

Original Article

Analysis of Denture Related Lesions in Oral Cavity - A Clinical Study

Aditi Sharma¹, Vishal Partap Singh², Beneetu Atri³

¹Lecturer, ³House surgeon, Department of Prosthodontics, Indira Gandhi Govt. Dental Hospital, Jammu, India

²PG Student, Department of Prosthodontics 2nd year, Institute of Dental Sciences and Technology, Modinagar, U.P., India

ABSTRACT:

Introduction- Oral lesions in denture wearers constitute a heterogeneous group of tissue changes, both with regard to pathogenesis, clinical and histopathological appearance, and possible complications. The present study was conducted to analyze denture related oral lesions in study population. **Materials & Methods:** The present study was conducted on 520 complete denture wearers with some lesions of both genders. The presence of oral lesions such as traumatic ulcer, angular cheilitis, denture stomatitis, epulis fissuratum and papillary hyperplasia were recorded. **Results-** Out of 520 patients, males were 280 and females were 240. The difference was non-significant (P= 0.5). 340 patients had age above 40 years while 180 had below 40 years. 415 patients had been denture wearer for last 5 years while 105 were less than 5 years. The difference was significant (P < 0.05). Commonly seen lesion was denture stomatitis in males (170) and females (145) followed by epulis fissuratum in males (56) and females (44), angular cheilitis in males (30) and females (25) and traumatic ulcer in males (6) and females (10). The difference was significant (P < 0.05). **Conclusion-** Denture wearers are more prone to develop lesions like denture stomatitis, epulis fissuratum, traumatic ulcers and angular cheilitis. Thus frequent dentist visit is required to prevent developing lesions and denture replacement after 5 years is advisable.

Key words- Denture wearers, Epulis fissuratum, Stomatitis.

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Corresponding Author: Dr. Aditi Sharma, Lecturer, Department of Prosthodontics, Indira Gandhi Govt. Dental Hospital, Jammu, India

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INTRODUCTION

The number of edentulous patients is increasing day by day. In case of older adults, edentulism is essential as a correlate of self-esteem and quality of life. Furthermore, the oral health of the completely edentulous patient is an important factor in relation to the nutrition, social interactions, and general systemic health of the patients.¹

Oral lesions in denture wearers constitute a heterogeneous group of tissue changes, both with regard to pathogenesis, clinical and histopathological appearance, and possible complications. Dentures may be the direct cause of these conditions, due to changing environmental conditions of the oral cavity and loading of the oral mucosa. However, systemic conditions and general diseases may influence the oral environment and alter tissue responses and resistance. The use of complete dentures in older patients has been known to act as a potential risk factor for

the development of various oral lesions such as, denture stomatitis, epulis fissuratum, angular cheilitis, papillary hyperplasia, and traumatic ulcer as well as development of squamous cell carcinoma.²

Besides complete dentures rehabilitative function, it is common to see the presence of oral mucosal lesions caused by poorly adapted dentures, improper use, improper cleaning, denture plaque, mechanical trauma. The association between poor oral hygiene and denture-related oral mucosal lesions (DMLs) is not well established because this relationship is complex.³ The defective dentures create additional opportunities for lodged food and limit the natural cleaning action by the tongue, lips, and cheeks. Denture cleaning methods may affect the condition of dentures, and pigmentation and abrasions in dentures occur with the use of toothpaste or toothbrush. Patients often think that ordinary teeth cleaning methods are

suitable for denture cleaning. The mechanical cleaning combined with effective and inexpensive chemical aids, such as sodium hypochlorite and coconut soap, seems to be more appropriate.⁴ The present study was conducted to analyze denture related oral lesions in study population.

MATERIALS & METHODS

The present study was conducted in the department of Prosthodontics. It comprised of 520 complete denture wearers with some lesions of both genders. All were

informed regarding the study and written consent was obtained. Ethical clearance was obtained before the study. General information such as name, age, gender etc. was recorded. The presence of oral lesions such as traumatic ulcer, angular cheilitis, denture stomatitis, epulis fissuratum and papillary hyperplasia were recorded. Results were tabulated and subjected to statistical analysis using chi-square test. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 520		
Males	Females	P value
280	240	0.5

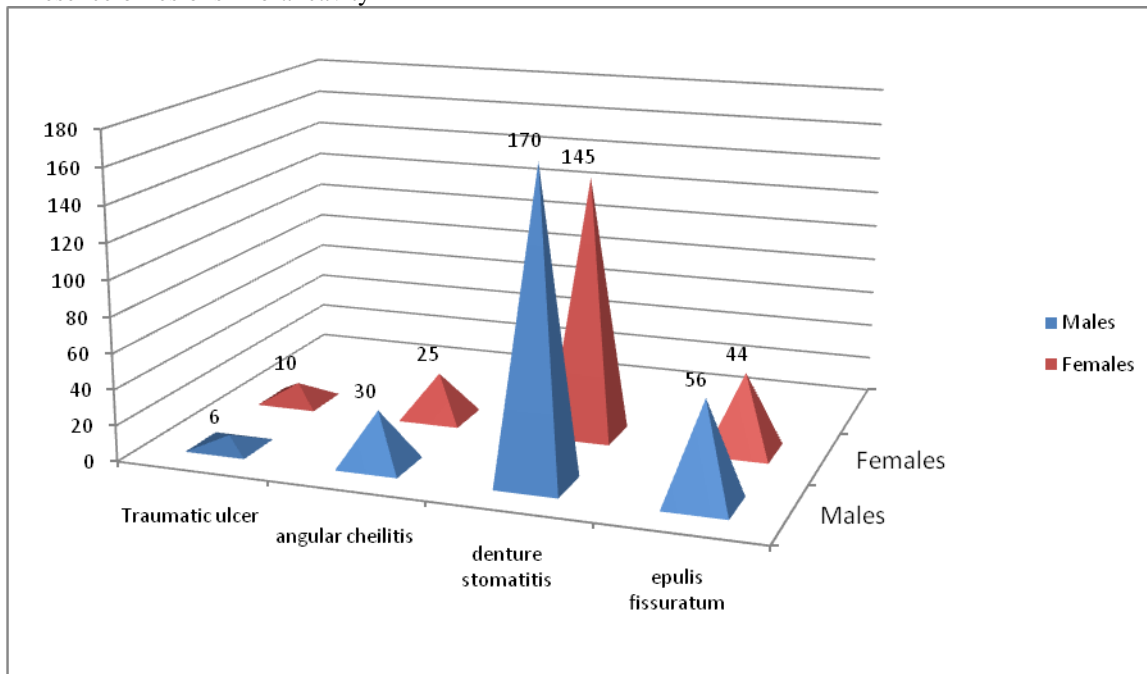
Table I shows that out of 520 patients, males were 280 and females were 240. The difference was non-significant (P= 0.5).

Table II Parameters in patients

Parameters	Number	P value
Age >40 years	340	0.01
< 40 years	180	
Length of denture wear >5 years	415	0.05
<5 years	105	

Table II shows that 340 patients had age above 40 years while 180 had below 40 years. 415 patients had been denture wearer for last 5 years while 105 were less than 5 years. The difference was significant (P < 0.05).

Graph I Presence of lesions in oral cavity



Graph I shows that commonly seen lesion was denture stomatitis in males (170) and females (145) followed by epulis fissuratum in males (56) and females (44), angular cheilitis in males (30) and females (25) and traumatic ulcer in males (6) and females (10). The difference was significant (P < 0.05).

DISCUSSION

Denture related lesion is common in complete denture wearer. The amount of lesions depends upon various factors such as the poor oral hygiene, chronicity of denture etc. Oral mucosal inflammation in case of denture wearers occurs in local, generalized, or papillomatous forms.⁵ Acute and chronic inflammatory lesions of the oral mucosa can be caused by various etiological factors including traumatic injuries due to traumatic occlusion, neuromuscular traumatic injuries due to improper balanced occlusion, complete dentures mere presence or acting as a foreign body, poor ventilation or oxidation of the oral mucosa covered by complete denture, improper retention of the denture, neurological and endocrinological systemic conditions of the patient, poor nutrition, chemotoxic injuries by denture base material, infectious material accumulation on undersurface of the denture.

In this study, 520 complete denture wearers had some kind of lesions. It included 280 males and 240 females. 340 patients had age above 40 years while 180 had below 40 years. 415 patients had been denture wearer for last 5 years while 105 were less than 5 years. This is similar to Moskana et al.⁶

We found that commonly seen lesion was denture stomatitis in males (170) and females (145) followed by epulis fissuratum, angular cheilitis and traumatic ulcers. This is in agreement with Macebo et al.⁷

Denture stomatitis (denture sore mouth) refers to inflammatory changes in the oral mucosa of denture-bearing tissues. These changes are featured by erythema and are found beneath complete or partial dentures in both jaws, but are more commonly reported in the maxilla.⁸ It was seen in 315 patients.

Epulis fissuratum is a benign hyperplasia of fibrous connective tissue which develops as a reactive lesion to chronic mechanical irritation produced by the flange of a poorly fitting denture. More simply, epulis fissuratum is where excess folds of firm tissue form inside the mouth, as a result of rubbing on the edge of dentures that do not fit well. The lesion is usually painless. The usual appearance is of two excess tissue folds in alveolar vestibule/buccal sulcus, with the flange of the denture fitting in between the two folds.⁹ It may occur in either the maxillary or mandibular sulci, although the latter is more usual. Anterior locations are more common than posterior. Less commonly there may be a single fold, and the lesion may appear on the lingual surface of the mandibular alveolar ridge. The swelling is firm and fibrous, with a smooth, pink surface. The surface may also show ulceration or erythema.

The size of the lesion varies from less than 1 cm to involving the entire length of the sulcus. In our study, it was observed in 100 patients of both sexes.

In a study by Abhishek et al.¹⁰, out of 362 complete denture patients, 378 oral mucosal lesions were found as 16 (4.2%) patients were having two types of lesions. Denture stomatitis (59.25%) was the most common lesion present, followed by epulis fissuratum (18.51%) and angular cheilitis (8.9%). The denture-induced oral mucosal lesions were found more common in age >40 years (60.78%) and in female (54.70%) complete denture wearer patients.

CONCLUSION

Denture wearers are more prone to develop lesions like denture stomatitis, epulis fissuratum, traumatic ulcers and angular cheilitis. Thus frequent dentist visit is required to prevent developing lesions and denture replacement after 5 years is advisable.

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