

# Midline Diastema Correction using M Spring

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**Abstract:- One among the most common malocclusions encountered during our clinical practice is midline diastema and it is associated with high chance of relapse as well. This article illustrates a case report in which clinical utilization of M-spring resulted in a faster and efficient midline diastema closure in 6 weeks duration.**

**Keywords:-** Midline Diastema, M Spring.

## I. INTRODUCTION

Midline diastema is a relatively common dental malocclusion which is characterized by presence of space between the maxillary central incisors. It is considered un-aesthetic and can affect patient's confidence level while smiling or talking. Midline diastema has been reported with a high prevalence value in younger patients compared to adults.<sup>1-3</sup>

Various etiologies have also been reported for midline diastema including tooth size discrepancies, aberrant and highly placed labial frenum attachments, habits, loss of teeth, some midline pathologies, such as mesiodens etc.<sup>4-7</sup>

## II. CASE REPORT

A female patient, aged 16 years, reported to Department of Orthodontics, with a chief complaint of presence of gap between her upper front teeth. On extraoral examination it is revealed that she had a mesocephalic head type with straight profile and competent lips.

Intraoral examination showed that the patient had a midline diastema of 5 mm between upper central incisors, bilateral Class I molar and Class I canine relation with 3mm overjet and overbite of 4mm.

### A. Diagnosis

Patient was diagnosed as Class I skeletal base with Angle's Class I malocclusion with generalized spacing and midline diastema

### B. Treatment Objective and Treatment plan

For this case, the treatment objective was to close the midline diastema and generalized spacing present in upper and lower anterior teeth while maintaining class I molar relation and class I canine relationship.

Non-extraction treatment was planned for the case which includes midline diastema correction using M-spring fabricated with 0.017 x 0.025 TMA wire and simultaneous conventional fixed appliance therapy with preadjusted edgewise McLaughlin-Bennet-Trevisi (MBT) mechanotherapy in 0.022 slot.

## III. M- SPRING

This spring was made using 0.017 X 0.025 TMA wire in the shape of letter "M" which incorporates three helices. Two of the three helices are located at the periphery and the third one at the center, having a diameter of 3mm each.



Fig 1 M Spring



Fig 2 Pre-Treatment Photograph Showing Midline Diastema of 5 mm



Fig 3 Midline Diastema Reduced to 1 mm after 5 Weeks of Treatment



Fig 4 Midline Diastema Completely Closed after 6 Weeks of Treatment using M Spring Mechanics.

#### IV. DISCUSSION

Midline diastema refers to space seen between two central incisors. There are many techniques available in the field of orthodontics to close the midline space using various methods. We can go for a simpler yet effective and faster treatment approaches such as utilizing M-spring which gives a good result in a few weeks.

#### V. CONCLUSION

Utilization of M-spring made in a rectangular TMA wire is definitely a simpler and easier way of treating midline diastema. It needs less wire bending and also reduces chairside time. Both treatment and the obtained results are faster and stable.

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