

Frequency of Maxillary Midline Diastema in Pakistani Population

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ABSTRACT

Maxillary midline diastema is of the common dental esthetic issues of patients presenting to various dental specialties. The aim of present study was to find out the frequency of maxillary midline diastema in patients presenting various dental hospitals/institutes of Punjab, Pakistan, from 2016-2020. Total 1139 patients having permanent dentition completed were examined in OPD as per selection criteria. The results showed that frequency of maxillary midline diastema was found to be 11.32%, out of which 65.11% were females and 34.88% were males. Thus it was concluded that maxillary midline diastema is not an uncommon dental issue with a frequency of 11.30% in our studied population and it was found to be more common in females.

Keywords: Maxillary Midline Diastema; Frequency; Prevalence.

INTRODUCTION

Maxillary midline diastema is any space in between upper maxillary central incisors > 0.5 mm.¹ It is considered as esthetic concern in most of the dental patients while it is considered as symbol of beauty for certain groups for example in France and Africa²⁻⁴

Maxillary midline diastema can be transient, physiological, developmental, pathological or iatrogenic.⁵ There are several causes of midline diastema such as: physiological diastema due to erupting maxillary canines in mixed dentition (ugly duckling stage), frenum attachment issues, impacted incisors, supernumerary teeth i.e., mesiodens, peg lateral incisors, mesiodistal angulation of incisors, Bolton discrepancy issues, proclined centrals, generalized spacing, palatally displaced canines and many others⁶⁻¹².

Prevalence of maxillary midline diastema is found to be different in different groups. It is found to be more prevalent in Africans and Middle East¹³. Very few studies have been conducted so far in Pakistan regarding frequency of maxillary midline diastema in population^{14,15}.

Therefore the aim of present study was to find out the frequency of maxillary midline diastema in patients presenting at OPD of dental hospitals/institutes of Punjab, Pakistan. This study will help in designing further large scale studies and will help in managing patients of different dental issues as per need and disease/malocclusion load.

MATERIAL AND METHODS

The present study was conducted at different dental centers of Punjab, Pakistan from 2016-2020. Total 1139 patients having permanent dentition completed were examined in OPD as per selection criteria. Following patients were excluded from the study: those patients who were in primary or mixed dentition, history of trauma, history of orthodontic or any surgical treatment, history of

dental extraction, left lip palate and other craniofacial anomalies¹.

The diastema was calculated as any space > 0.5mm in between maxillary central incisors (Figure 1),¹ while clinical intraoral examination on dental unit with proper and optimal illuminating conditions with the help of examination set and was verified with radiographs. The diagnosis of all the patients was done by experts of different dental specialties in their respective dental institutes. The data was collected and gender differences were also calculated and presented using descriptive statistics.

RESULTS

The results showed that frequency of maxillary midline diastema was found to be 11.32% (Table 1), out of which 65.11% were females and 34.88% were males (Table 2).

Table 1: Frequency of maxillary midline diastema among studied patients (n=1139)

Parameter	Frequency
Total Patients	1139 (100 %)
Patients with Diastema	129 (11.32 %)

Table 2: Gender distribution of maxillary midline diastema among studied patients (N=129)

Parameter	Frequency
Patients with Diastema	129 (11.32 %)
Males with Diastema	84 (65.11 %)
Females with Diastema	45 (34.88 %)

Figure 1: Maxillary midline diastema



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DISCUSSION

Maxillary midline diastema is of the common esthetic issues of patients presenting to various dental specialties.² The prevalence and frequency of maxillary midline diastema is found to be different in different populations and there very few studies have been conducted so far in Pakistan regarding frequency of maxillary midline diastema in dental patients.⁵⁻⁷ The aim of present study was to find out the frequency of maxillary midline diastema in patients presenting at OPD of dental hospitals/institutes of Punjab, Pakistan.

The results showed that frequency of maxillary midline diastema was found to be 11.30% (Table 1), out of which 65.6% were females and 34.4% were males. The results are in agreement with previously conducted local study by Jan et al.,¹⁵ where frequency of maxillary midline diastema was found to 12.59%. The results are in comparison with other international studies such as in UK it was found to be 3.4%, in Saudia 4-23%, in Nigeria 28.4%.¹⁶⁻²⁵ The differences in results can be attributed to differences in selection criteria, methodology and genetic predisposition. The results showed that maxillary midline diastema was found to more common in females that may be attributed to greater esthetic concerns in females.

There are several limitations of this study such as small sample size and cross sectional nature; however, within these, it was found that maxillary midline diastema is a common dental issue with a frequency of 11.30% in our studied population and it was found to be more common in females. Our suggestion is to conduct further large scale studies with better methodology.

CONCLUSION

Maxillary midline diastema is a common dental issue with a frequency of 11.32% in our studied population and it was found to be more common in females. Our suggestion is to conduct further large scale studies.

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Conflict of Interest: We have no conflict of interest that I should disclose.

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