International Journal Dental and Medical Sciences Research
Volume 3, Issue 1, pp 12-16 www.ijdmsrjournal.com ISSN: 2582-6018

Epidemiological and Clinico-pathological study of oral submucous fibrosis in Patna and its periphery.

[1] Kumar Vishwajit, [2]Priya Shree, [3]Debeswar Das, [4]Anupama Kumari, [5]Shirsha Mukherjee, [6]Suwasini

[1]*Department of Oral Pathology,Microbiology and Forensic OdontologyVananchal Dental college and hospital NilamberPitamber university, Garhwa India*
[2]*Department of Oral Pathology, Microbiology and Forensic Odontology, Vananchal Dental college and hospital NilamberPitamber university, Garhwa India*
[3]*Department of Oral Pathology, Microbiology and Forensic Odontology, Regional Dental College, Guwahati-32. Assam, India*
[4]*Department of Oral and Maxillofacial Surgery, Hazaribagh Dental college,VinobaBhabe university, Hazaribagh India*
[5]*Department of Oral Pathology, Microbiology and Forensic Odontology Vananchal Dental college and hospital NilamberPitamber university, Garhwa India*
[6]*Department of Oral Pathology, Microbiology and Forensic Odontology, Buddha Dental college and hospital, patna*

Date of Submission: 15-12-2020 Date of Acceptance: 21-12-2020

ABSTRACT: Epidemiological analysis and distribution of Oral submucous fibrosis, in Patna and its periphery peripheral Population with comparison among gender, age group, as well as various oral sites All the cases reporting to the dental out Patient department with screening ofOral submucous fibrosis, included in the study total number of patients are 50. A proper clinical examination and essential investigation was carried out and final diagnosis based on histopathological study. Data obtained was compiled on a MS Office Excel Sheet (v 2010). Data was subject to statistical analysis using Statistical package for social sciences (SPSS v 22.0, IBM). An increase in the occurrence ofOral submucous fibrosis, especially in the middle age groups directly attributable arecanutwas observed.

Key words: Epidemiological,Oral submucousfibrosis,Arecanut

I. INTRODUCTION

Oral submucous fibrosis (OSF) is the chronic debilitating and crippling condition of oral mucosa. It is well recognized as potentially malignant disorder which is associated mainly with the use of arecanut in various forms. It is characterized by inflammation and progressive fibrosis of the submucosal tissue. The pathogenesis of the disease includes various factors like arecanut chewing, chillies, nutritional deficiencies and genetic processes. [1]

OSF was first reported in India in 1953 by Joshi and he coined the term submucous fibrosis of palate and faucial pillars.[2] Various other names suggested were diffuse oral submucous fibrosis (Lal, 1953), idiopathic scleroderma of the mouth (Su,1954), idiopathic palatal fibrosis (Rao, 1962) and sclerosing stomatitis (Behl, 1962).[2]

The aims and objectives of this present studies are as follows:
1. To obtain epidemiological information of oral submucous fibrosis.
2. Distribution of these disease in Patna and its peripheral Population with comparison among gender, age group, as well as various oral sites

II. MATERIALS AND METHODS

Data obtained was compiled on a MS Office Excel Sheet (v 2010). Data was subject to statistical analysis using Statistical package for social sciences (SPSS v 22.0, IBM).

The present study was carried out in the department of Oral & Maxillofacial pathology of Buddha institute of dental sciences and Hospital Patna. All the cases reporting to the dental Out Patient department with screening oforal submucous fibrosis. Total 50 patients were examined. A proper clinical examination and essential investigation was carried out and final diagnosis based on histopathological study.

III. RESULTS

International Journal Dental and Medical Sciences Research
Volume 3, Issue 1, pp 12-16 www.ijdmsrjournal.com ISSN: 2582-6018

Results obtained were expressed as frequencies and percentages of males and females participating in the present study and mean age of the participants, participants with a particular habit, site, clinical and histopathological staging/ grading. Table showing mean age distribution of study participants with standard deviation.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
AGE	50 50	20	80	38.50	14.449

Table showing Age coded into decades

Age coded	Frequency	Percent
20-29 years	16	32.0
30-39 years	13	26.0
40-49 years	10	20.0
50-59 years	6	12.0
60-69 years	3	6.0
>70 years	2	4.0
Total	50	100.0

Oral submucous fibrosis was found to occur more in 3rd and 4th and 5th decades of life, but it was seen that as age increased the Prevalence of occurrence of oral submucous fibrosis considerably decreased.

Distribution of Sex among study participants

	Frequency	Percent
Male	40	80.0
Female	10	20.0
Total	50	100.0

Table clearly shows a male predominance. (4:1)

Age and Gender distribution of study participants

Age Distribution		SEX		
		Male	Female	Total
AGE CODE	20-29 years	15	1	16
	30-39 years	11	2	13
	40-49 years	6	4	10
	50-59 years	4	2	6
	60-69 years	2	1	3
	>70 years	2	0	2
	Total	40	10	50

The Oral submucous fibrosis are found to occur most in 20-29 age group and least in 70 years and above age group.

International Journal Dental and Medical Sciences Research
Volume 3, Issue 1, pp 12-16 www.ijdmsrjournal.com ISSN: 2582-6018

Distribution of Habits among study participants

S. NO.	Habit	Frequency	Percentage
1.	Pan	2	4
2.	Areca nut	18	36
3.	Lime	2	4
4.	Tobacco	6	12
5.	Betel quid	10	20
6.	Khaini	6	12
7.	Gutkha	5	10
8.	Spicy / hot food	1	2

In our study Areca nut usage comprises of 36 % of cases followed by Betel quid and tobacco habits.
Distribution of Site of lesion among study participants

S.NO.	Site	Frequency	Percentage
1.	Buccal mucosa	22	44
2.	Labial mucosa	6	12
3.	Tongue	9	18
4.	Palate	3	6
5.	Retro molar area	8	16
6.	Pharynx	2	4

OSMF were found to be more occur in Buccal mucosa, followed by tongue and retro molar area.

Distribution of clinical features of lesion among study participants

Clinical Staging	Frequency	Percent
Stage I	15	30.0
Stage II	15	30.0
Stage III	12	24.0
Stage IV	8	16.0
Total	50	100.0

Results showed that maximum subjects fall under stage I and stage II followed by stage III and IV.
Distribution of Histological features of lesion among study participants

	Frequency	Percent
Very early	15	30.0
Early	15	30.0
Moderate	12	24.0
Advanced	8	16.0
Total	50	100.0

In our study very early and early stage was prevalent when compared to moderate and advanced stage.

International Journal Dental and Medical Sciences Research
Volume 3, Issue 1, pp 12-16 www.ijdmsrjournal.com ISSN: 2582-6018

Age-wise distribution of clinical features

AGE CODE	CLINICAL STAGING				
	Stage I	Stage II	Stage III	Stage IV	Total
20-29 years	10	4	1	1	16
30-39 years	5	5	2	1	13
40-49 years	0	6	4	0	10
50-59 years	0	0	3	3	6
60-69 years	0	0	1	2	3
>70 years	0	0	1	1	2
Total	15	15	12	8	50

Age-wise distribution of Histological features

		HISTOPATHOLOGOCAL FEATURES				
		Very early	Early	Moderate	Advanced	Total
AGE CODE	20-29 years	10	4	1	1	16
	30-39 years	5	5	2	1	13
	40-49 years	0	6	4	0	10
	50-59 years	0	0	3	3	6
	60-69 years	0	0	1	2	3
	>70 years	0	0	1	1	2
	Total	15	15	12	8	50

Tables reveal 3rd decade is very much prone for the occurrence of OSMF and after histopathological studies it showed maximum was in very early stage only.

IV. DISCUSSION:

The present study was analysis of oral submucous fibrosis in Patna and its periphery and its incidence..A thorough clinical and histopathological examination was carried out in individual visiting to department of oral pathology. In our study exhibit that those patients taking in any form of arecanut where more prone to develop oral submucous fibrosis.

Our study reveals that subjects with OSMF exhibited an age range of 20-29 years followed by 30-39 years. So we can inform that OSMF cases were more predominant in 3rd and 4th decade of life also clearly showing a male predominance. A research carried out by P.C. Gupta et al, on OSMF subjects shows similar results as far age and gender was concered. He even found out that subjects having Arecanut chewing habit develop OSMF with a greater frequency when compared to other oral habits. This findings was also in accordance to our study, where we found almost 36% cases were associated with Arecanut chewing.[3]

Another study carried out by SafilaNaved et al also revealed a male predominance, but when habits were compared with our results we found out that Arecanut chewing was common our subjects where as she reported excess of tobacco usage lead to development of OSMF, which was in contracting to our results.[4]Our results in accordance to a study conductedby Ahmad M.S et al, who also showed a male predilection with an age range of 21-40 years. But he also stated that in his cases the most common etiology for developing OSMF was consumption of having spices &chillies in contrast to our findings, where we reportedonly 2% of cases consuming spicy food can develop OSMF.[5]Another study carried out by Kalbande et al, showed age range was 21-40 years for occurrence of OSMF with a male predominance which was in accordance to our findings. He has even considered parameters like habits and clinical

staging of the subjects and found out that Gutkha was most common habits 73% for development of OSMF with which was grade II staging 60% predominant in contrast to our findings.[6]Were we found Gutkha contributed for only 10% in development of OSMF and when clinical staging was compared. We had equal prevalence for grade I & grade II stage. 30% our findings were in complete accordance with the reviews by Sabharwal et al, who authorize that mean age range is 43 years with a male predominance is found in OSMF, and Arecanut being the most common site in the oral cavity.[7] S.V. Burungale et al in his research revealed age range for OSMF was to be 20-29 years oral habits like Arecanut usage smoking, tobacco chewing can lead to development of OSMF, and most common site was the buccal mucosa. All his findings were in complete harmony in our obtained results.[8]

V. CONCLUSION:

An increase in the occurrence of OSMF especially in the middle age groups directly attributable to arecanutwas observed. There is a high level of ignorance regarding potentially malignant disorders among general public especially tobacco users. Government and the private sectors should work hand in hand in spreading the awareness of these potentially malignant disorders among general public which in turn would help in reducing the incidence of OSCC and reduce the burden of this disease on the individual and the society.

REFERENCES:

[1]. Khan S, Sinha A, Kumar S, Iqbal H. Oral submucous fibrosis: Current concepts on aetiology and management – A review. J Indian Acad Oral Med Radiol 2018;30:407-11
[2]. Pindborg JJ, Chawla TN, Srivastava AN, Gupta D. Epithelial changes in oral submucous fibrosis. Acta Odon Scandinav 1965;23:277-86.
[3]. GUPTA P.C et al; Oral Submucous fibrosis in India: A new epidemic; The National Medical Journal of India Vol-11, No-2, 1998, P-113-116.
[4]. NAVEED SAFILA et al; Prevalence of (OSF) Oral Submucous fibrosis and Risk factors in Karachi; Vol-3, Suppl-2, May-20-14, P-7-9.
[5]. M.S AHMAD et al, Epidemiological and etiological study of Oral Submucous fibrosis among Gutkha chewers of Patna, Bihar, India, J Indian SocPedodPrev Dent,2006 jun;24(2).
[6]. B.A KALBANDE et al , Epidemiological study of Oral Submucous fibrosis in Yavatmal district ,international Journal of recent trends in science and techology , ISSN 2277- 2812 E-ISSN 2249 - 8109,volume 6 ,issue 1, 2013 pp 38-40
[7]. SABHARWAL R et al, Oral Submucous fibrosis- A Review , J Adv Med Dent Scie Res 2013;(1):29-37.
[8]. BURUNGALE S.U et al; Epidemiological study of Premalignant and Malignant lesions of the Oral cavity; Journal of Academia and Industrial Research Vol-2, Issue-9, Feb-2014; P-519-523.