Case Report

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Keeping Natural Diastema in Anterior Restoration: A Case Report

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ABSTRACT

Background: A midline diastema is a gap in between the adjacent central incisors, and generally people wish to close this midline gap in between their teeth. But due to some taboos and beauty conceptions, some people want to maintain this natural midline diastema. This paper deals with keeping natural diastema in anterior restorations.

Keywords: Midline diastema, composites, taboos in dentistry, aesthetics.

INTRODUCTION

A famous writer Martin Hungerford has said that beauty lies in the eyes of beholder. In the population of billions and trillions across the world, people are motivated about their own definition of beauty, and their smiles are no more exceptions. A lady can feel queen of the world with a stone fixed on her canine and the same can be uncomfortable with a tooth tattoo. Midline Diastema is spaces of varying magnitude between the crowns of fully erupted maxillary central incisors. Keene describes, Midline Diastema as anterior midline spacing greater than 0.5mm between the proximal spaces of adjacent teeth[15]. Incidences of maxillary and mandibular Midline diastema are 14.8% and 1.6 %, respectively[1]. It can occur in temporary, mixed or permanent dentition and may be considered normal for many children during the eruption of the permanent maxillary central incisors. When incisors first erupt, they may be separated by bone and the crowns incline distally because of the crowding of the roots. With the eruption of the laterals and permanent canines, diastema reduces or even closes completely[16]. In a conservative clinic, we often use composites to close these midline gaps if they proceed in the permanent dentition but rarely do we face some special patients those want a gap in between his or her teeth due their own concept of beauty, belief or other conception, should be termed as DESIRED DIASTEMA.

CASE REPORT

A 45 year old patient reported in the Department Of Conservatives And Endodontics with a complaint of broken teeth previously restored with composite. His teeth were restored three years before, after he met an accident. There was no history of pain and patient was asymptomatic. Oral examination revealed, generalized spacing, attrition and abrasion on mandibular incisors. Patient was diagnosed of Elis class II teeth fracture and a composite restoration. But patient did not want to close the natural gap in between his central incisors. Because he believed that the midline diastema is the sign of wealth and who has it, he becomes rich.

Patient was educated about midline diastema. It may leads to food lodgement and progression of

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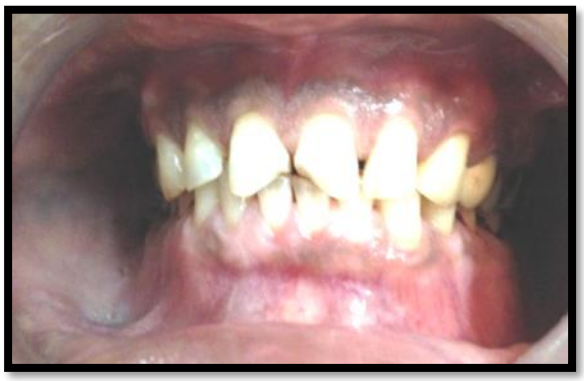
caries in the space. It may leads to the loosening of teeth and gum related problems and ultimately lose of teeth. The fractured area of the tooth was isolated, cleaned with cotton and dried. Careful bevelling of the tooth was done with help of a flame shaped diamond bur for the conservative preparation, shade selection done with the help of shade guide. The area was etched and a layer of bonding agent was applied and cured for 20 sec with curing light. The composite build up was done in small increments applying two coats of bonding agent each time. Following least destructive technique, a gap was maintained by proximal stippling during finishing of the build up. Patient was given precaution not to take coffee, tea or staining food items for a day and to avoid biting on food like apples with anterior teeth.



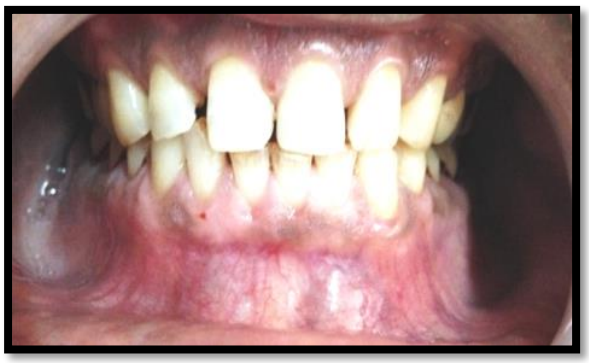


FIG 2: a) Preoperative Photograph b) Desired Daistema In Build Up

DISCUSSION

Clashing point of views:

We usually meet people in our clinics, who complains of unaesthetic smiles due to midline daistema but there are some exceptions also, who desires of a midline gap in between their anterior teeth due to their own concept and vision about their smile. Patients want Diastema closure because of compromised aesthetics due to gap in between the anterior teeth and space created after the extraction of mesiodens etc. And some people desires of this midline gap because of some taboos and their own beauty conceptions tabulated in table 1

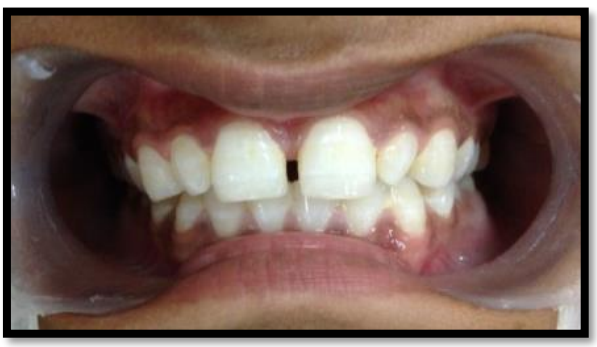
Table 1: Clashing point of views on midline gap.

Diastema Closure	Desired Diastema
Compromised aesthetics due to gap in between the anterior teeth. Space created due to extraction of mesiodens etc.	Aesthetic requirement and Taboos: Indian :Sign of wealth Nigerian : Sign of beauty France: luck tooth or ***"dents du bonheur"*** Cinema : identity symbol. Fashion : latest trend "gap tooth models"

Aetiology of diastema is as follows:

1. Developmental: Microdontia, Missing Laterals, Mesiodens Macroglossia, High Fibrous Fraenum attachment.
2. Pathological: Midline Cysts, Tumours and Periodontitis.
3. Neuromuscular: Oral Habits, such as Tongue-thrusting During Speech, Swallowing or Abnormal Pressure during Rest[16].

Various treatment modalities are adopted to close the midline gap in between the anterior teeth which includes the veeners, orthodontic treatment and surgical procedures like frenectomy, If there is no high fraenum involvement or any other need of orthodontic treatment, we can fill and contour the midline gap using the composite, which saves the time and money of the patient fulfilling their aesthetic requirement.



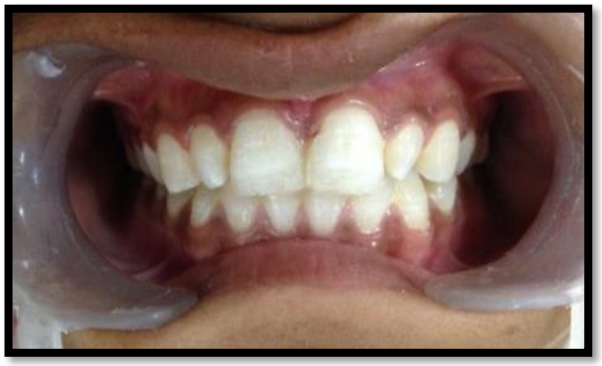


Fig 1: Diastema closure at conservative dentistry clinic. A) Before Treatment B) After Treatment

In cases where patients are inconvincible and they are diastema freaks, it our duty to conserve their teeth in limits of their aesthetic demands. In those cases interproximal enamel reduction technique can be used that is used as a mean of gaining space in comprehensive orthodontic treatment[17].

It involves:

- Sepration of the teeth with separators and
- Enamel reduction with the help of proper abrasive strips , diamond disc or burs
- Recontouring the shape of the teeth
- Polishing of the teeth to reduce the enamel surface roughness
- Protection of the reduced enamel with fluoridation as outer fluoridated enamel layer is lost.

CONCLUSION

As people are motivated about their own definition of beauty, some wishes to close the midline diastema and some desires of the midline diastema. As a conservative dentist, we should apply the least destructive method to design their smile according to their wish list.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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