INTRODUCTION

Orthodontic treatment observes resistance in areas of desired tooth movement and anchorage sites. Hence, proper orthodontic anchorage preparation is important to ensure predictable tooth movement and negating insufficient reciprocal movement [1]. Understanding each patient’s anchorage requirements is of paramount importance which ensures high-quality care. Unexpected or unintended anchorage loss frequently results in a compromised finish [2]. Traditionally, high-anchorage situations require excellent patient compliance with extra oral traction devices. Among these anchorage devices, miniscrew implants have increasingly been used for orthodontic anchorage because of their absolute anchorage, easy placement and removal, and cost effectiveness. Therefore, the skeletal anchorage system offers a nonsurgical orthodontic treatment option for skeletal (surgical) malocclusions, as well as a nonextraction treatment for malocclusions characterized by severe maxillary or mandibular protrusion, and/or anterior crowding. The purpose of the present article is to compare the mini-implant supported mechanics with conventional mechanics with the help of cases treated in the department of orthodontics.
• Distalization (Figure 3)
• Molar protraction (Figure 4)
• Molar axis control (Figure 5)

**Vertical control**
• Anterior intrusion/Extrusion (Figures 2 and 6)
• Posterior intrusion/Extrusion

**Transverse control**
• Symmetric expansion/contraction
• Asymmetric expansion/contraction

![Figure 1](image1). (a): Enmasse anterior retraction using T-loop, (b): Enmasse anterior retraction using mini-implants.

![Figure 2](image2). (a): Enmasse anterior retraction and intrusion using Burstone Arch, (b): Enmasse anterior retraction and intrusion using mini-implants.

![Figure 3](image3). (a): Distalization of upper 1st molars using pendulum appliance, (b): Distalization of upper 1st molars using sliding JigFig.

![Figure 4](image4). (a): Molar protraction using T-loop, (b): Molar protraction using mini-implants.
DISCUSSION

For a long time, orthodontists have struggled to achieve efficient control of anchorage. Dissatisfaction with conventional methods of anchorage led some practitioners to explore the use of implants as a source of absolute anchorage. Mini-implants offer advantages like temporary fixture in bone, small size, rapid and atraumatic placement in almost all sites within mouth and cost effectiveness. The cases cited above have compared mini implant supported mechanics with conventional one. Enmasse retraction of anterior teeth can be done conventionally using different wire configurations like T-loop or Burstone arch but anchorage control in all three dimensions of space is difficult. So to overcome that mini-implants have been used (Figures 1 and 2). Similarly, movement of first or second molar in all three planes of space i.e., protraction or distalization; correction of buccally tipped molar in either arch can be achieved using mini-implants (Figures 5 and 6).

CONCLUSION

Orthodontic mini-implants are a powerful aid for the orthodontic practitioner in resolving challenging malocclusions. Mini-implants placed in alveolar bone are effective in adolescent patients, and marked improvement is often observed, even in patients with skeletal problems.

Thus skeletal anchorage should serve merely to expand the horizon of orthodontic services we can cater to our patients and can take up new challenges which were considered limitations earlier.

REFERENCES