Heal Talk

Non Extraction treatment of Crowded Case with deep Bite- A Case Report

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12year old male patient reported to my clinic with the chief complaint of highly placed canines. On examination it was found that he had crowding due to which canines were labially placed. Pretreatment assessment-

On extraoral examination (figure 1)the patient cephalic index was mesocephalic and facial type was mesoprosopic . The face was symmetrical with convex profile. The lips were competent.

On intraoral examination all teeth were present except third molars. The maxillary arch was V shaped and symmetrical with labially placed canines. The mandibular arch was U shaped with crowding in anterior region and canines were out of arch. The overjet was 0.5 mm and 75% of overbite. Radiographic examinationPretreatment OPG and lateral cephalogram were made (figure 2).various cephalometric findings were done which suggested normal skeletal bases with dental malocclusion. Growth pattern was horizontal.

Diagnosis:

Growing male with class I skeletal bases . Molars were in class I relation. Crowding in upper and lower arches with labially placed canines. There was cross bite in relation to upper left lateral incisor. 75% deep bite with reduced overjet.

Treatment objectives-

To obtain harmonious profile.

Levelling and alignment of arches without changing intercanine width.

Correction of crowding.

Correction of cross bite.

Correction of overjet and overbite.

Treatment plan-

Proper planning lead to non extraction treatment of the patient. Proximal stripping was planned in lower arch to gain 5 mm of space. Expansion of upper arches with correction of cross bite in relation to upper lateral incisor was decided. Intrusion of upper anteriors for correction of deep bite.

Followed with permanent retention in lowers anteriors and wire extending from canine to first premolar on labial side to be bonded in upper arch were decided.

Treatment-

Upper and lower bonding was done with 022 Roth Preadjusted straight wire appliance.

Initially 014"niti wires were ligated, without ligating upper canines in upper arch. Proper

proximal stripping was done in relation to lower anteriors and achieved 5 mm of space and then 014"niti wire was ligated.

After two months of treatment we achieved some space with expansion of arches and the canines were ligated then. Posterior bite blocks were given to take out the upper left lateral incisor which was in cross bite. we shifted to higher wires to achieve proper alignment(Figure 3). We incorporated curve of spee in upper and lower wires(019ss"x025 ss") to achieve true intrusion of anteriors. We focused not to change intercanine width, so that results can be stable. We started class II elastics also for some time to settle occlusion. Settling wires were given at the settling stage. Post treatment assessment-

Proper settling of occlusion took place.

We achieved good vertical control.

No change in intercanine width.

- Crowding was relieved.
- Cross bite was corrected.
- Harmonious profile was achieved. Results after three years post treatment-

No relapse was seen even after 3 years(Figure

4). Dentition is quite stable.

Conclusion-

After three years we assessed the case and found no changes and results were quite stable. Through this we can conclude if we don't change intercanine width achieved results can be permanent. With proper planning we can achieve stable results without sacrificing premolars to achieve good esthetic results. So just by examining the patient don't reach to a conclusion for extraction rather plan properly



Figure 1 Pretreatment extraoral and intraoral



Figure 2 Pretreatment lateral cephalogram and pretreatment OPG

Figure 3 Stage treatment