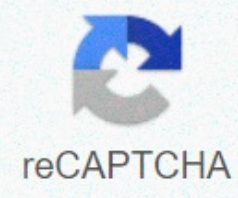




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Surgery for vertical maxillary exces

View / Download PDF doi: Buy Reprint Ekta Lahoti, Partha Pratim Choudhury1, Ali Asger Nakib2, Mukesh Kumar3 Consultant Orthodontist (Private Practice), Kolkata, India 1Department orthodontics, Clinical Teacher, North Bengal Dental College and Hospital, Siliguri, India 2Departments orthodontics, Clinical Tutor, Dr. R. Ahmed Dental College And Hospital, Kolkata, West Bengal, India 3Assistant Professor, Department of Orthodontics, Sarjug Dental College and Hospital, Darbhanga, Bihar, India Address for: Dr. Ekta Lahoti, 50E, K. M. Naskar Road, Opp. E-mail: 13ekta@gmail.com orthodontic treatment for a 24-year-old patient with a resinous smile and progyrlination along with a hyperdivergic profile. The patient had an excessive gingival display in both the first and rear areas of the maxilla. This situation often requires surgical therapy in adult patients. However, due to the patient's reluctance to surgery, a resinous smile was treated to breaking into the entire maxilla harness. After leveling and leveling, the absolute fastening system as well as the modified transpalatal arch was designed to achieve posterosuperior movement throughout the upper dentition. The active treatment period was 2.3 years. Recently, miniimplants have been used for several purposes – resinous smile correction with increased facial height with full intrusion of maxillary arc; deep bite correction with intrusion in front teeth; and open the bite correction with molar intrusion. [1-4] In 2003, Paik and Others[1] with one palatal implant and modified trans-normal arc (TPA) treated the vertical excess maxilla. In 2006, Kim et al. [2] used a miniimplant with segmented wires to reach the intrusion. A resinous smile creates an aesthetic problem and requires proper diagnosis and treatment planning. A resinous smile coupled with a hyperdivergent profile is often characterized by excessive maxillary posterior dentoalveolar height along with excessive front dentoalveolar height. In such situations, frequent surgical therapy such as Le Fort wrap is necessary to improve the aesthetic. However, an alternative method of using miniscrews is now often used in cases where going under the knife is an issue. In this case, the report describes the orthodontic treatment of a 24-year-old female patient with skeletal class II malignancies, a resinous smile, proclaching, and hyperdivergent profile In which gummy smile correction was achieved by intruding all upper jaw dentition using four miniscrewsws buccally with maxillary arch and modified TPA. The 24-year-old female patient presented a skeletal Class II malocclusion and a resinous smile along with the protrusion. Molars showed a Class II relationship. Her right first molar was a crossbite. The overjet was 11 mm and the overbite was 2 mm. She also had a Kaija Wing lip deformity with lip trap and mental strain at closing [Figure 1]. Figure 1: (a-d) Pre-reactions face photos Of Cephalometric assessment revealed a retrusive mandib, a large upper anterior dentoalveolar height (U1-NF) and a large upper posterior dentoalr height (U6-NF), and a large mandid jaw plane angle associated with increased abdominal facial height. Both upper and lower inetoe were flammed [Figure 2 and Table 1]. Figure 2: (a) Pre-re-set intraometric photographs 1. Table 1: Cephalometric data Measurement First treatment After treatment Anteroposterior skeletal SNA (°) 82 81 SNB (°) 71 73 ANB (°) 11 8 Vertical Skeletal GoMe-FHP (°) 38 36 FMA (°) 39 37 ANS-Me (mm) 73 70 Tooth Overjet (mm) 11 2 Top(mm) 2 2 U1/SN (°) 116 9 7 IMPA (°) 102 93 U1-NF (mm) 34 30 U6-NF (mm) 27 24.5 L1-MP (mm) 51 49 L6-MP mm) 38 38 Soft tissue U lip-E line (mm) +2 –1.5 L lip-E line (mm) +6 +1.5 Our treatment objectives included improving the aesthetic and facial profile of the patient's smile together with harmonious occlusion. This included: Correcting anterior proclination and creating a normal overbite and overjet ratio reducing excessive gingival display Reducing the vertical dimension to improve facial balance by correcting the right molar crossbite. The patient was given the following two treatment options: Conventional orthodontic treatment with upper and lower first premolar extraction and third molar extraction combined with orthognatic surgery (Le Fort 1 maxillary and genioplasty boosting) Extraction of all upper and lower first premolars, together with all upper and lower molars, followed by orthodontic intrusion of the complete upper and lower denyrtion system. Given the severity of the event, ortognathic surgery was proposed as the first option to which the patient showed undesplination. Both alternatives were explained to the patient who chose a more conservative second option. Four maxillary cheek miniscrews and modified TPA were then used to intruder the entire maxillary arch. Two miniscrews buccally in the lower arc were used to hold the lower arc. All upper and lower first premolars along with all upper and lower third molars were obtained. The pre-adjusted fixed device 0.022 × 0.028 slot (MBT recipe) was due to maxilla and mandial arches. Conventional alignment and alignment was carried out in the upper and lower arches. After six months, alignment to 0.019 X 0.025 inches of stainless steel arch wire was reached. Four minibraxes (diameter 1.5 mm and length 8 mm) were placed in the maxillary behind the cheek region and two minibraxes in the lower posterior region buccally local infiltration anesthesia. Modified TPA was made with 1 mm stainless steel wire and central acrylic in such a way that it stays approximately 5 mm from the palatal mucosa [Figure 3]. Figure 3: (a-e) Treatment progress intraoral photos After 4 months of deployment, her two lower mini-fights got loose, which was then removed. She was then asked to perform isometric clenching exercises for two 15 min sessions a day (3 s clenching with 5 s rest in between) for all active treatments and after debonding for 8 weeks. Closed coil spring (6 mm anior) was attached to hooks on both sides of the archwire. The e-chain was given to the posterior region. This caused an intrusion of the entire maxilla dentition. The intrusion took about 12 months [Figure 4], after which the modified TPA almost touched the palatal mucosa. The closure of the premises was carried out with active tiebacks. In this way, the mandible autorotated counterclockwise up and forward, resulting in a decrease in the front face height and chin development. After the mandidder autorotation, the uterine bite deepened and need to incorporate the inverted curves into the lower archwire to achieve a proper overbite. Orthodontic treatment lasted approximately 28 months. The fixed lingues were then conscripted into both arcades. Figure 4: A-e) Post-treatment intra-second-stage photos Normal overeventh and cover have been reached at the end of treatment. Lower face height lowering by 3 mm. Lips and chin appeared more harmonious [Figs. 4 and 5]. The angle of the mandbulary plane has been reduced by 2° [Table 1]. Post-treatment panoramic X-rays showed the general parallelism of the roots. No significant root resorption was observed [Figure 6]. Figure 1: A-d) Post-treatment facial photograph Figure 6: (a) Pre-emptied panoramic X-ray (b) After-treatment of the panoramic X-ray general intrusion due to cephalometric tracing cases showed excellent maxillary tooth movement and upper prelock movement with a slight skeletal change and obserment anti-lock rotation. The lower molar had minimal vertical and anteroposterior changes [Figure 7-9]. Figure 7: (a) Pre-argar lateral cefalogram. (b) Post-treatment side cephalograms Figure 8: pre-treatment and post-treatment cephalometric tracing superimposition; shows upper molar intrusion, autorotation of the mandication, and lower abdominal facial height decrease Figure 9: Regional superimposition tracking Resinous smile can occur for many reasons, such as vertical maxillary excess, excessive gingival overgrowth, altered passive eruption, anatomically short upper lip, hypermobile muscles in the upper lip, or any of these factors. [5,6] Many times, orthognatic surgery is required for correction. In this patient, the resinous smile seems to be the result of vertical maxillaring excess. Lin et al. [3] using several screws suggested using screw mechanics to achieve the impact of the maxilla Le Fort I. Posterior blockade therapy with or without reejecting magnets[7, 8] has been used in several studies and the results suggest a decrease in lower facial height. However, patients' compliance with such devices is poor, and temporomandibular joint problems have been reported using repellent magnets. In this case report, four miniscrews along with modified TPA with maxillary arc and two miniscrews in the mandiar arc have been used without problems of patient compliance. This is satisfactorily caused by the intrusion of the entire maxilla dentition. This procedure paik et al. [1] is called the slow impact of the maxilla because it mimics the effects of Le Fort I maxilla mingle surgery. In the lower arc, two mini-bolts were placed to prevent the molar overcoming of the mandemic jaw, as the mandder's autorotored counterclockwise after the maxillary impact. Stability has always been in relation to the factor after the posterior intrusion and the reduction of the vertical dimension in adult patients. It has been suggested that insucation of the posterior teeth can be maintained isometrically clenched exercises. Chewing gum used to increase contraction forces lift muscles of the lower jaw can be useful to maintain correction. Isometric clenching on a soft bite plate for 30 mins a day for 8 weeks or two 15 min sessions (3 s clenching with 5 s rest along the line) can be done. Alternatively, chewing gum used for 30 mins per day for 4 weeks can be recommended. Subsequently, total occlusal force was found to increase by 140% and contact area by 125%. [9,10] Clenching exercises were recommended for this patient. Correction of a resinous smile can be effectively done using miniscrews with intrusion into the maxillary dentition and has replaced the need for surgery in many cases. We would like to thank Dr. Angshuman Bhattacharya (MDS, orthodontics) for his encouragement. The authors confirm that they have obtained all the appropriate patient consent forms. In the form, the patient has given his or her consent to her images and other clinical information to be reported in the journal. The patient understands that the name and initials will not be published, and appropriate efforts will be made to conceal the identity, but anonymity cannot be guaranteed. Zero. There are no conflicts of interest. Paik CH, Woo YJ, Boyd RL. Treatment of adult patients with vertical maxillary excess using miniscrew fixation. J Clin Orthod. 2003;37:423-8 [Google Scholar] Kim TW, Kim H, Lee SJ. Correction of deep shifts and resinous smiles using a mini-implant with a segmented wire in ascending Class II, Chapter 2 patient. Am J Orthod Dentofacial Orthop. 2006;130:676-85 [CrossRef] [PubMed] [Google Scholar] Lin JC, Liou EJ, Bowman SJ. Simultaneous reduction of vertical dimensions and resinous smile using mini screw fastening. J Clin Orthod. 2010;44:157-70 [CrossRef] [Google Scholar] Razavi MR. insuction using miniscrew palatal anchorage. J Clin Orthod. 2012;46:493-8 [Google Scholar] Robbins JW. Differential diagnosis and treatment of excessive alkaline display. Pract Periodontics Aesthet Dent. 1999;11:265-72 [Google Scholar] Redlich M, Mazor Z, Brezniak N. Severe High Angle Class II Chapter 1. malocclusion with vertical maxillary excess and resinous smile: case report. Am J Orthod Dentofacial Orthop. 1999;116:317-20 [Google Scholar] Dellinger EL. Clinical evaluation of the active vertical corrector – nonsurgical alternative to skeletal open bite treatment. Am J ortod. 1986;89:428-36 [CrossRef] [Google Scholar] Kalra V, Burstone CJ, Nanda R. Am J Orthod Dentofacial Orthop. 1989;95:467-78 [Google Scholar] Uchida M, Yamaguchi K, Nagano S, Ichida T. Daily clenching exercise improves occlusion contact. Orthopaedic waves. 2005;64:29-37 [Google Scholar] Show Sections