T.B.-M.

Age: 40 Years – 10 Months

Diagnosis: Class II, Division 2 Nonextraction – Adult (correction with Class II elastics)

Background:

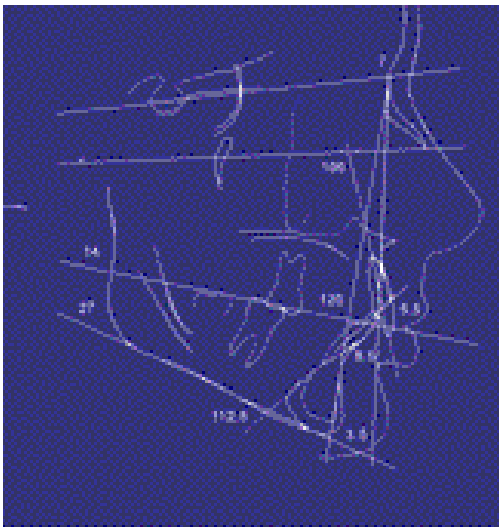
This attractive 40-year-old patient is an example of what was mentioned in the Class II nongrowing introduction. This patient has a beautiful upper lip-to-nose relationship with a strong chin button. The lower lip is slightly everted due to the position of the anterior dentition. What a challenge these cases used to be when using conventional mechanics. Earlier in my career I would have tried to distalize the molars or extract upper first bicuspids. Both of these treatment options would have had a significant impact on the profile with loss of upper lip support. With this lower-force technology, the overbite and torque can be corrected with the selection of high-torque maxillary anterior brackets and using a maxillary reverse curve NiTi archwire with +20° of torque (see Reverse curve NiTi archwire). This saves so much time and allows the clinician to start Class II elastics as soon as .019 x .025 SS wire is placed in the upper arch (see Final phase archwire).

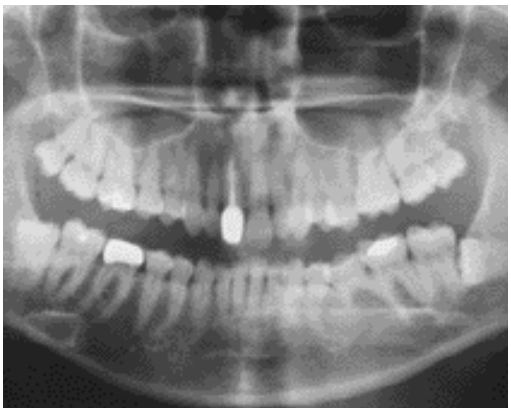
This stainless steel archwire is strongly recommended to maintain the vertical in the maxillary arch when pulling Class II elastics. It is so encouraging to correct a Class II molar and cuspid, eliminate crowding in both arches, and level the curve of Spee without severely dumping the lower incisors. In this case the lower incisors actually uprighted slightly with only minimal anterior bodily movement. Two very important tips are to always cut the lower archwire distal to the first molars prior to placing Class II elastics and instruct the patient to wear two elastics on each side when sleeping if they posture the mandible forward when wearing elastics. In some cases, the patient will position the jaw forward when sleeping and minimize the effect of elastic wear. It was very exciting to be able to exceed this patient's expectations for orthodontics by finishing in 18 months with 11 total appointments. Obviously, outstanding patient cooperation is required!

Facial Evaluation:

1. Attractive upper-lip-to-nose relationship.
2. Slightly everted and full lower lip.
3. Nicely defined lower jaw and chin button that masked retrusive mandible.
4. When smiling, shows narrow maxillary mid-arch width.

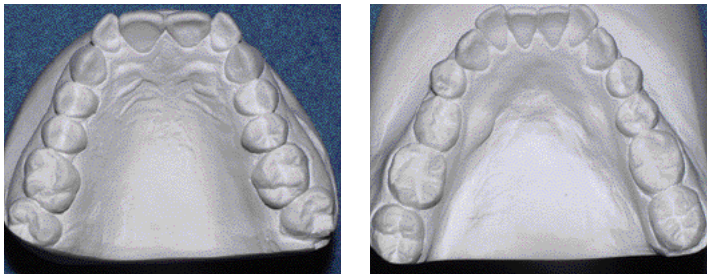
Pretreatment Radiographic Survey:





Dentition Evaluation:

1. Class II molar and cuspid with 100% overbite.
2. Upper and lower incisors overerupted.
3. Upper central incisors too upright and too long.
4. Moderate crowding of both arches.
5. Significant curve of Spee.
6. Lower incisors labially inclined.
7. Congenitally missing lower left second bicuspid with retained left second primary molar.
8. Third molars were extracted prior to starting treatment.
9. Full porcelain crown maxillary right incisor and mandibular right first molar.



Treatment Objectives:

Goal:

Complexity of treatment is to correct the Class II molar and cuspid, eliminate crowding, curve of Spee without further dumping of the lower incisors.

1. Facial considerations dictated treatment planning options.
2. Eliminated extraction of upper first bicuspids due to negative impact on face.
3. Establish arch form to give lateral facial support.
4. Control torque of upper and lower anterior segments.
5. Maintain attractive nose-to-lip relationship.
6. Minimize everting of the lower lip.

Treatment Sequence:

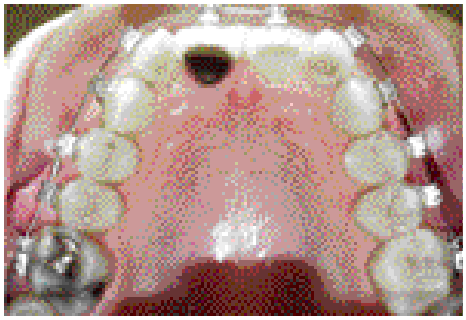
Special bracket torques

- In this case the patient was going to wear Class II elastics long term.
- I selected +17° on the upper centrals and +12° (high torque) on the upper laterals to prevent the centrals from uprighting too much.
- Lower incisors -6° (low torque) were chosen to keep lower incisors from flaring during extended Class II elastics wear.

Start:

1. Bonded maxillary *7* to *7*, except for broken-down lower left first molar. Decided to place band for support.
2. Made nighttime soft splint for lower arch.
3. Placed .014 NiTi SE *(see Initial archwire)* maxillary archwire – sectional mandibular .014 NiTi SE archwire *(see Sectional archwire)* due to lower left first molar not bondable.
4. Banded full mandibular arch at next appointment.




Appt. 1
2 months – 2 weeks:

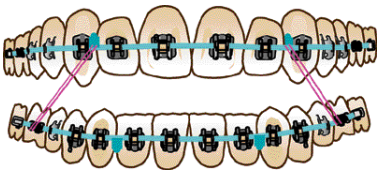
- Banded lower first molar.
- Placed maxillary .017 x .025 NiTi SE reverse curve with +20° torque *(see Reverse curve archwire).*
- Placed mandibular .016 NiTi SE.

Appt. 2
5 months:

- Maxillary .018 x .025 NiTi SE. This is used as a transitional wire between the .017 x .025 NiTi SE reverse curve and the .019 x .025 SS finishing archwire. Without this transitional wire, going from the reverse curve to the finishing archwire would be too uncomfortable for the patient. (The reverse curve with +20° torque placed last appointment worked to perfection. Sometimes an .019 x .025 reverse curve with torque is needed.)
- Placed mandibular .016 x .025 NiTi SE.

Appt. 3
7 months– 1 week:

- Placed maxillary and mandibular .019 x .025 preposted SS archwire *(see Finishing archwire).*
- Took Panorex.
- Started Class II elastics 5/16" 6 oz *(see Class II elastics).*
- Full-time wear. Clipped lower archwire distal to lower first molars. This is critically important to be able to correct Class II cases with elastics.



Appt. 4
9 months – 1 week:

- Continued Class II elastics. Two elastics on each side at bedtime only if patient postured mandible forward while sleeping.

Appt. 5
10 months – 3 weeks:

- Checked patient. Continued Class II elastics.

Appt. 6
12 months – 2 weeks:

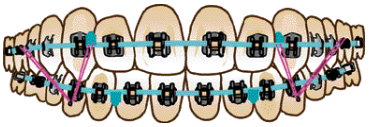
- Adjusted maxillary archwire with tiebacks *(see Tiebacks).*
- Continued Class II elastics.

Appt. 7
14 months:

- Placed mandibular .014 x .025 NiTi SE with tiebacks. Used .014 x .025 NiTi SE to incorporate second molars. Left for one appointment.
- Continued Class II elastics.

Appt. 8
15 months – 2 weeks:

- Maintained maxillary .019 x .025 preposted stainless steel archwires.
- Placed mandibular .016 x .025 preposted SS., for desired play between the archwire and the slot of the bracket to improve settling/finishing.
- Started V-elastics full time.
- Added Class II elastics at night only *(see V-elastics and Class II elastics)*.



Appt. 9
17 months:

- Adjusted maxillary and mandibular archwires.
- Continued same elastic wear.
- Prepared to debond.





Finals

18 months – 1 week: Debonded upper and lower.

Pretreatment

Posttreatment

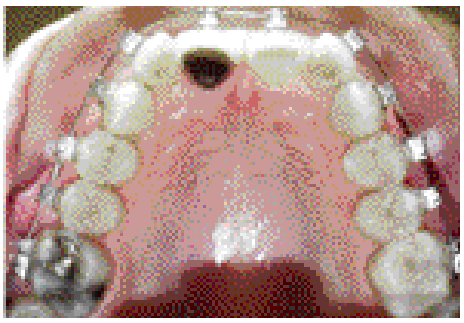
Pretreatment

Posttreatment

Final

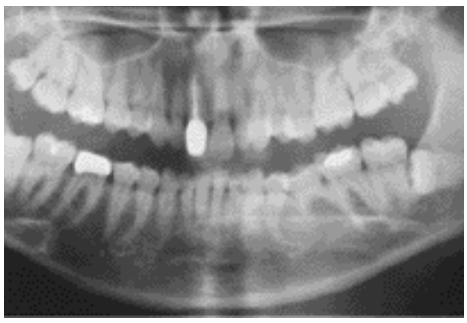
Final

Final



Initial Bonding

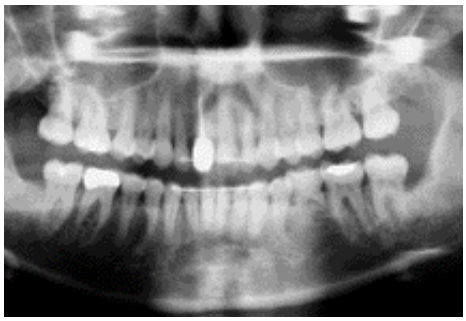
Initial Bonding



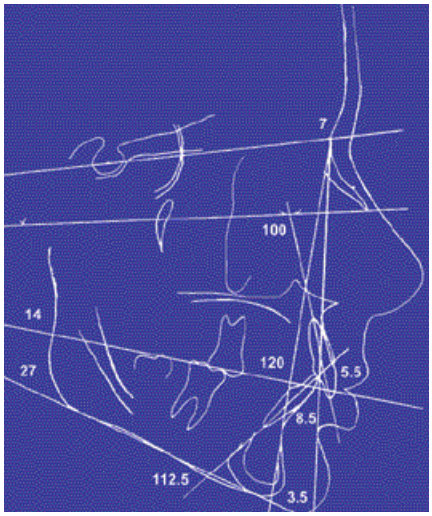
Initial

Posttreatment

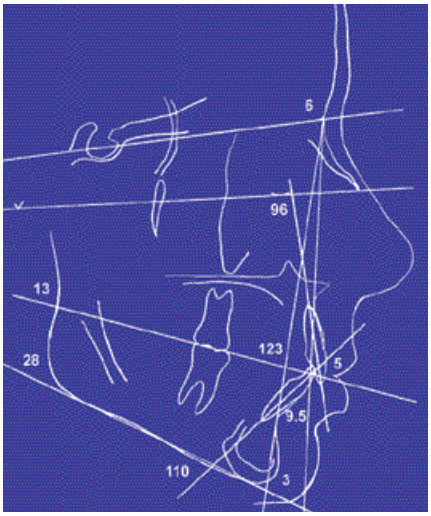
Posttreatment



Final



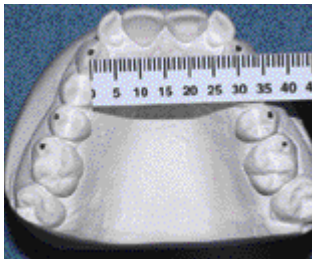
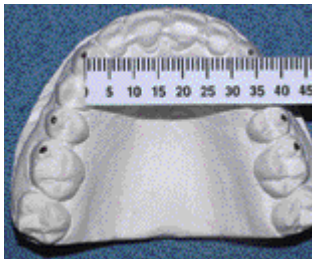
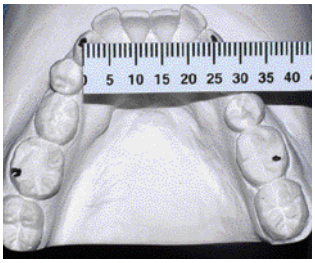
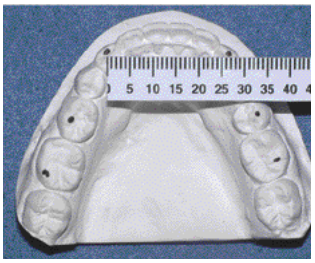
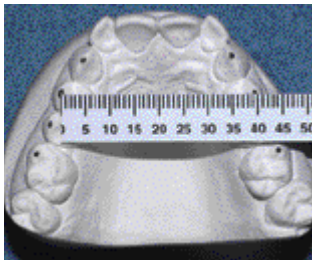
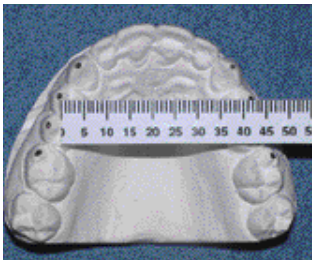
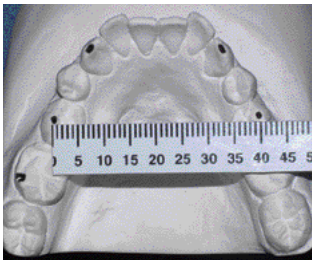
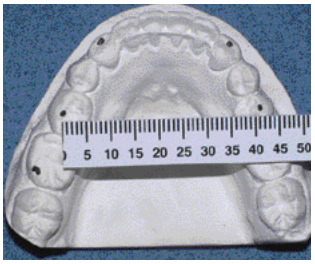
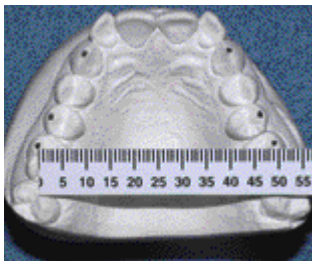
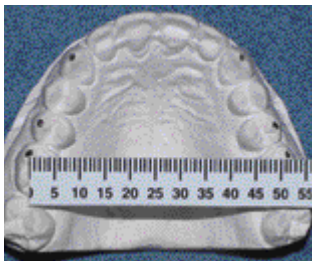
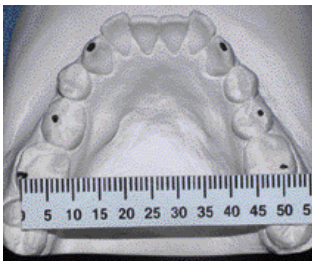
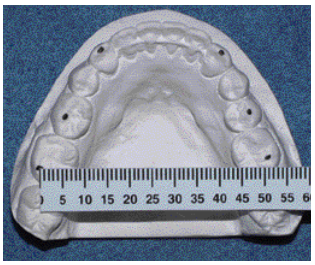
Initial



Final

Composite

Occlusal Cast Transverse Measurement Comparisons

Pretreatment	Posttreatment	Pretreatment	Posttreatment
			
30.0 mm	33.5 mm 3.5 mm change	25.0 mm	26.5 mm 1.5 mm change
			
39.5 mm	41.5 mm 2 mm change	39.5 mm	41.0 mm 1.5 mm change
			
49.0 mm	51.5 mm 2.5 mm change	50.0 mm	51.0 mm 1 mm change

Retention:

1. Bonded maxillary .016 x .022 Hilgers braided wire lateral to lateral.
2. Bonded maxillary .026 steel round to all teeth cuspid to cuspid.
3. Damon Splint must be worn nightly for 10-12 months. Length of time depends on case severity.
4. Made regular slip-cover retainers in addition to splint.

T.B-M. Case Summary