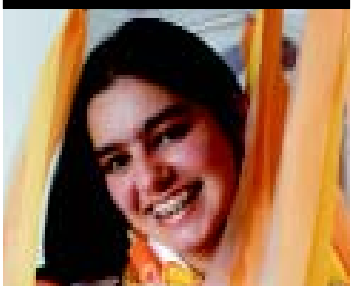

MARCELA, A PATIENT OF DR. JORGE CATARCIONE, PRESIDENT OF THE BRAZILIAN TIP-EDGE ASSOCIATION, WEARS A TIP-EDGE SMILE IN RIO'S CARNIVAL PARADE.

TIP-EDGE® TODAY

Published Quarterly In The USA

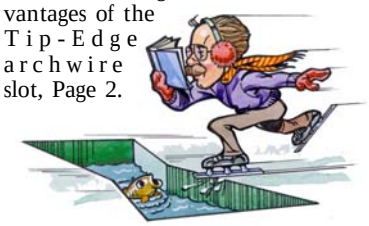
DURING A DRIVE THROUGH THE ARIZONA DESERT, A COUPLE OF TOURISTS WAVE GOODBYE TO AN OLD FRIEND.

FALL 2000

EDGELINES

EXPERT ON SLIDING MECHANICS OBLIVIOUS TO TIP-EDGE SLOT

Biomechanics guru overlooks advantages of the Tip-Edge archwire slot, Page 2.



NO UNDERSIZE WIRES IN STAGE THREE

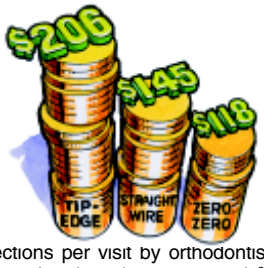
The fallacy and folly of using undersize archwires during torquing and uprighting are revealed—Q&A, Page 2.

ELASTIC PACKAGING FINALLY TELLS TRUTH

Force values on elastic bags are now related to intraoral applications, Page 3.

TIP-EDGE GRAPHIC

The number of office visits required to treat a case effects the collections per visit.[1]



Collections per visit by orthodontists using different brackets in recent study[2] if each patient were treated for a fee of $4,000.

1. White C. Scheduling for success. Appointment coordinator home study course workbook, February 1997, p. 21.
2. Ramos G et al. The relative efficiency and effectiveness of treatment . . . unpublished thesis.

COVER STORY

Tip-Edge Treatment as a Practice Management Tool: Overhead Drops Below 40%

By Michael J. Mele, D.D.S., M.S.—Glenside, Pennsylvania

If you are an avid reader of the TIP-EDGE TODAY, then you are well versed with the tremendous treatment advantages that Tip-Edge provides. For the past three years I have implemented and embraced this technique. As my clinical skills have improved, so have my treatment results and my practice's profit margin.

Forcing myself to improve and understand the subtleties of the Tip-Edge technique, I learned after only one year that I could schedule patients with longer appointment intervals. Patients in stages one and two of treatment would have originally been scheduled every 4 to 6 weeks; now, they are scheduled every 8 weeks.

In addition, most all stage three patients are regularly seen every 12 weeks. Of course, for doctors concerned with "checking-up on patient compliance," good cooperation with elastics would have already needed to be established by stage three.

Before I knew it, my practice began treating more patients per month without lengthening treatment time. In fact, using Tip-Edge has actually lessened my overall treatment times. These two factors together have increased my monthly collections. Staff hours and overhead fixed costs remain the same as well as the number of new patients. However, by changing the frequency of patient visits while reducing the length of treatment time, my office overhead has dropped precipitously from 65% to 39%.


By changing the frequency of patient visits while reducing treatment time, overhead has dropped from 65 percent to 39 percent—Dr. Mele.

This recent 26% reduction in overhead is the most dramatic drop I have ever experienced. Even more amazing is that I did not begin using Tip-Edge to reduce overhead. My goal was and has always been to improve my mechanics and overall treatment results. Tip-Edge has helped me achieve both while increasing my profit margin!

Using Tip-Edge means no longer needing to use headgear or any other intra or extraoral anchorage appliances. Severe overjet corrections are easily and readily accomplished. Treatment options, especially with regard to extraction cases, are expanded. Now, we can extract the ideal teeth for any particular patient.

There is no longer the need to depend on first premolars as being the only extraction option. In the past, virtually all of us have been instructed to extract these teeth. The edgewise technique almost mandates first premolar extractions and is very difficult when the second premolars or first molars need to be removed.

Several colleagues and other practitioners have expressed concerns about adolescent cooperation with Class II elastics. In my opinion this is one of the greatest advantages of the Tip-Edge technique. Having treated roughly 350 patients in our office and another 100 with residents at the

Please see COVER STORY next page

COVER STORY

Tip-Edge Treatment...

Continued from page 1

Temple University of Pennsylvania, adolescent patients cooperate with their elastics much more so than with the traditional edgewise treatment.

With the edgewise modality, we straighten a patient's smile and then six months into treatment ask him or her to begin wearing their elastics. It is at this point that a teenager's smile, in his or her own mind, looks great already. Why should they cooperate with elastics or worry about an overjet?

Tip-Edge patients begin wearing elastics from the onset of bonded treatment. The elastics themselves are very light (1.5 oz. per side) and patients adapt quickly. Our office also impresses upon the patients that ideal tooth movement is directly related to their cooperation with these elastics. In more than one instance, patients have started wearing double elastics per side on their own in hopes of accelerating treatment. You can spot this easily, as the increased vertical pull of the elastics may deepen the patient's bite or loosen the anchor molars.

We all know that better cooperation and improved mechanics speeds patients toward their debond appointment. Extraction cases can often be treated in 20 months or less with fewer appointments. Some cases can be handled in as few as 10 office visits.

As orthodontists, we strive for ideal case results. However, remember that improved treatment and office efficiency is directly related to the hours we work and our profit margin. The Tip-Edge Differential Straight-Arch® Technique can provide these goals for each and every one of us in the orthodontic field.

** Dr. Mele is an Assistant Clinical Professor at Temple University, where he teaches orthodontic residents Tip-Edge. He also has a private practice in Glenside, PA.*

Biomechanics Expert On Sliding Mechanics Appears Oblivious To Benefits of Tip-Edge Slot

In the May 2000 issue of the AMERICAN JOURNAL OF ORTHODONTICS AND DENTOFACIAL ORTHOPEDICS experts in various aspects of orthodontics were invited to share their thoughts. Under the heading "Orthodontic biomechanics: vistas from the top of a new century," Dr. Robert Kusy of the University of North Carolina zeroed in on sliding mechanics.

He claims little new has been accomplished through investigations by "luminaries of the art." Kusy's own 10-year study seemed to confirm what was already known. The source of major friction in sliding mechanics occurs during active configuration when both sides of the edgewise slot contact the archwire. This, of course, is true but with the introduction of the Tip-Edge archwire slot, should no longer be of any clinical significance to orthodontists.

The Tip-Edge archwire slot (which is also preadjusted) never achieves active configuration during sliding mechanics. In fact, it becomes more *passive* as the upper and lower surfaces of the slot move away from the archwire—not toward it. This new geometric relationship between the slot and the archwire eliminates most, if not all, the problems Kusy discusses.

During sliding the Tip-Edge slot does not close down on the archwire; there is no deformation of hard metallic alloys, no notching and no increased frictional problems from ceramic brackets or nickel containing archwires. Also because of this many of his other concerns about sliding me-

Continued on page 3 . . .

Q's and A's

Q. *When going into pre-two in an extraction case, do you just put the .016″ wire into the square tubes since there are no molar stops? Do you need to have the .022″ wire in before using E-Links® to close posterior spaces?* *Salt Lake City, UTAH*

A. That's what pre-two is all about—getting the brackets lined up with the square tube using the .016″ archwire so you can go into the heavier, .022″ archwire and start closing spaces with E-Links. Stage two is when you close the extraction spaces and you must have good bracket engagement on the .022″ archwire before going to E-Links. Sometimes you can start light (yellow) horizontal elastics with the .016″ archwire but E-Links are too heavy for the .016″ archwire and may cause the molars to rotate.

Q. *We have noticed that in the torque phase, we often get a central diastema in the maxillary arch using the Tip-Edge technique. Could you explain to us the possible biomechanical problem?* *Brussels, BELGIUM*

A. It is quite common to see space(s) open between maxillary anterior teeth when torquing in the third stage. This is especially true when the torquing is powered by Side-Winder springs operating against a full size, passive rectangular archwire.

The spaces are actually a positive sign. They indicate that the teeth are torquing, and as they do, their incisal edges move forward as the crowns rotate about the archwire. This moves them into a larger arc. Therefore, space must appear somewhere.

Of course, if it is concentrated in one place, the midline, the patient may not feel it is a positive, but rather a negative. Merely check to make sure the ends of the archwire are bent distal to the molar tubes then place an E-Link between the central incisors. This will close the space in the midline and create ½ size spaces mesial to the lateral incisors. This is good because the teeth need space along the archwire to upright mesiodistally from the Side-Winder spring forces. If they can't upright, there will be no torque.

Q. *I want to avoid patient discomfort. What is wrong with using undersize archwires during stage three—.020″ round or .019″ x .026″ rectangular?* *New York, NEW YORK*

A. The Tip-Edge archwire slots are relatively large (.024″-.026″) at the start of stage three. Therefore, a "full size" wire is actually undersize. There is no reason to use smaller archwires but there are many reasons ***not*** to use them.

First you will be losing molar torque control that you may need but not even realize. Of even more importance is the fact that, under the power of the Side-Winder springs, the individual teeth will overupright and undertorque in the presence of an undersize rectangular archwire. Overuprighting not only creates angulated roots, but tipped incisal edges and sometimes causes "black triangles" in the gingival embrasure areas.

When the teeth overupright, their archwire slots become effectively smaller making recovery by the placement of full size, leveling arches impossible. Side-Winder springs often need to be placed in reverse with nothing to stop overtipping if the patient misses an appointment. The final answer is, NEVER use undersize archwires when torquing or uprighting.

Truth in Packaging Finally Includes Elastics

In the past, intraoral elastics were only identified in one or two ways. The first was by indicating the inside diameter (I.D.) of the elastics in fractions of inches and the thickness of the cut, i.e., ¼″ light, 7/16″ heavy, etc. The second system was the listing of the force required to extend the elastic two or three times its diameter. Neither of these values can be used to accurately select an elastic to deliver a desired force when stretched between two points in the mouth.

Not only is the current practice of labeling elastics with 2 or 3 times force values worthless—it is misleading and can be detrimental to patient care. An elastic labeled "2 ounces" might deliver 6 ounces of force when used for Class II traction. The effect, especially in the Differential Straight-Arch Technique can be detrimental. Anchor molars may be loosened and/or anterior bites deepened.

TP has introduced Tru-Force™, a meaningful and practical force value identification system based on stretching elastics 20 and 30 millimeters. These commonly used intraoral distances have been applied to all sizes of elastics to provide a consistent and predictable force guide.

Tru-Force elastics are packaged in tamper-proof, zip lock bags.

To ensure a 2-ounce force in the beginning of treatment, a TP elastic labeled 2 ounces at 30 millimeters is selected. As treatment progresses and distances become shorter, elastics with 2- to 3-ounce Tru-Force values at 20 millimeters would be appropriate. With these Tru-Force values listed at both a 20- and 30-millimeter stretch on each elastic package, the use of a tension gauge at the chair should become less important.

Staff members should also be better able to provide patients with the correct size elastics to meet the force requirements established by the orthodontist. A chart listing all elastics by Tru-Force value, color and diameter is provided on the sides of TP elastic dispenser boxes.

Biomechanics Expert

. . . continued from page 2

chanics in practice, i.e., realigning and leveling, couples, clearance between archwire and slot, become irrelevant.

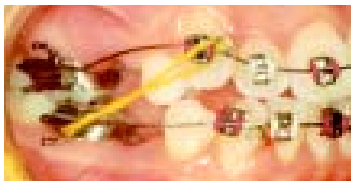
Kusy feels that in the near future the relationships between classical friction, binding, and notching will be understood in terms of materials and geometric parameters. Hello—Wake up! All these concerns have already been eliminated by the Tip-Edge archwire slot, as well as those relating to interbracket distance, bracket and engagement indices, and "present" torquing problems.

Unfortunately, Kusy's seeming ignorance or disregard for Tip-Edge is shared by many other "experts" on biomechanics. Perhaps its simplicity is a threat to their worlds of self-induced complexity.

CASE REPORT

A seventeen-year-old female presented with a Class I malocclusion. Her main concern was the "crooked front teeth." The four second premolars were extracted to alleviate an obvious arch length/tooth mass discrepancy. It was felt the removal of first premolars might retrude the lips of her already flat profile. Treatment was completed in 15 months.

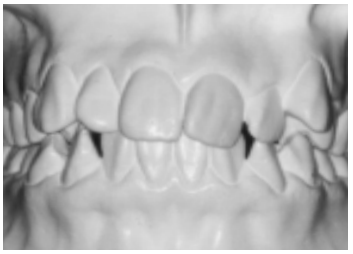
In retrospect the selective use of brakes and/or power tipping on the canines in stage two could have resulted in a better midline correction and buccal occlusion without prolonging treatment.

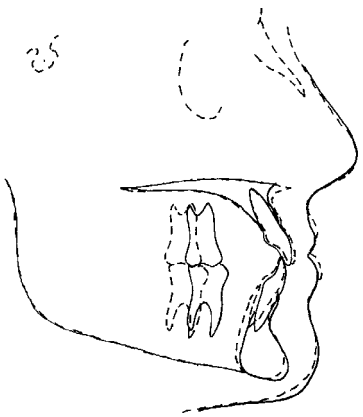


Classical start of treatment. High tensile stainless archwires (.016″) plus 2 ounce, 24 hour Class II elastics. Canines are free to tip and slide distally. Therefore, there is no need for vertical loops for anterior alignment.

Four months into treatment. Archwires are .022″ round and first premolars are bracketed. E-Links for space closure and Class II elastics to maintain the anterior teeth in edge-to-edge relationship.

A year into treatment and rectangular stage three has already been under way for three months. Side-Winder spring power produces both tip and torque corrections as required. Class II elastics worn as needed.





L.S. ..... Female, 17 Years
Extraction U55, L55
Archwires Used 6 (3U, 3L)
Adjustments 11
Treatment Time ..... 15 Months
Retention ..... Maxillary Retainer
Mandibular 3-to-3

Cephalometric Changes:

	Start-Dotted	Finish-Solid
1 A-Po	+1.0 mm	+1.0 mm
Wits	+2.5 mm	–0.5 mm
SN-MP	25.0°	25.0°
SNA	82.5°	80.0°
SNB	80.0°	80.5°
ANB	2.5°	-0.5°
1-SN	109.0°	106.0°

First 3-Year Course in Italy

The first 3-year clinical program on the Tip-Edge appliance conducted by Dr. Achille Farina, coordinator of the study group on the Tip-Edge appliance of the Italian Society of Orthodontics, ended in September 1999.

The course was organized by the "Centro Studie Ricerche di Ortodonzia" at La Spezia, Italy. It was unique because for the first time in Italy the participants have been educated on both the standard edgewise and new Tip-Edge appliances.

Along with Dr. Farina, who covered the Differential Straight-Arch Technique, the instructors for the edgewise standard program were Drs. Silvia Allegrini and Mauro Cozzani, both Masters of Science in Orthodontics at Boston University. The course was comprised of both lectures and typodont instruction for the first year. During the second and third year the participants treated patients with both techniques.

Dr. Achille Farina (back row, center) also just completed an Italian version of the Tip-Edge video with his own treated cases. Copies can be obtained from TP Italia, www.tpitalia.com, fax number 390-35-30.02.12.

Brazilian Course Utilizes Tip-Edge Brackets on Canines Only

Drs. Seiti Ishi and Messias Rodrigues gave a course in October 1999 in Sao Paulo, Brazil. It was held at the Sociedade Paulista de Ortodontia's (SPO) main office. Dr. Rodrigues showed treatment using Tip-Edge brackets on the canines only. Conventional, preadjusted edgewise brackets were placed on all other teeth.

Dr. Jorge Catarcione, President of the Brazilian Tip-Edge Association, was invited to participate. Dr. Ishi presented some cases of pure, 100 percent Tip-Edge treatment.

Members at the Sociedade Paulista de Ortodontia (SPO). Dr. Jorge Catarcione (standing at left) of the Tip-Edge Brazilian Association. Dr. Seiti Ishi and Dr. Messias Rodrigues (in center)—October 1999.

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