

Original Article

PREVALENCE OF ORAL MUCOSAL NORMAL VARIATIONS IN A GERIATRIC POPULATION OF CHHATTISGARH- A REAL WORLD EVIDENCE

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Abstract: The incidence of OMLs is thought to extend with age, because of physiological changes within the oral cavity and also because of the sustained impact of risk habits. Other predisposing factors within the elderly include decreased saliva flow and long-lasting effects of local and systemic factors, like alcohol intake, smoking, snuff and drug use. The importance to differentiate normal conditions from pathological lesions lies within the proven fact that the normal variations don't need any medical intervention. Oral mucosa may be a harbor to several such normal variations which can confuse the diagnosis among the budding dentists. So, proper knowledge about their existence, prevalence and features are very important. The search of the literature revealed no such studies in Chhattisgarh Population, warranting a quick need to carry out a study to understand the prevalence of oral mucosal normal variations in the geriatric Chhattisgarh Population.

AIM- The aim of our study is to search out the prevalence and to achieve more knowledge about oral normal soft tissue variations in the geriatric Chhattisgarh Population and possibly identify new avenues of research in this area.

METHOD- It is a Prospective and observational correlation study, performed in an exceedingly period of two years from 2015-2017 within the Department Of Oral Medicine and Radiology at Chhattisgarh Dental College and Research Institute, Rajnandgaon, (Chhattisgarh), India. It included the patients of age 60 years and above of Chhattisgarh Population.

RESULT- The most prevalent normal variation in this study was found to be fissured tongue 46% followed by coated tongue (20%), depapillation of tongue (20.3%), Melanosis (9.7%), lingual varicose (1.4%), leukoedema (1.1%), Fordyce's granules (0.7%) and geographic tongue (0.14%).

CONCLUSION- The present study renders sufficient information about the epidemiologic aspects of oral mucosal normal variation in the geriatric population which may prove valuable in the planning of future oral health strategies of this group of the Indian population. This will further enhance community programs to educate the elderly population, along with the younger generation to get the elderly screened for any deviation from these variations or any oral mucosal lesions by availing adequate clinical and pathological laboratory facilities, which will ensure a good quality of life in this population of interest.

KEY WORDS- Geriatric, Chhattisgarh, Fissured tongue, Coated tongue, Depapillation of tongue, Melanosis, Lingual varicose, Leukoedema, Fordyce's granules, Geographic tongue

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1. Introduction

The prevalence of oral mucosal changes has been reported to be between 10.8 and 61.6% in various populations.^[1,2,3,4,5,6] These differences are also due to the study protocol, participant individual selection, genetics, age, and sex, further as local and general risk factors within the study population.^[1,2] Oral mucosal changes can be subcategorized by clinical features into the subsequent major groups: normal variations and oral mucosal lesions (OML).^[7] The incidence of OMLs is thought to extend with age, because of physiological changes within the oral cavity and also because of the sustained impact of risk habits. Other predisposing factors within the elderly includes decreased saliva flow and long-lasting effects of local and systemic factors, like alcohol intake, smoking, snuff and drug use.^[3,7]

Importance of studying the normal variation of oral mucosa:

Oral mucosa is a complex structure, well adapted for its particular function and anatomical location.^[8] Some oral conditions despite their different physical features are considered normal. Based on Cowson's theory, such conditions are called pseudo-pathological and escape to be considered a pathological abnormality.^[9] The importance to differentiate normal conditions from pathological lesions lies within the proven fact that the normal variations don't need any medical intervention.

Like Linea Alba (White Line), a typical horizontal white linear raised scalloped on each side within the buccal mucosa along the occlusal plane, which extends from the corners of the mouth towards molar teeth is directed towards pterygomandibular raphe.^[8,10,11] It emerges because of hyperkeratosis caused by continuous irritation, frictional trauma, parafunctional habits (sucking trauma and clenching).^[12,13] It doesn't demand any therapy and may be eradicated by the removal of etiologic factors. Oral mucosa may be a harbor to several such normal variations which can confuse the diagnosis among the budding dentists. So, proper knowledge about their existence, prevalence and features are very important. India is a vast country with a population of over 1.2 billion, of which 7.6%, i.e. approximately 76 million people are older than 60 years. The elderly population of India suffers from numerous dental and oral health problems with the Incidence of oral cancer being the highest within the world.^[14] There are only a few studies worldwide with a sufficiently sizable amount of people presenting data on oral mucosal normal variation in a general population. The search of the literature revealed no such studies in Chhattisgarh Population, warranting a quick need to carry out a study to understand the prevalence of oral mucosal normal variations in the geriatric Chhattisgarh Population.

2. Materials and Methods

It is a Prospective and observational correlation study, performed in an exceedingly period of two years from 2015-2017 within the Department Of Oral Medicine and Radiology at Chhattisgarh Dental College and Research Institute, Rajnandgaon, (Chhattisgarh), India.

Inclusion Criteria:

- Individuals of Chhattisgarh Population.
- Individuals of age 60 years and above.

Exclusion criteria:

- Individuals of age below 60 years
- Individuals not belonging to Chhattisgarh region.

METHODOLOGY:

The study comprises 714 geriatric individuals, who were selected from the individuals visiting from the Department of Oral Medicine and Radiology, Chhattisgarh Dental College and Research Institute, and a camp held by the institute. The chosen individuals were then screened for the presence of oral mucosal normal variations by 3 individual examiners and the diagnosis was rendered.

3. Results

Age group	Total
Male	525
Female	189
total	714

Normal variation	Males	Females	Total	Prevalence
Depapilation	111	34	145	20.31%
Leukoedema	8	0	8	1.12%
Fissure tongue	249	80	329	46.07%
Lingual varicose	10	0	10	1.40%
Fordyce granules	5	0	5	0.7%
Coated tongue	112	33	145	20.30%
Geographic tongue	1	0	1	0.14%
Melanosis	56	13	69	9.7%

Table 2: Prevalence of Normal Oral Mucosal Variations

Table 2 describes the prevalence of Normal Oral Mucosal Variations in the Chhattisgarh geriatric population, with the most prevalent normal variation found to be fissured tongue 46% followed by coated tongue (20%), depapilation of tongue (20.3%), Melanosis (9.7%), lingual varicose (1.4%), leukoedema (1.1%), fordyces granules (0.7%) and geographic tongue (0.14%).

4. Discussion

Oral health impairments can interfere with one's social interactions, self-esteem, and self-image and thus can dramatically affect a person's quality of life. Ageing increases the susceptibility to disease. Oral, dental, and craniofacial diseases and conditions disproportionately affect the elderly, and frail elders are particularly liable to increased morbidity because of oral infections. Dental professionals must comprehend the special prerequisites of the elderly and work meticulously to render proper treatment to this group of population.^[15] Information on the oral health of the elderly population in an exceedingly number of nations is out there, but scarce data are available or are published on the elderly population of Chhattisgarh. The prevalence of oral mucosal normal variations and lesions is reported to be higher in older patients than within the younger population. Association have also been reported between oral mucosal disorders and ageing.

Considering the whole of the Chhattisgarh geriatric population, the foremost prevalent normal variation was found to be was fissured tongue 46% followed by the coated tongue (20%), depapilation of the tongue (20.3%), melanosis (9.7%), lingual varicose (1.4%), pigmentation (1.2%), leukoedema (1.1%), Fordyce's granules (0.7%) and geographic tongue (0.14%).

Depapilation of tongue:

The prevalence of depapilation of tongue was found to be 20.3% in our population. It was more prevalent in male (21.4%) than in female (17.98%)

Leukoedema:

The prevalence of leukoedema was found to be 1.1% in the present population. It was only found in male in present study. This prevalence is comparable with that in the study by Mozafari et al^[16] where the prevalence was found to be 1.4%.

Fissured tongue:

The prevalence of fissured tongue was found to be 46% in our population. It was more prevalent in males (47.42%) than in females (42.32%). A much higher prevalence of such lesion was reported by Mozafari et al^[16] as 66.5% in Northeast Iran, whereas Maweri S.A.A. et al^[17] reported 34.2% in Sana'a Yemen geriatric population, Patil et al^[18] reported it to be 6% in Indian Population, Bakhshi et al^[19] found it to be 3.1% in Iran geriatric population and Cebeci et al^[20] reported it to be 0.9% in Turkish population. It can occur due to nutritional deficiency or allergy.

Melanosis:

The prevalence of melanosis was 9.7% in present population

Lingual varicose:

The prevalence of lingual varicose was 1.4% in our population. It was found only in males in our study. A much higher prevalence of such lesion was reported by Ferreira et al ^[21] as 51.6% where as Mozafari et al ^[16] to be found it to be 42% in Northeast Iran and Bakhshi et al ^[19] reported it to be 27.9% in Iran geriatric population.

Fordyce's granules:

The prevalence of Fordyce's granules was found to be 0.7% in our study population and was found only in males. A much higher prevalence of such lesion was reported by Mozafari et al ^[16] as 21% in Northeast Iran, Ferreira et al ^[21] reported it to be 10.8% in Brazil geriatric population and Bakhshi et al ^[19] reported it to be 24.8% Iran geriatric population.

Coated tongue:

The prevalence of coated tongue was found to be 20.3% in our population. It was more prevalent in males (21.4 %,) compared to females (17.4 %). This finding is higher than the prevalence found by Patil et al ^[18] as 3% in Indian population and Ferreira et al ^[21] in Brazil geriatric population as 14.4%.

Geographic tongue:

The prevalence of geographic tongue was found to be 0.14% in our population and only in males. This is comparable to the prevalence found by Rastogi et al ^[22], who reported 1% in North India, Bakhshi et al ^[19] who reported 0.8% in Iran geriatric population, Patil et al ^[18] reported 5% in Indian population, Ferreira et al ^[21] reported 0.6% in Brazil geriatric population and Mozafari et al ^[16] reported 0.9% in Northeast Iran population.

5. Conclusions

The present study renders sufficient information about the epidemiologic aspects of oral mucosal normal variation in the geriatric population which may prove valuable in the planning of future oral health strategies of this group of the Indian population.

This will further enhance community programs to educate the elderly population, along with the younger generation to get the elderly screened for any deviation from these variations or any oral mucosal lesions by availing adequate clinical and pathological laboratory facilities, which will ensure a good quality of life in this population of interest.

Conflicts of Interest: NIL

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