the buccal mucosa.
- Grade IVB: It is an extensive condition, with the lesions of premalignant and with some neoplastic changes are observed all over the mucosa.

METHODOLOGY

Two hundred eighty cases of OSF diagnosed and staged on clinical bases, were included in this study.
After detailed history regarding symptoms of OSF like, gradual decrease in mouth opening, pain associated with burning sensation with spicy foods, dryness of mouth, change of voice with nasal tonality, decreased hearing due to involvement of the Eustachian tubes, dysphasia to solids due to dryness of the mouth and inappropriate mouth movements for eating, whistling and blowing. All patients were examined thoroughly, starting from general physical examination to investigations, complete ENT examination specifically oral cavity and throat and measured for functional grading of trismus.CBC was advised to those who were looking anemic. Biopsy from lesion was taken for histopathology when ulcerated or exophytic lesions were found. Related information was recorded on prescribed Performa.
Study Type: Observational, Descriptive study
Place and Duration: Dr. Moula Bux Jaffery Memorial Hospital Badin Sindh from Jan. 2010 to Sept. 2011.
Inclusion Criteria: All the patients with submucous fibrosis irrespective of age and gender.
Exclusion criteria: Patients having traumatic oral ulcers, ankylosing of jaw due to involvement of temporomandibular joint and Immuno compromised persons.

RESULTS

Most cases were from younger age group with high number of males. Most of the patients (70%) were found in Stage II and III of fibrosis. 65% were seen with mild Trismus according to functional grading I and II. Almost all (99%) patients had a history of taking Paan, Chhallia and Gutka, 29% patients had developed recurrent mouth ulcers and 2% patient had developed neoplasia, while 85% patients have a history of recurrent throat infections.

GENDER DISTRIBUTION (n=280)

Gender	No. of patients	Percentage
Male	187	66.7%
Female	93	33.3%

AGE DISTRIBUTION (n=280)

Age of Patient	No. of Patients	Percentage
< 10 years	00	0,0%
10 – 20 years	80	28.5%
20 – 30 years	82	29.2%
30 – 40 years	62	22.1%
40 – 50 years	46	16.4%
> 50 years	10	3.5%

FUNCTIONAL GRADING (TRISMUS) n=280

Grade	No. of Patients	Percentage
Grade I	110	39.2%
Grade II	70	25.0%
Grade III	62	22.1%
Grade IV	38	13.5%

CLINICAL STAGING (n=280)

Stage	No. of Patients	Percentage
Stage I	65	23.2%
Stage II	130	46.4%
Stage III	76	27.1%
Suspicious cases for biopsy	09	03.2%

DISCUSSION

Betel nuts or CHHALIA are used by nearly 600 million people round the world.[10] After introduction of so many dangerous products CHHALIA is the next very common addictive product introduced all around the world.[11] It is grown up as a commercial industry, particularly in South East Asia. A survey from different nations like Pakistan, India and Nepal demonstrated the pervasiveness of betel nut items in the previous couple of decades ranges between 20 to 40% in adults.[11,12] A study conducted at Karachi by Khawaja and others mentioned forty percent peoples having regular habit of using betel nuts etc.[13,14] Betel nut is a potent carcinogen next to tobacco in our subcontinent.

OSF starts as a simple superficial mucosal lesion to invade wide area of oral cavity and pharyngeal structures causing significant morbidity leading to mortality in the form of squamous cell carcinoma.[4] Regional variation was found in both gender with female predominant. In addition, a female dominancy ratio for use of areca nut was reported in this region. Some studies in our country showed a male female ratio of 1:2.3.[4] which contradicts our study. In another study of 185 cases at Chennai, India male female ratio was 9.9:1 An study carried out at Patna, Bihar (India), again male shows dominant ratio with 2.7:1.[15]

After the introduction of betel nuts and PAAN Masala preparations a new trend is developing showing change in the male female ratio and age group.

Age group for these cases varies from region to region. It is very common in teen age group.A study of Saipan, 8.8% teenagers with mean age as 16.3 years (± 1.5 y) were diagnosed to have submucous fibrosis.[16] In general, patients age group ranges from 15-50 years. In our study common age group is between 15 to30 years and suffers are using these products more than 4 to 5 times per day.

CONCLUSION

- Major cause of OSF is use of PAAN, CHHALIA and GUTTKA
- Young age group is more vulnerable.
- Recurrent throat infection is very common and is difficult to treat.
- Change in facial expression is another Psychological and social issue
- Morbidity is always there, but may lead to the mortality

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