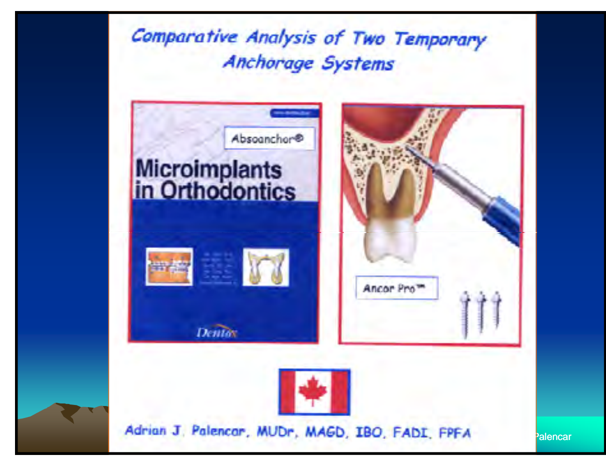


With the invention and development of the Temporary Anchorage Device (TAD), a.k.a. Mini-screw, Micro-screw, Mini-implant, Micro-implant, we are able to achieve "ABSOLUTE" MAXIMUM ANCHORAGE

Dr. Adrian J Palencar

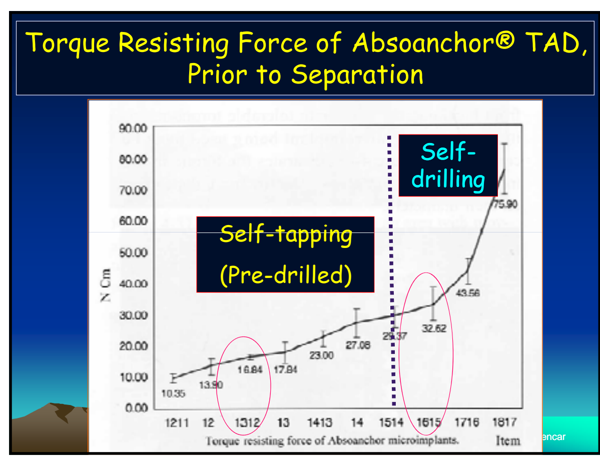
ABSOLUTE ANCHORAGE???

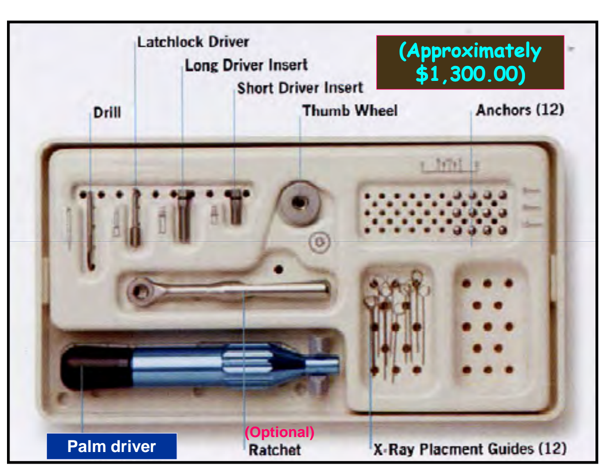
According to the evidence based research, there is a definite displacement of the TAD when applying the force in the neighborhood of 0.5 – 1.5 mm, depending on:

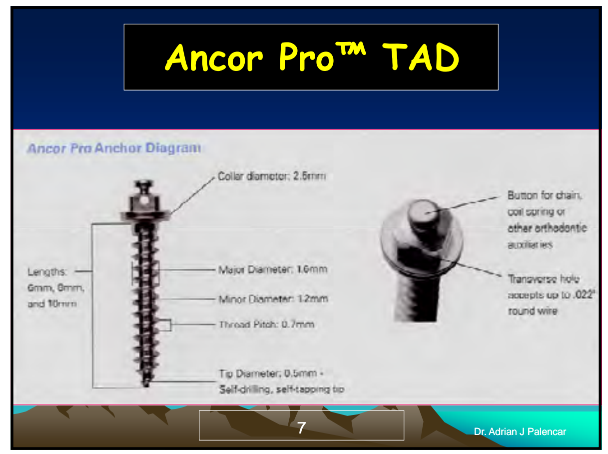
- The size of the TAD
- Thickness of the cortical bone
- The amount and direction of the force
- Length of time the TAD is loaded

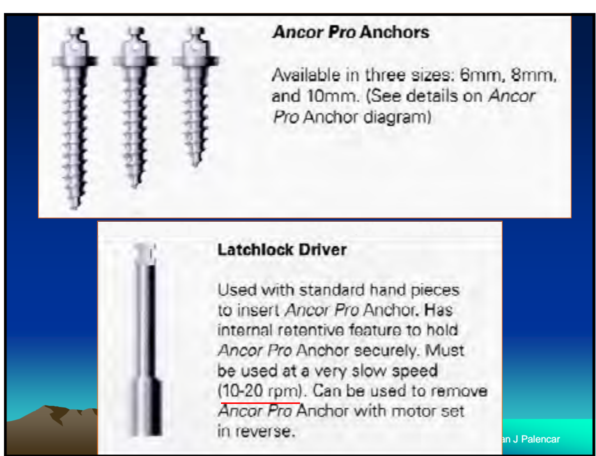
4

Dr. Adrian J Palencar









Patient FAQ

What is a TAD?

A TAD is a miniature screw that we position in the mouth. It serves as an anchor for moving specific teeth in the most controlled and predictable way possible. TADs are made of sterile medical-grade titanium alloy. They eliminate cumbersome appliances (e.g., headgear) and allow us to treat certain cases that were nearly impossible before this technique was refined. TADs also allow us to treat cases better and faster that ever before. TADs are truly revolutionizing orthodontic treatment.

How exactly is the TAD positioned?

After numbing the area where the TAD is to be placed, we use gentle pressure to insert it through the gums and into the bone between your teeth.

Having a TAD placed sounds painful. Should I be worried?

Absolutely not! While it's normal to assume that the procedure will be painful, it is actually pain-free. You may feel some slight pressure during the insertion but no pain. The entire procedure takes only a few seconds.

Will it hurt after the anesthetic wears off?

No. Some patients say they feel a little pressure for a short period afterward. Only a few patients have reported needing to use an over the counter medication such as acetaminophen or ibuprophen.

What if it aches the next day?

There is no call for alarm. Minor aching associated with new tooth movement is not only normal, but is expected. However, if you have concerns, simply call our office and we'll make an appointment to see you. We'll probably suggest that you take an over the counter remedy to lessen the ache.

What if the TAD or its attachment causes an irritation inside my cheeks or lips?

For immediate relief, you may be able to cover the attachment that is causing the irritation with a cotton swab or a small amount of wax. Call the office or the after hours number we provide and we'll give you instructions and/or make an appointment to see you.

Patient FAQ Cont'd

What if the TAD comes loose?

On occasion, a TAD might become a little loose. In most cases this minor mobility is nothing to be concerned about; however, if you feel the TAD is excessively loose, or it is causing you discomfort, call the office and we'll make an appointment to see you to determine if the amount of give is normal.

How long will the TAD need to stay in place?

As the name implies, the anchorage device is temporary and is typically removed in a few months when it is no longer needed to assist in tooth movement.

Will it hurt when you remove it?

No. Before we remove it we'll place numbing gel around the TAD and then back it out gently. The entire process takes only a few seconds.

I've never heard of TADs before. Are they new?

Not really. Dentists have used TADs since 1983 and oral surgeons and orthopedists have used miniature screws like this for decades longer. Recent refinements in the devices and the procedures for their use have propelled the application of TADs to a heightened level in orthodontics. With TADs, orthodontic treatment options have never been greater. We are proud to be at the forefront of this exciting technology and feel confident that your experience with it will be comfortable and the results exemplary.

Informed consent for placement of Temporary Anchorage Device (TAD)

Name of the patient_______________

I accept for myself (or on behalf of my dependent) proposed treatment by Dr.________________, which includes the use of TADs (mini screws) to help with positioning of teeth.

I understand that TADs will be used as an anchor to help stabilize, or for movement of a tooth or group of teeth. It was explained to me that TADs will be inserted into my palate, behind my last tooth or into the space between upper and lower teeth.

It was explained to me that the TADs will be inserted with the aid of the local anesthetic. The insertion procedure was explained to me thoroughly and I understand that the absolute success of all TADs cannot be guaranteed.

Some complications may occur:

1. Discomfort, mild pain and swelling in the area
2. Inflammation or infection of the insertion site
3. Mobility or loss of TAD
4. Penetration of TAD to the maxillary sinus
5. Injury of the nerve
6. Fracture of TAD
7. Damage of the dental roots or adjacent structures

I understand the content of this informed consent. I had the opportunity to ask questions and all of my questions were answered.

Date: ______________

Signature of the patient

Signature of the parent/guardian

Name of the parent/guardian

Information for the Patient:

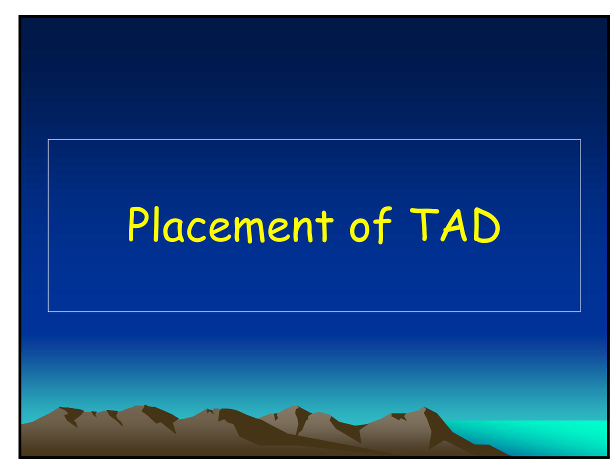
TEMPORARY ANCHORAGE DEVICES (TADs)

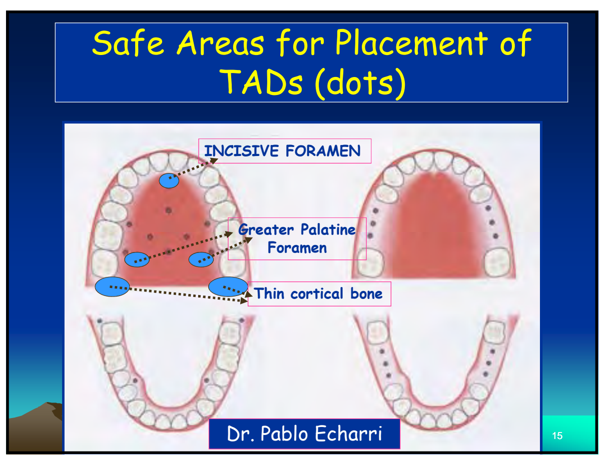
TADs are mini screws that are inserted in the maxilla or the mandible and they serve as support to the movement of the teeth to be corrected during orthodontic treatment.

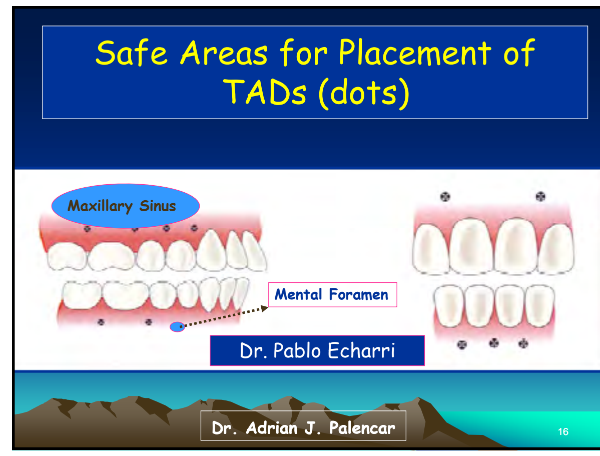
For effective dental movement, it is necessary to have a point of support, and occasionally the rest of the teeth do not offer sufficient resistance. TADs are made of completely biocompatible material such as titanium, which is used for dental prosthesis or in other medical sciences such as traumatology.

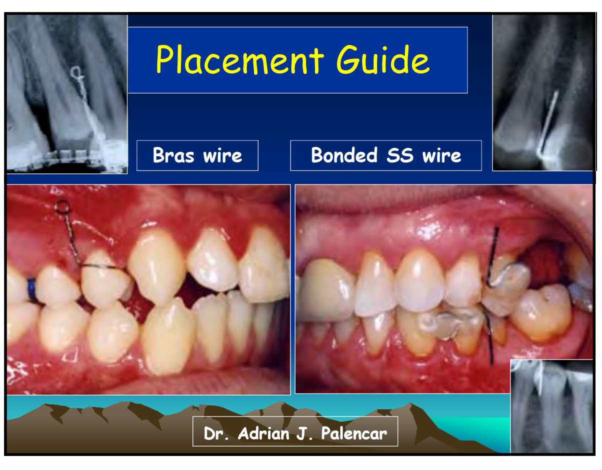
The procedure of insertion is very fast and painless, and is carried out with local anaesthesia. However, in most cases, it can be done without anaesthesia. Smokers or mouth breathers are more prone to infection or inflammation. It is very important to maintain good oral hygiene and to also use antiseptic mouthwash after eating.

If the visible part of TADs provokes discomfort in the lips, cheeks or tongue, it can be covered with wax or dental silicon. If you notice inflammation around the micro implant or any mobility, please contact our office.


Placement of TAD


Safe Areas for Placement of TADs (dots)
INCISIVE FORAMEN
Greater Palatine Foramen
Thin cortical bone
Dr. Pablo Echarri
15

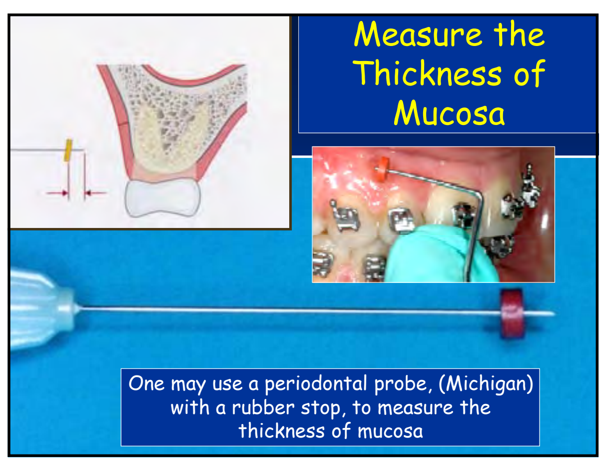

Safe Areas for Placement of TADs (dots)
Maxillary Sinus
Mental Foramen
Dr. Pablo Echarri
Dr. Adrian J. Palencar
16

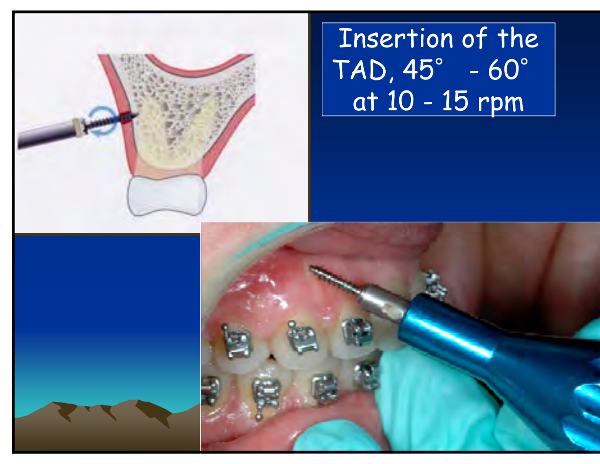

Placement Guide
Bras wire
Bonded SS wire
Dr. Adrian J. Palencar

Disinfection
PERIDEX

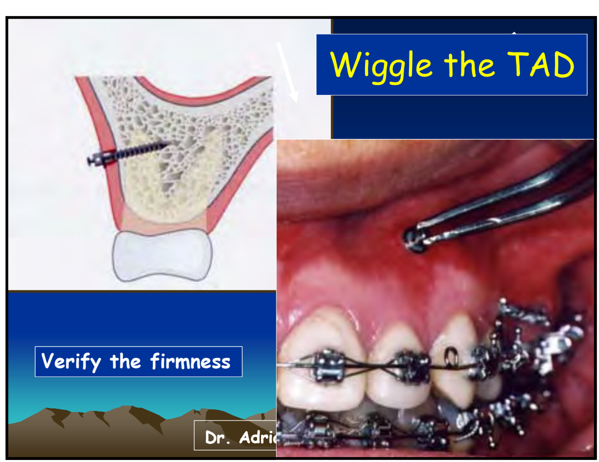
Topical Anesthetic

Infiltration with a Rubber Stop on the Needle
20

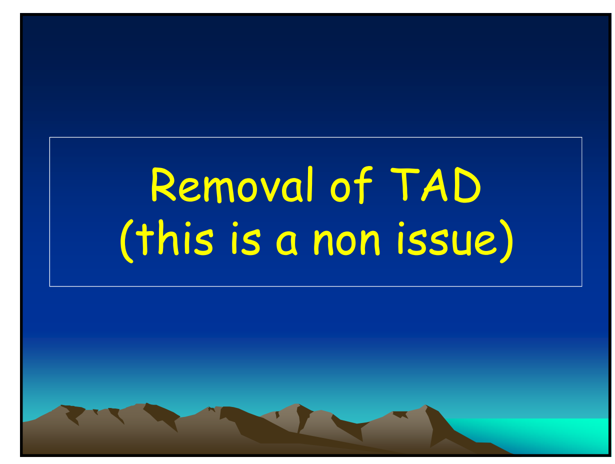

Measure the Thickness of Mucosa
One may use a periodontal probe, (Michigan) with a rubber stop, to measure the thickness of mucosa


Insertion of the TAD, 45° - 60° at 10 - 15 rpm

Tap the TAD
Dr. Adrian

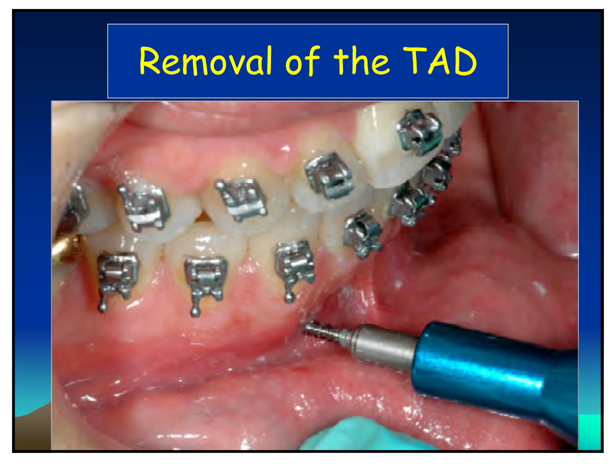

Wiggle the TAD
Verify the firmness

"You should check your e-mails more often. I fired you over three weeks ago."
Dr. Adrian J. Palencar
25


Removal of TAD
(this is a non issue)

Disinfection
PERIDEX

Topical Anesthetic
Dr. Adrian J. Palencar
28

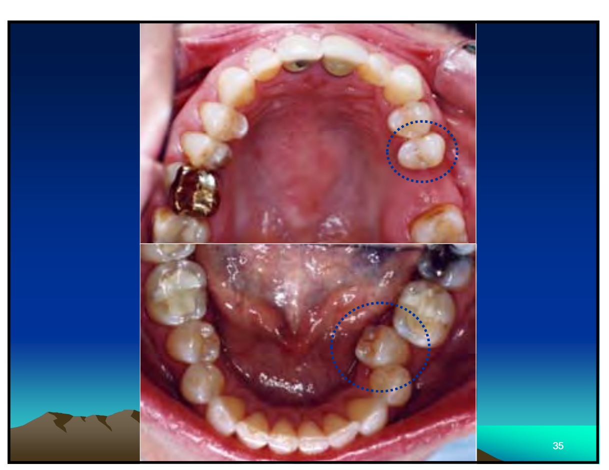

Removal of the TAD

Immediately Post-removal of TADs

Karen Robson
Age: 45.0
Chief Complaint
• I do not like the left side of my mouth
• Food gets impacted between my lower back teeth
• I would like to have a bridge placed on my upper left side
Dr. Adrian J. Palencar
32

Dr. Adrian J. Palencar
33

Dr. Adrian J. Palencar
34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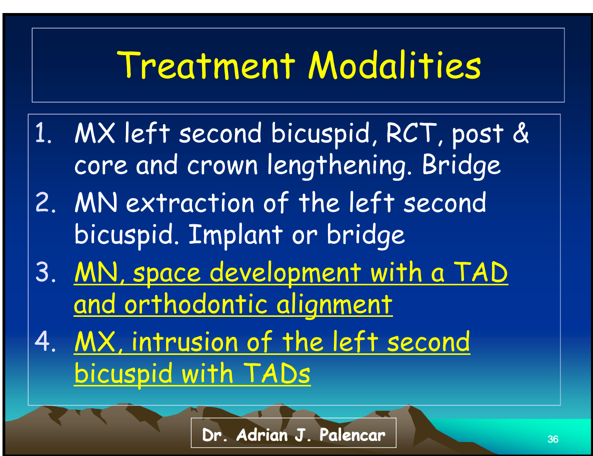
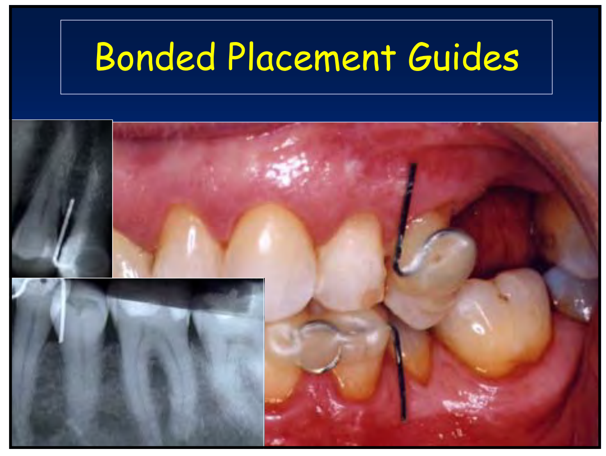
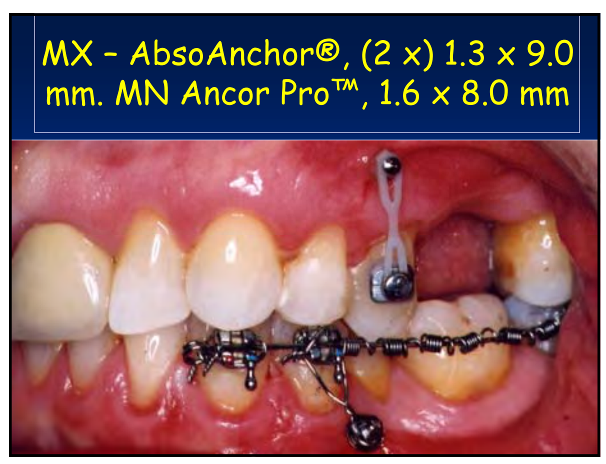
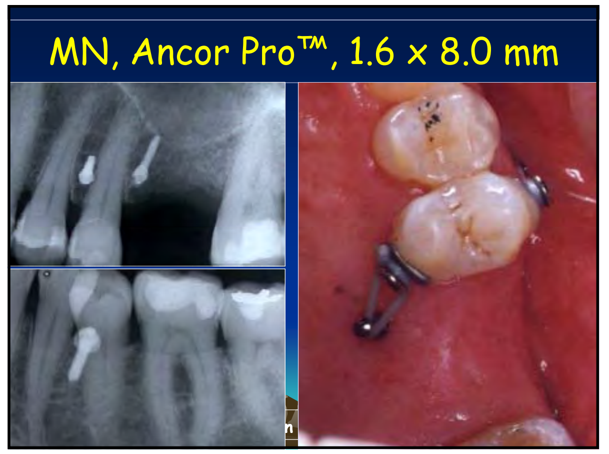
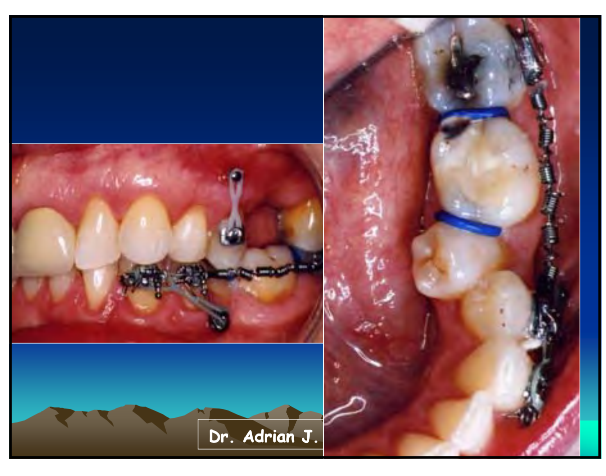

Treatment Modalities
1. MX left second bicuspid, RCT, post & core and crown lengthening. Bridge
2. MN extraction of the left second bicuspid. Implant or bridge
3. MN, space development with a TAD and orthodontic alignment
4. MX, intrusion of the left second bicuspid with TADs
Dr. Adrian J. Palencar
36


Bonded Placement Guides


MX – AbsoAnchor®, (2 x) 1.3 x 9.0 mm. MN Ancor Pro™, 1.6 x 8.0 mm


MN, Ancor Pro™, 1.6 x 8.0 mm

018 CNA® and
Open coil spring
Dr. Adrian J. P


Dr. Adrian J.

Dr. Adrian J. Palenca

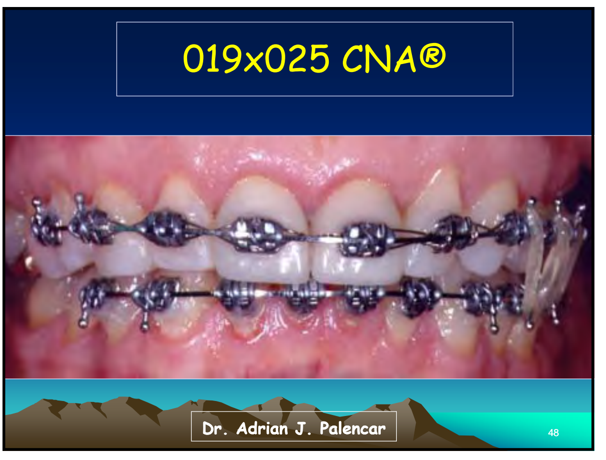
Dr. Adrian J. Palencar
43

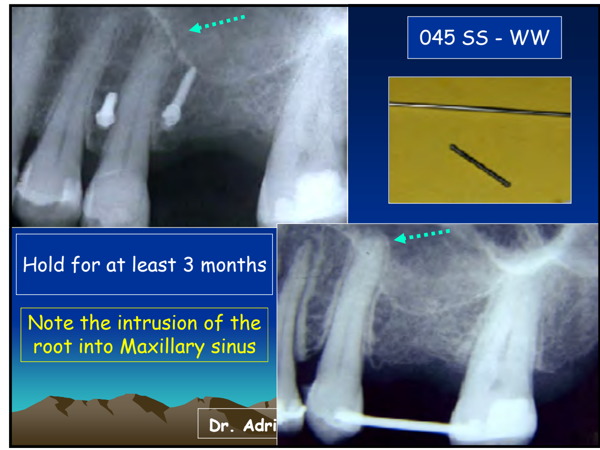
Dr. Adrian J.

Dr. Adrian J. Palencar
45

018 NiTi Biokinetix®
Dr. Adrian J. Palencar
46

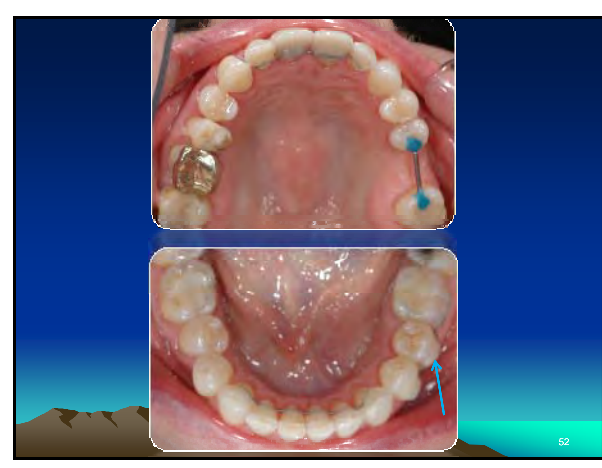
018 NiTi Bio Kinetix®
Dr. Adrian J. Palencar
47


019x025 CNA®
Dr. Adrian J. Palencar
48


045 SS - WW
Hold for at least 3 months
Note the intrusion of the root into Maxillary sinus
Dr. Adri

045 SS WW & Blue Composite Core Material
Adrian J. Palencar
50

Dr. Adrian J. Palencar
51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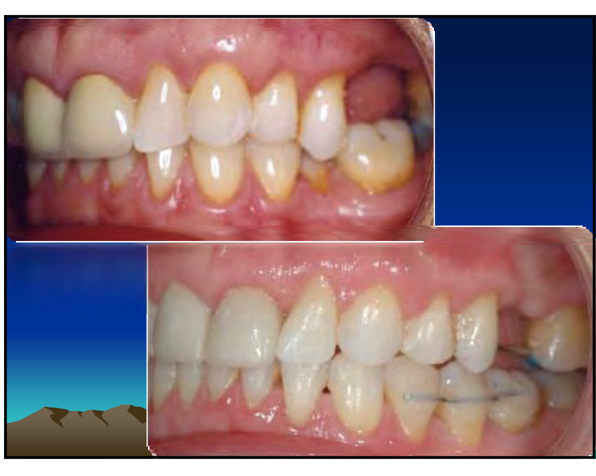
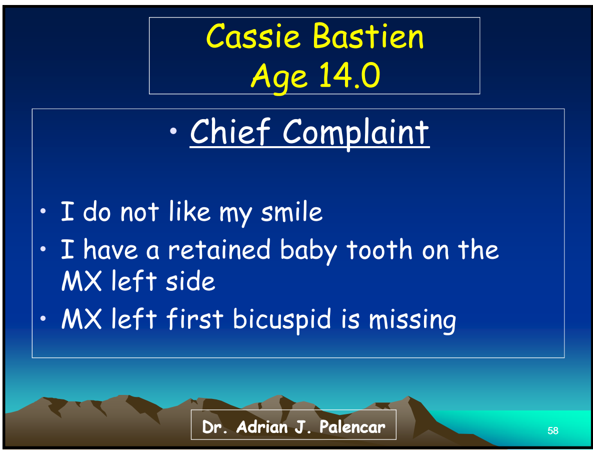


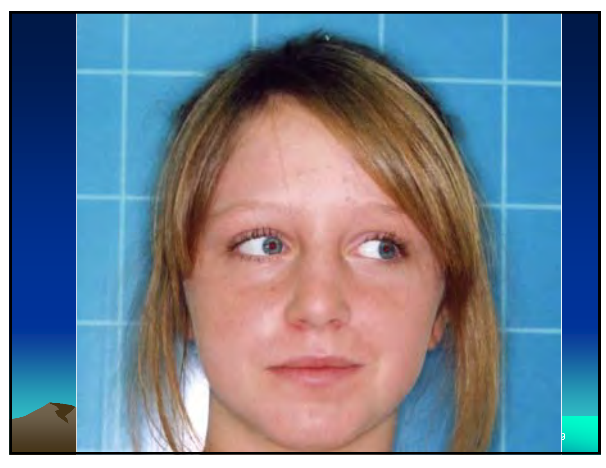
Final images
54

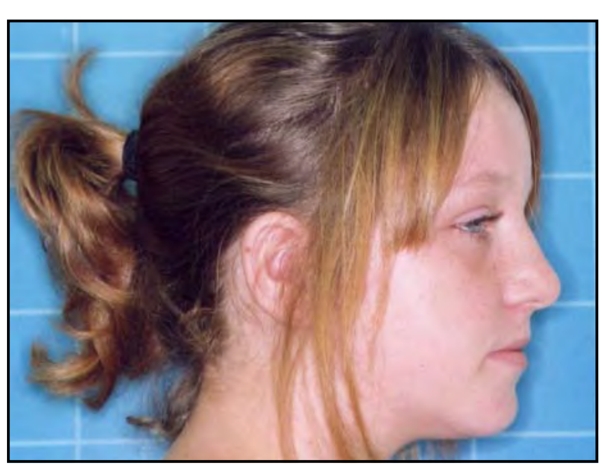
Dr. Adrian J. Palencar
55

OUR COMPUTERS ARE DOWN, SO WE HAVE TO DO EVERYTHING MANUALLY...
Dr. Adrian J. Palencar
56

LIPS THAT TOUCH LIQUOR SHALL NOT TOUCH OURS
1919 Prohibition
57


Cassie Bastien
Age 14.0
• Chief Complaint
• I do not like my smile
• I have a retained baby tooth on the MX left side
• MX left first bicuspid is missing
Dr. Adrian J. Palencar
58





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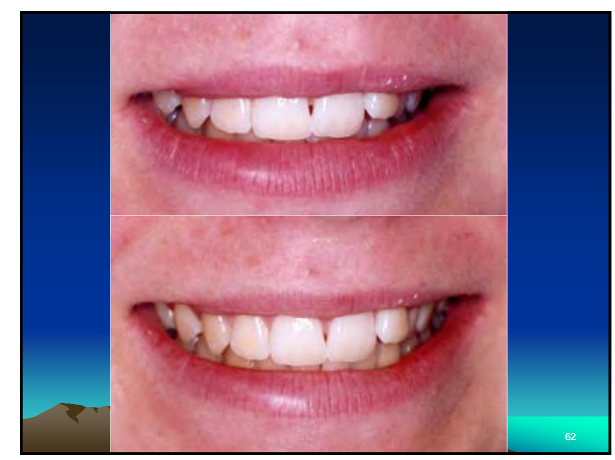
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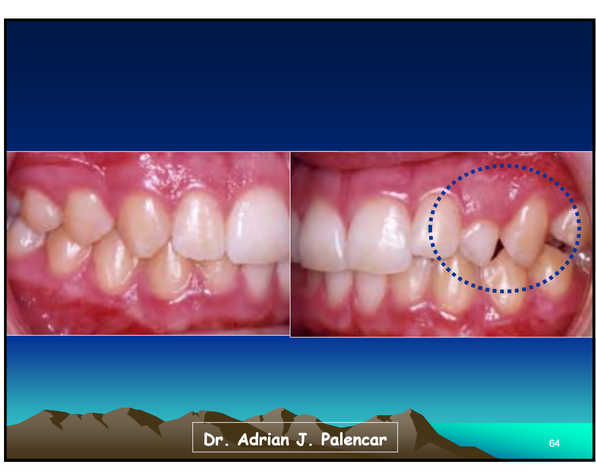
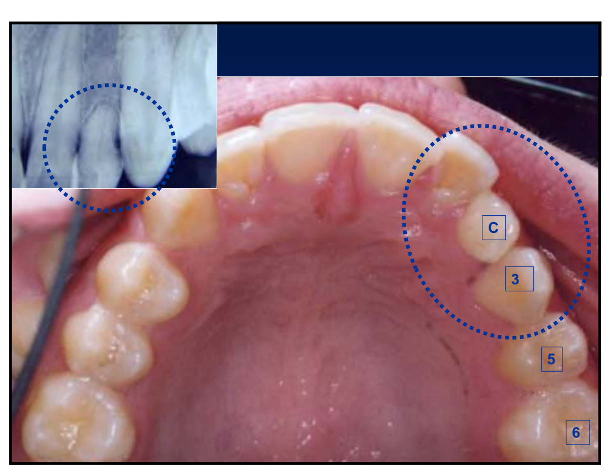
63


Dr. Adrian J. Palencar
64


C
3
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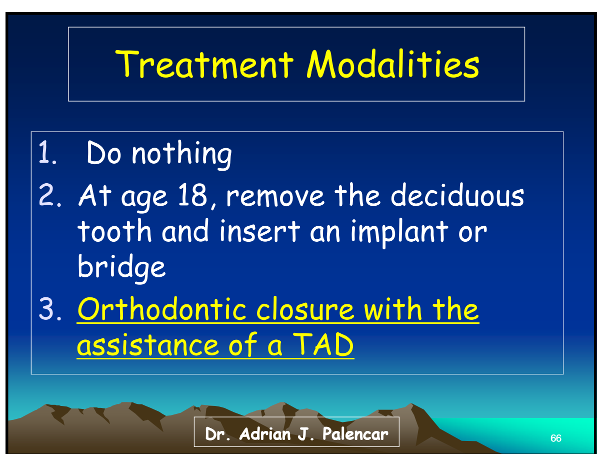
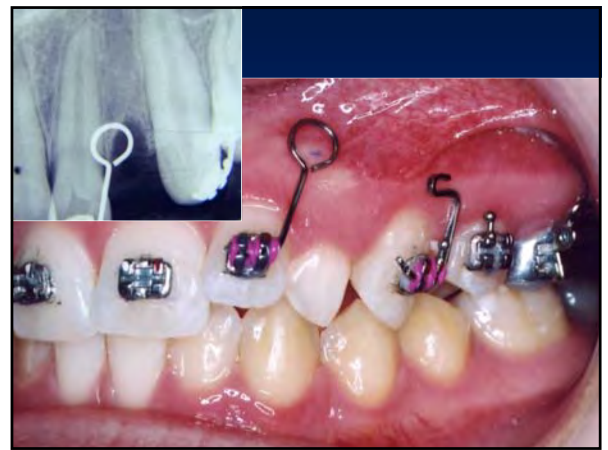
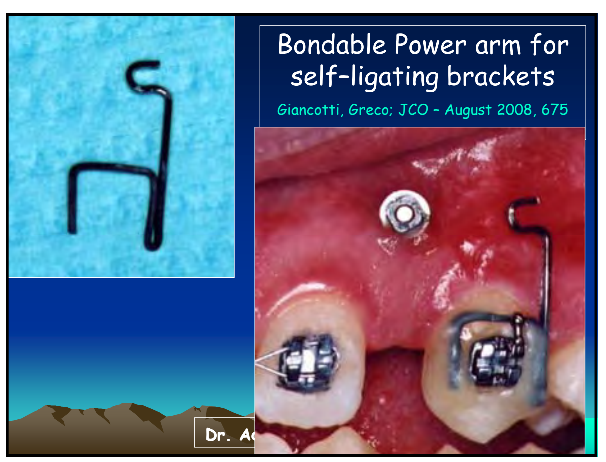
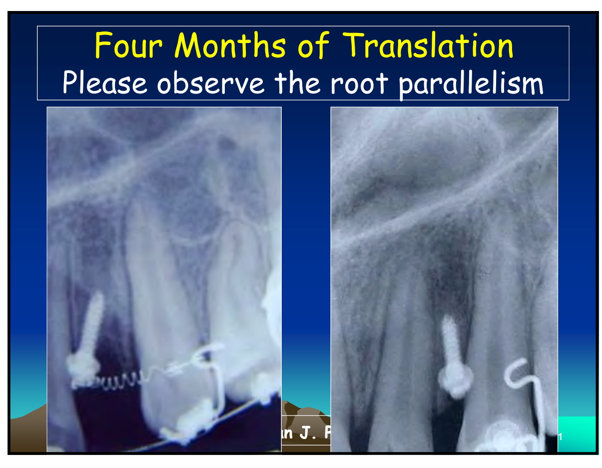

Treatment Modalities
1. Do nothing
2. At age 18, remove the deciduous tooth and insert an implant or bridge
3. Orthodontic closure with the assistance of a TAD
Dr. Adrian J. Palencar
66

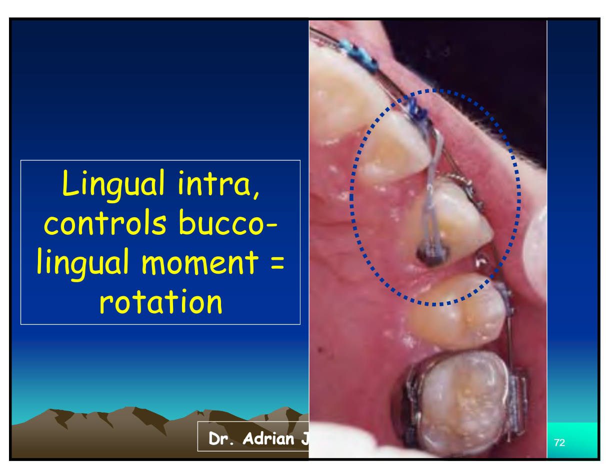


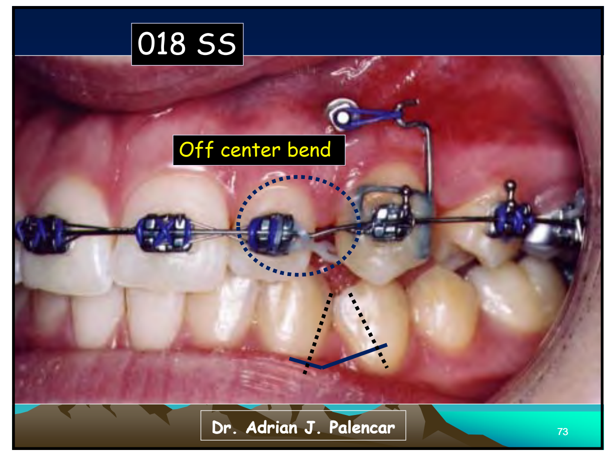
Ancor Pro™, 1.6 x 8.0 mm Closing coil spring – 150 grams

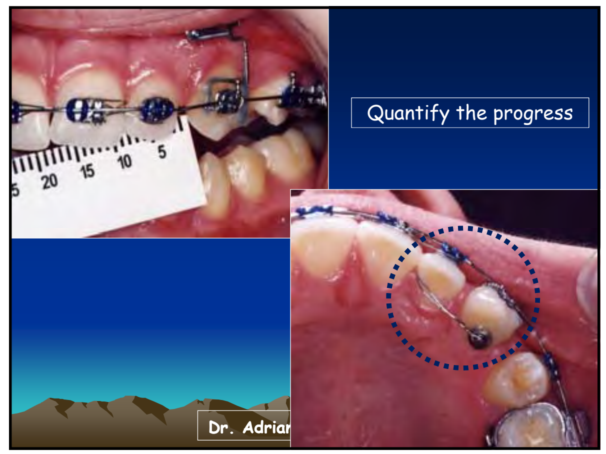

Bondable Power arm for self-ligating brackets
Giancotti, Greco; JCO – August 2008, 675

Quantify the progress
25 20 15 10 5
30 25 20 15 10 5
15 10 5
Dr. Adrian J. Palencar
70

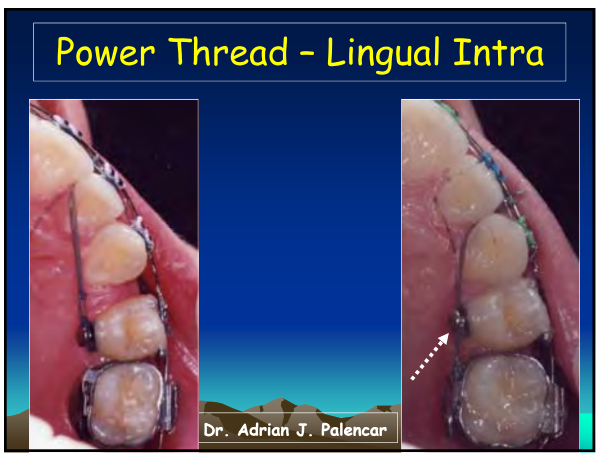

Four Months of Translation
Please observe the root parallelism


Lingual intra, controls bucco-lingual moment = rotation
72


018 SS
Off center bend
Dr. Adrian J. Palencar
73

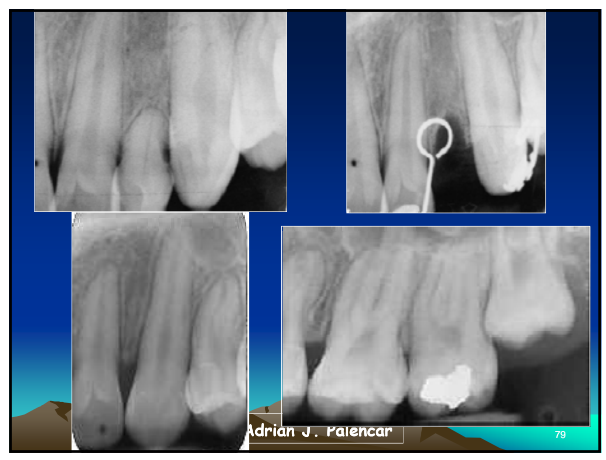

Quantify the progress
20 15 10 5
Dr. Adrian

018 SS
Dr. Adrian J. Palencar
75


Power Thread – Lingual Intra
Dr. Adrian J. Palencar

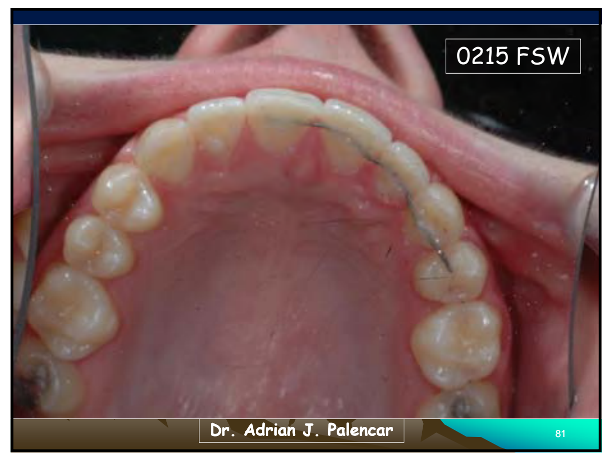
018 CNA®
Soft tissue shield

Lateral tongue thrust
3 x ¼" 6.5 oz. Rhino, Cross



Adrian J. Palencar
79

QCM Retainer

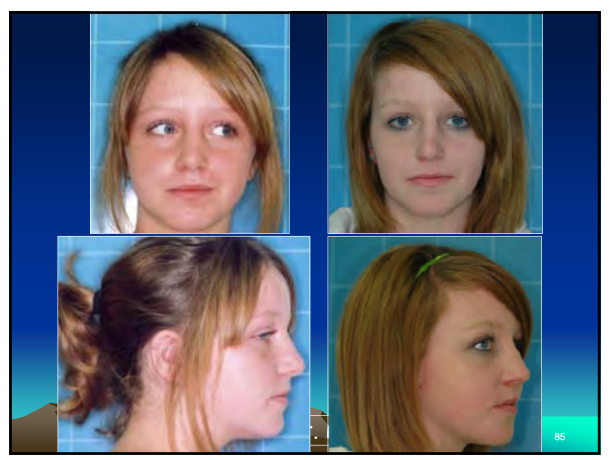


0215 FSW
Dr. Adrian J. Palencar
81

82

Dr. Adrian J. Palencar
83

Dr. Adrian J. Palencar
84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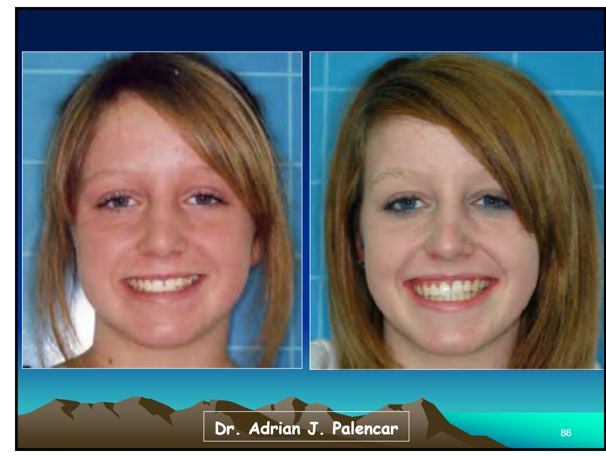
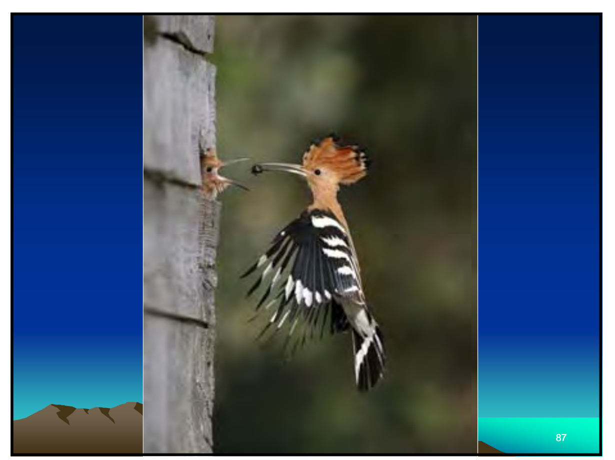
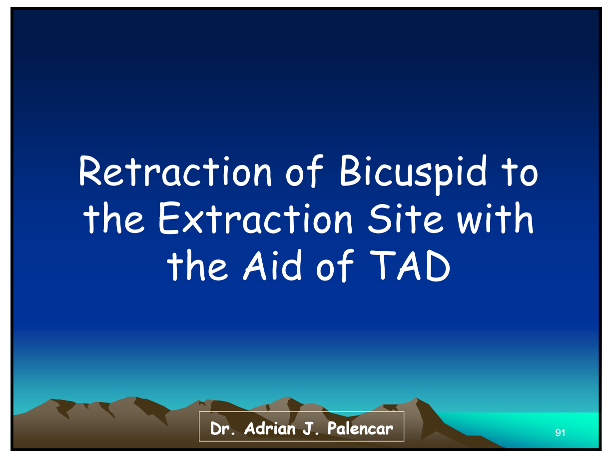

Dr. Adrian J. Palencar
86

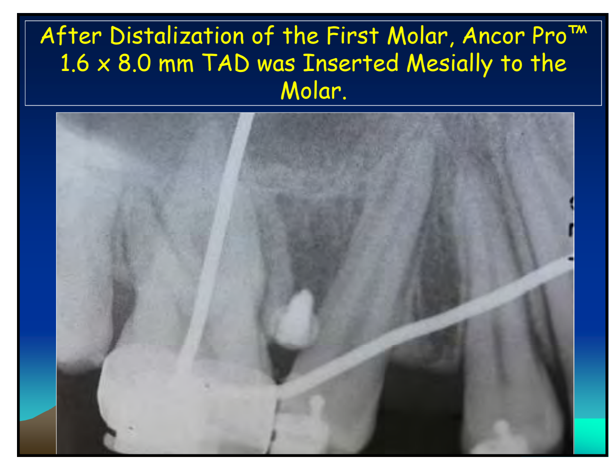

87

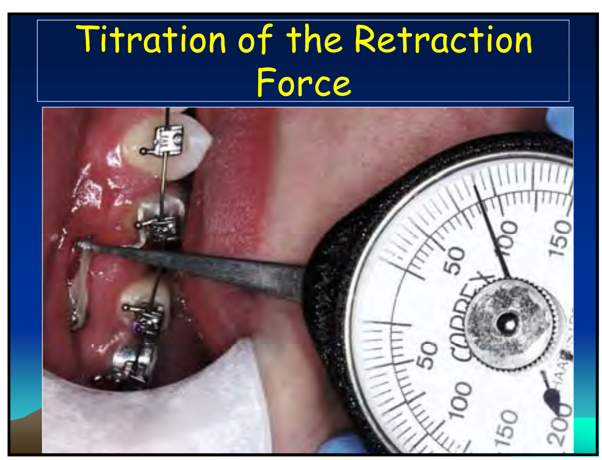
Excessive Maxillary Gingival Display
Dr. Adrian J. Palencar
88

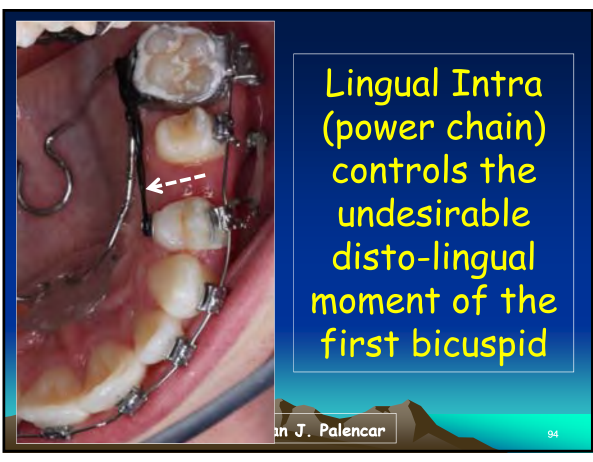
Titration of Intrusive Force

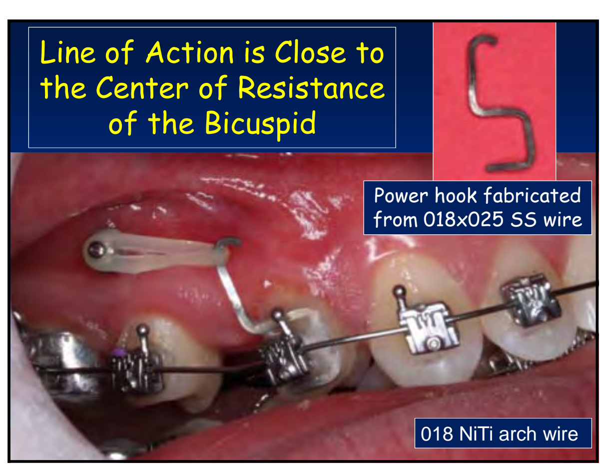
Excessive Labial Moment (Flaring) is Neutralized by Activation of 019x025 SS Key-hole Wire
Dr. Adrian J. Palencar
90

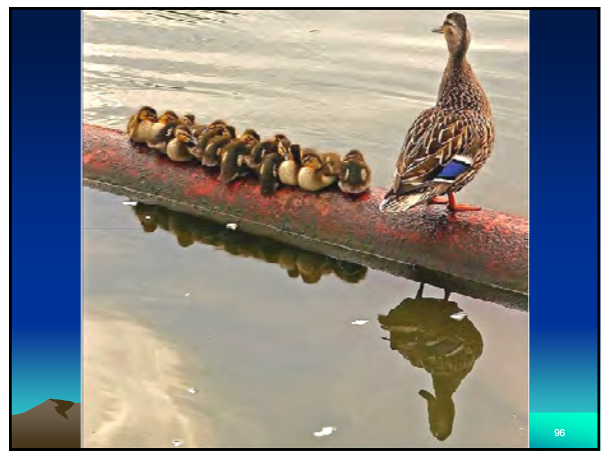

Retraction of Bicuspid to the Extraction Site with the Aid of TAD
Dr. Adrian J. Palencar
91

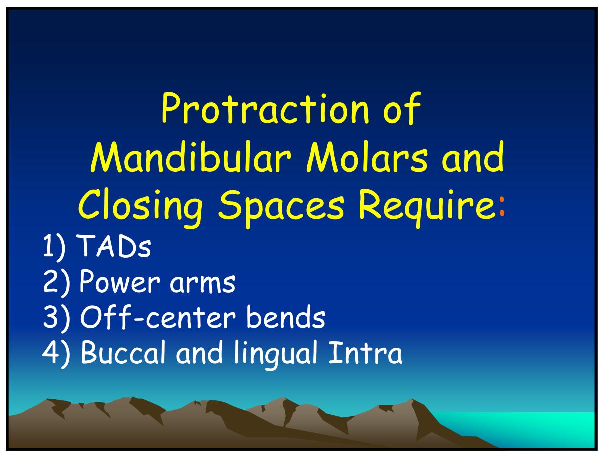

After Distalization of the First Molar, Ancor Pro™ 1.6 x 8.0 mm TAD was Inserted Mesially to the Molar.


Titration of the Retraction Force

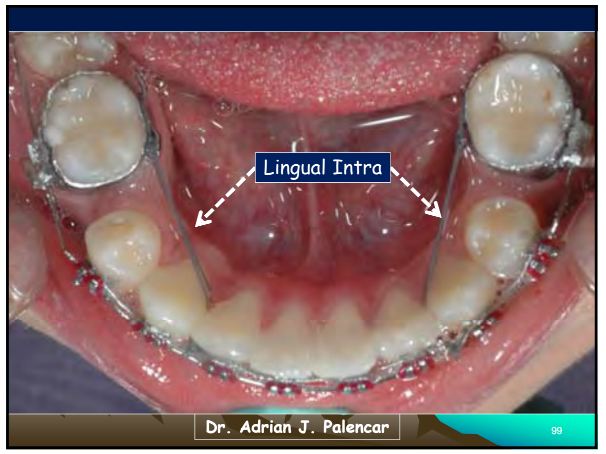

Lingual Intra (power chain) controls the undesirable disto-lingual moment of the first bicuspid
94

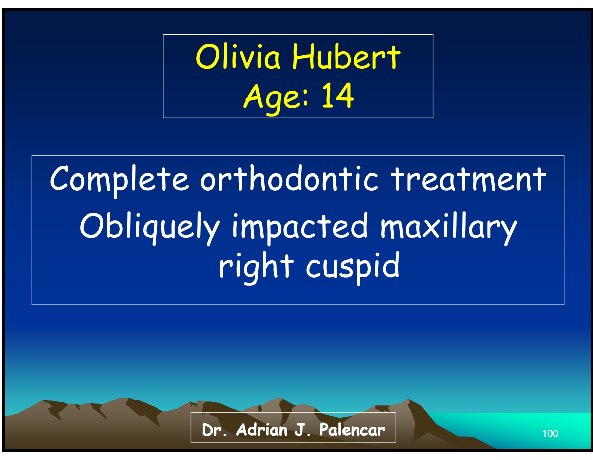

Line of Action is Close to the Center of Resistance of the Bicuspid
Power hook fabricated from 018x025 SS wire
018 NiTi arch wire

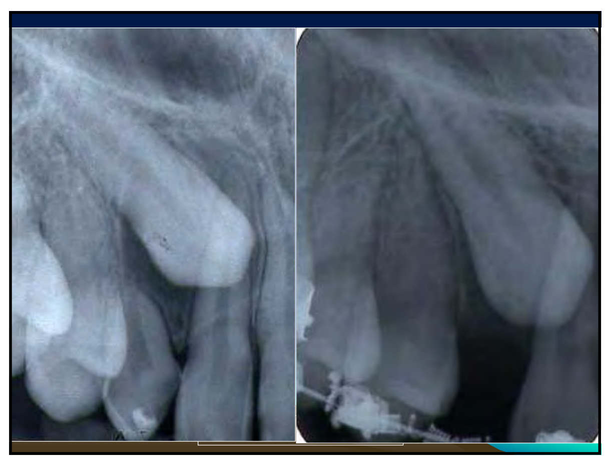

96


Protraction of
Mandibular Molars and
Closing Spaces Require:
1) TADs
2) Power arms
3) Off-center bends
4) Buccal and lingual Intra

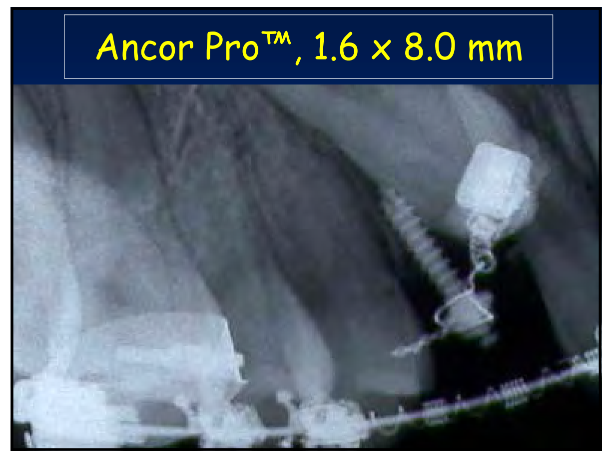
Dr. Adrian J. Palencar
98


Lingual Intra
Dr. Adrian J. Palencar
99

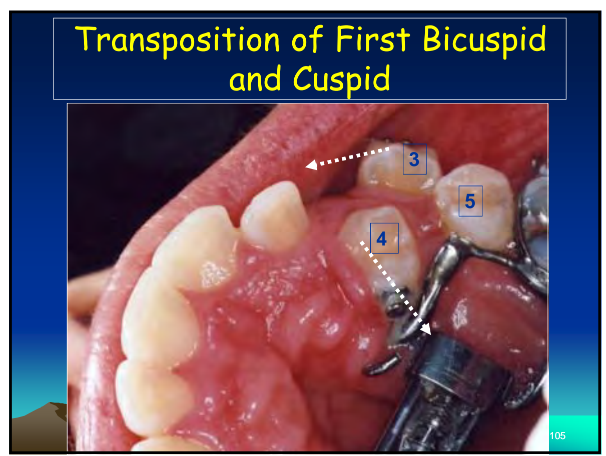

Olivia Hubert
Age: 14
Complete orthodontic treatment
Obliquely impacted maxillary
right cuspid
Dr. Adrian J. Palencar
100



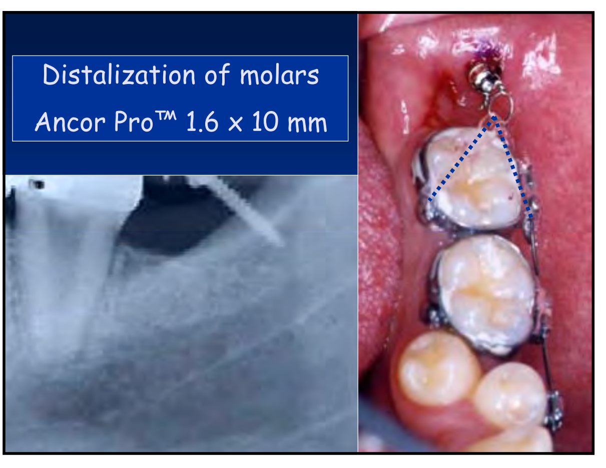
Ancor Pro™, 1.6 x 10.0 mm
Open Coil Spring 150 grams

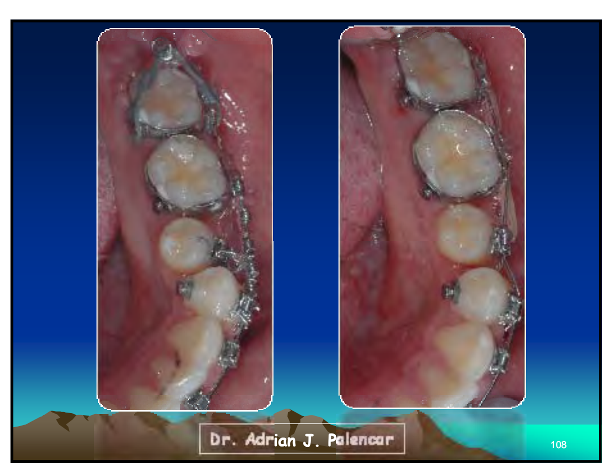

Ancor Pro™, 1.6 x 8.0 mm

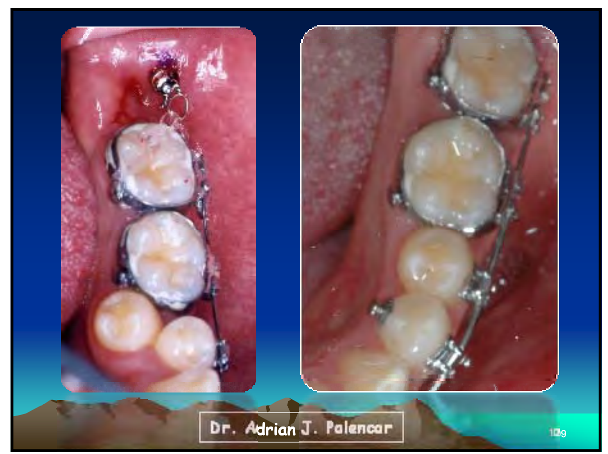
019x025 CNA® and OCS
Dr. Adrian J. Palencar
104

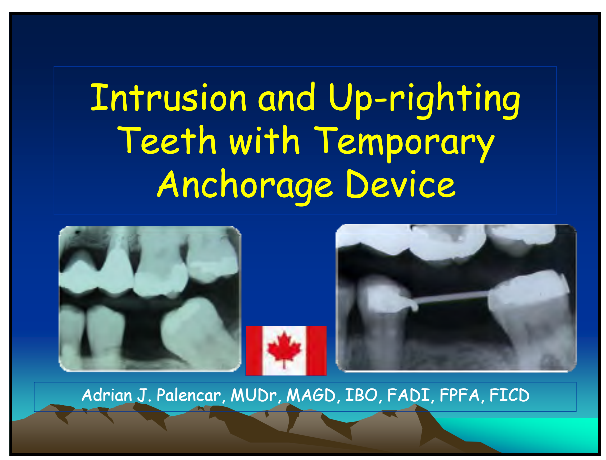

Transposition of First Bicuspid and Cuspid
3
5
4
105

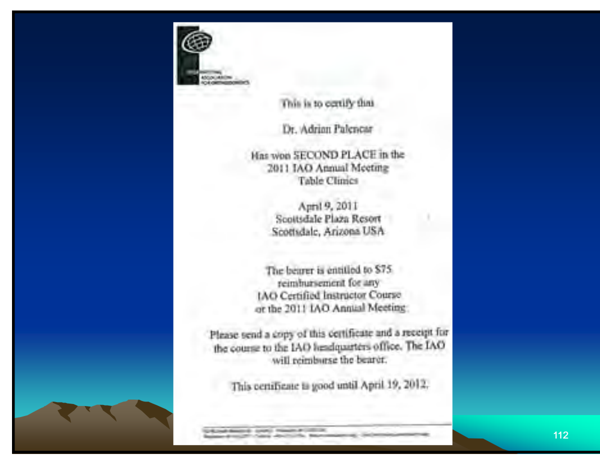
Ancor Pro™ 1.6 x 8.0 mm
3
5
4
106


Distalization of molars
Ancor Pro™ 1.6 x 10 mm


Dr. Adrian J. Palencar
108



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April 9, 2011
Scottsdale Plaza Resort
Scottsdale, Arizona USA

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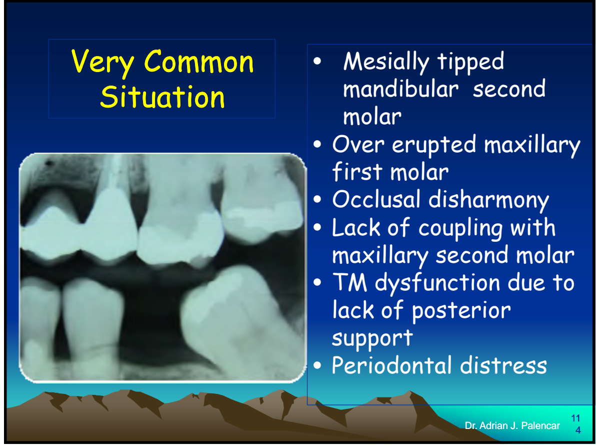
FEATURE

Intrusion and Up-righting Teeth for Fixed Prosthesis with Temporary Anchorage Device



Ancor Pro™, 1.6 x 10 mm
Dr. Adrian J. Palencar
115

Retainer for a Bridge
040 SS Wire
Sandblast the ends of the wire
Dr. Adrian J. Palencar
116

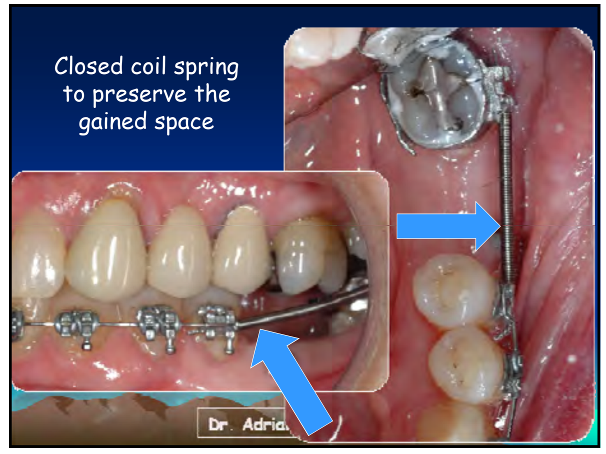
Molar Band .032 SS Wire and Bondable Sandblasted Metal Pad
117

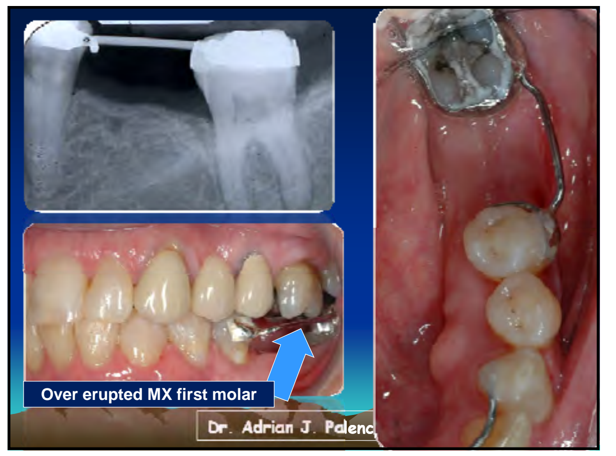
Retainer for an Implant
.032 SS Wire
Dr. Adrian J. Palencar
118

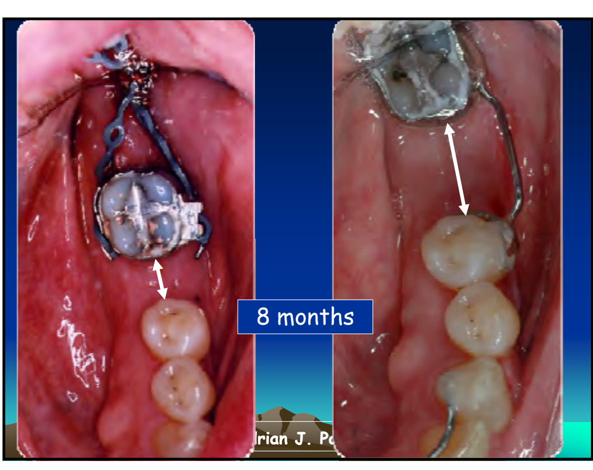
Two Ancor Pro™ 1.6 x 8.0 mm
TADs
Dr. Adrian J. Palencar
119

Bond-A-Braid bonded with Tetric Flow
Hilgers
Bond-A-Braid™
Dr. Adrian J. Palencar
120

Ancor Pro™, 1.6 x 10 mm
Dr. Adrian J. Palencar

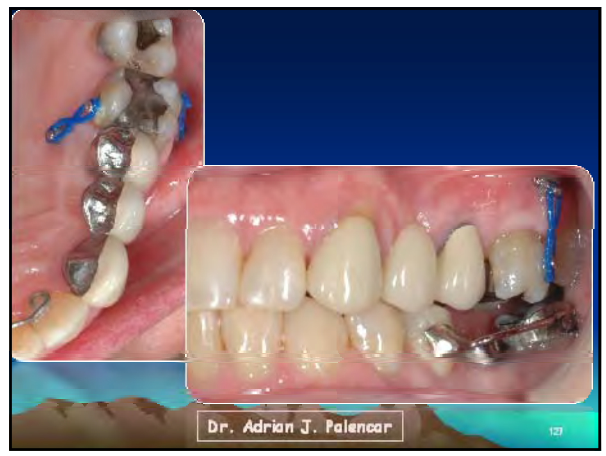

Closed coil spring
to preserve the
gained space
Dr. Adria

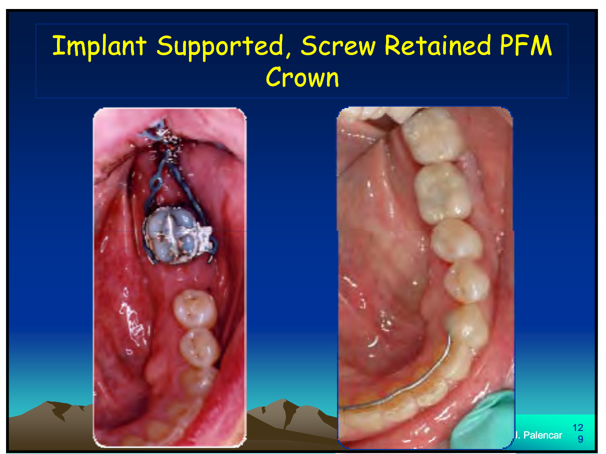

Over erupted MX first molar
Dr. Adrian J. Palenc

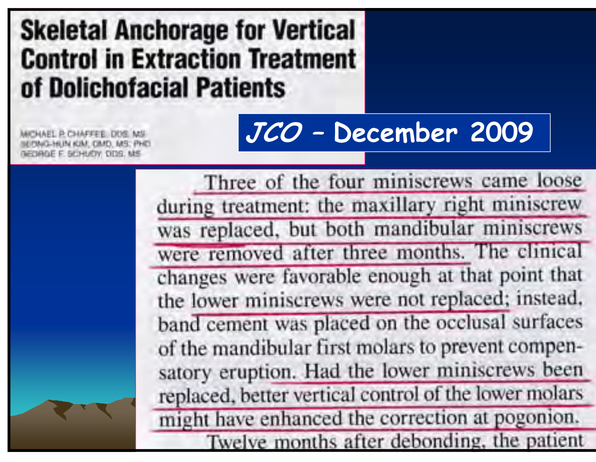

8 months
rian J. Pa

Over erupted MX first molar
Dr. Adrian J. Palen

Ancor Pro™ – 1.6 x 8.0 mm
Dr. Adrian J. Palen





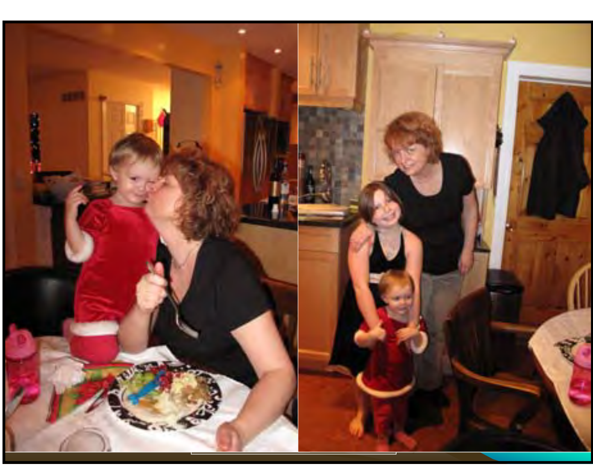


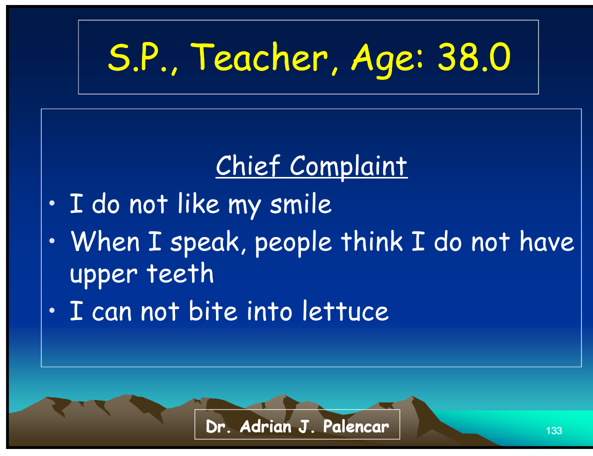
Skeletal Anchorage for Vertical Control in Extraction Treatment of Dolichofacial Patients

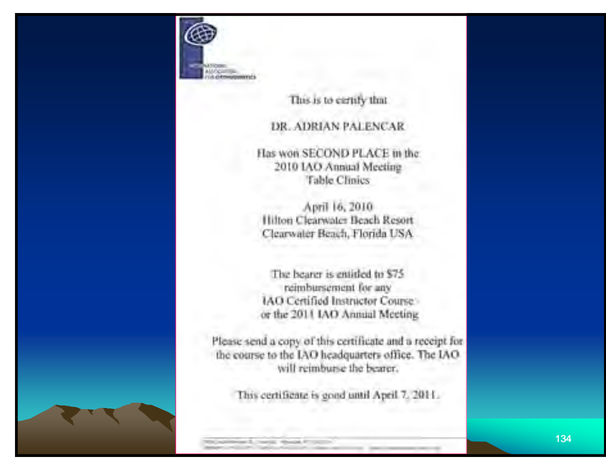
JCO – December 2009

Three of the four miniscrews came loose during treatment: the maxillary right miniscrew was replaced, but both mandibular miniscrews were removed after three months. The clinical changes were favorable enough at that point that the lower miniscrews were not replaced; instead, band cement was placed on the occlusal surfaces of the mandibular first molars to prevent compensatory eruption. Had the lower miniscrews been replaced, better vertical control of the lower molars might have enhanced the correction at pogonion.

Twelve months after debonding, the patient







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Clearwater Beach, Florida USA

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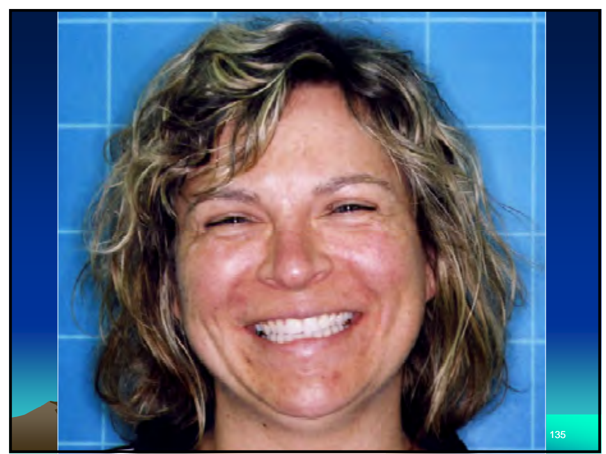
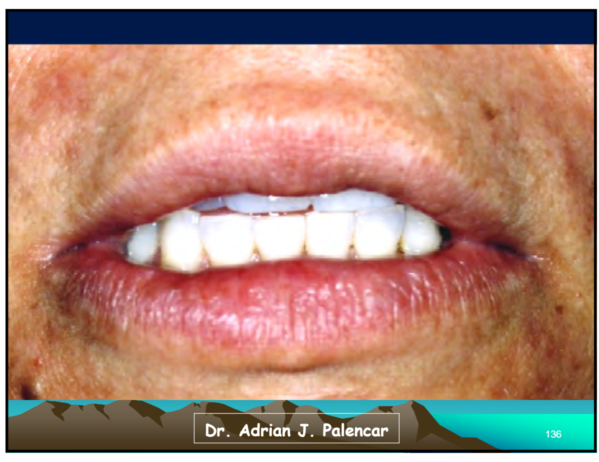
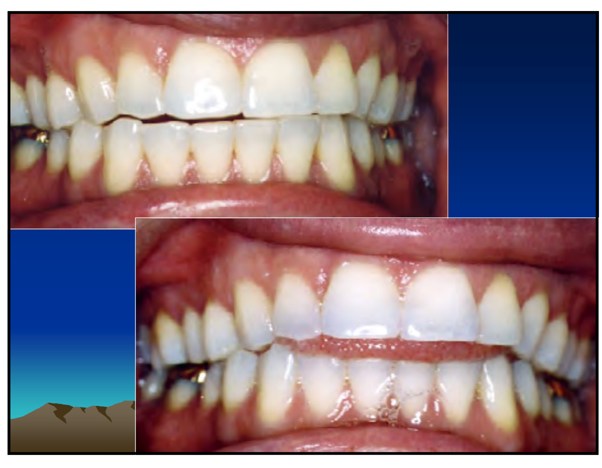
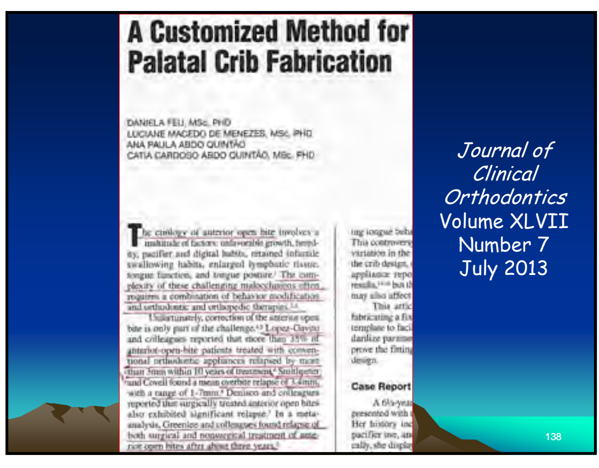








A Customized Method for Palatal Crib Fabrication

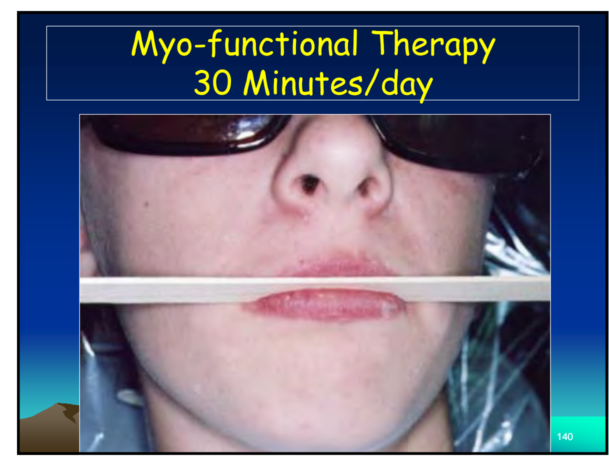
DANIELA FEU, MSc, PHD
LUCIANE MACEDO DE MENEZES, MSc, PHD
ANA PAULA ABDO QUINTÃO
CATIA CARDOSO ABDO QUINTÃO, MSc, PHD

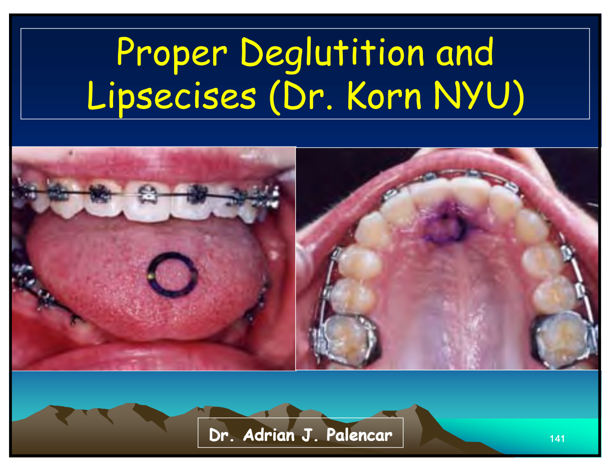
The etiology of anterior open bite involves a multitude of factors: unfavorable growth, heredity, pacifier and digital habits, retained infantile swallowing habits, enlarged lymphatic tissue, tongue function, and tongue posture. The complexity of these challenging malocclusions often requires a combination of behavior modification and orthodontic and orthopedic therapies.

Unfortunately, correction of the anterior open bite is only part of the challenge. Lopez-Gavito and colleagues reported that more than 35% of anterior-open-bite patients treated with conventional orthodontic appliances relapsed by more than 3mm within 10 years of treatment. Smithpeter and Covell found a mean overbite relapse of 3.4mm, with a range of 1-7mm. Denison and colleagues reported that surgically treated anterior open bites also exhibited significant relapse. In a meta-analysis, Greenlee and colleagues found relapse of both surgical and nonsurgical treatment of anterior open bites after about three years.

Case Report

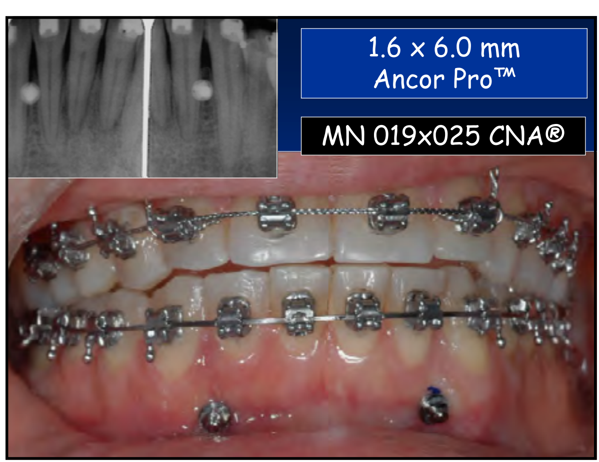
018 NiTi Bio-Kinetix®
Dr. Adrian J. Palencar
139


Myo-functional Therapy
30 Minutes/day
140


Proper Deglutition and
Lipsecises (Dr. Korn NYU)
Dr. Adrian J. Palencar
141

MX 019x025 V Force 3™
MN 018 NiTi Bio-Kinetix®
MN Sharp
tongue rake
142

MX 019x025
SS braded
Placement guide for TADs

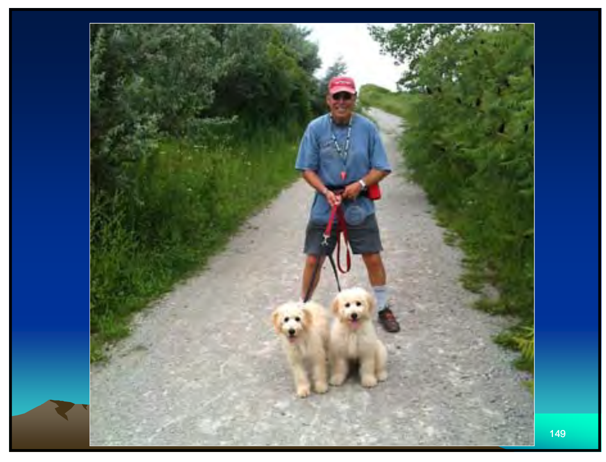

1.6 x 6.0 mm
Ancor Pro™
MN 019x025 CNA®

¼" - 4.5 oz. Triangular Elastics - Lion

MX & MN 019x025 CNA®
¼" - 4.5 oz. Elastics Lion
Dr. Adrian J. Palencar
146

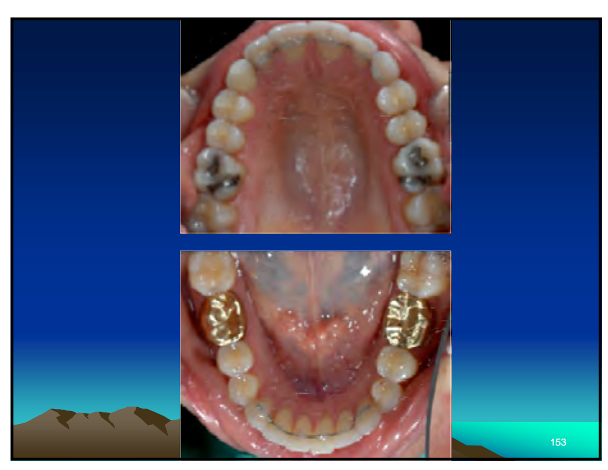
The pt. must have an OJ in order to extrude MX incisors
Gradual Step-downs
Dr. Adrian J. Palencar
147

¼" - 4.5 oz. Elastics - Lion
Dr. Adrian J. Palencar
148

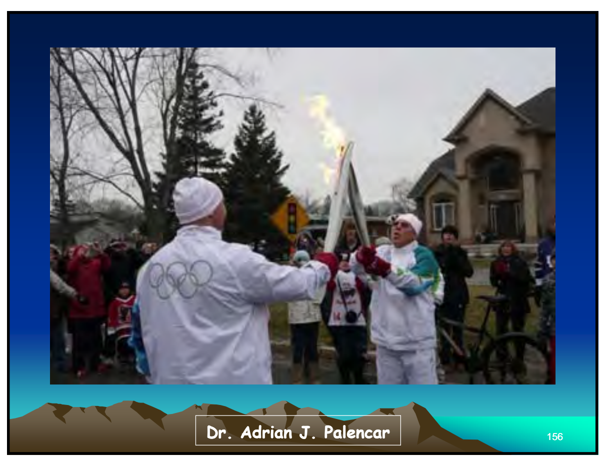

149

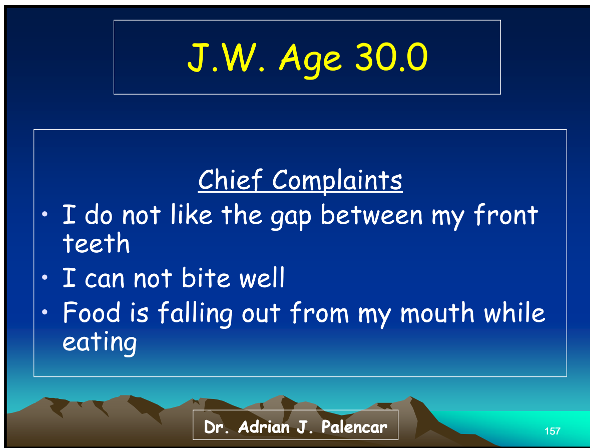
151

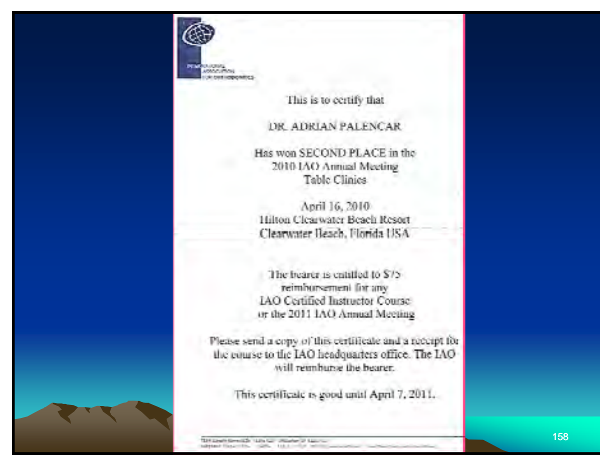
152


153

Dr. Adrian J. Palencar
154


Dr. Adrian J. Palencar
156





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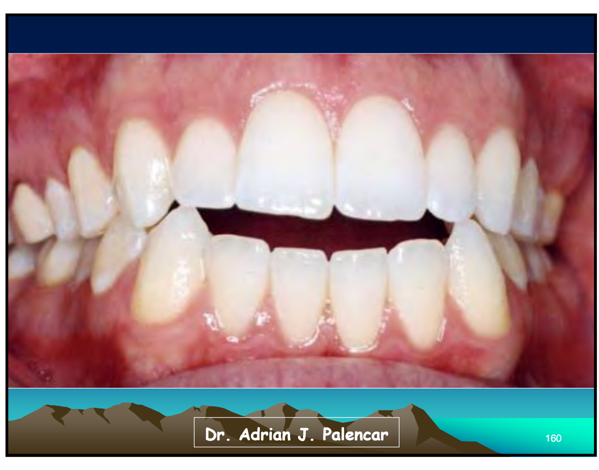
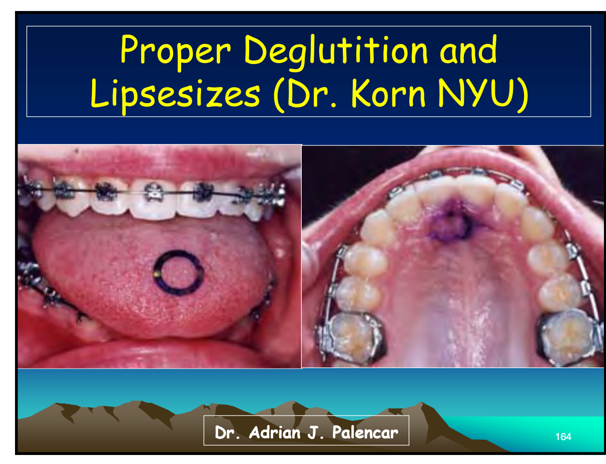
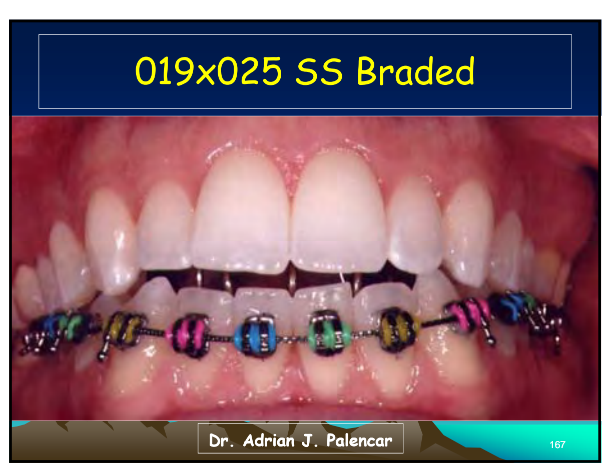


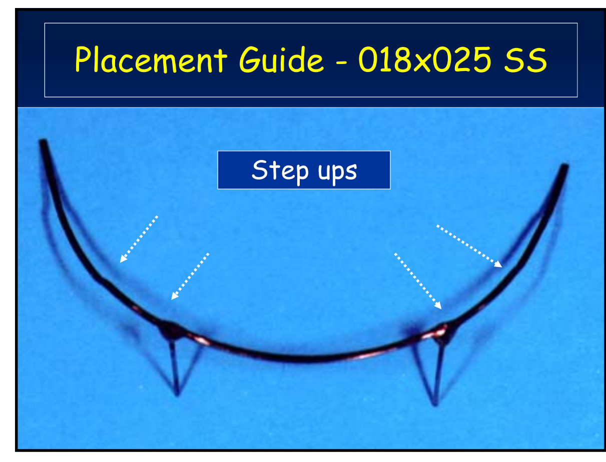
Myo-functional Therapy
30 Minutes/day
163

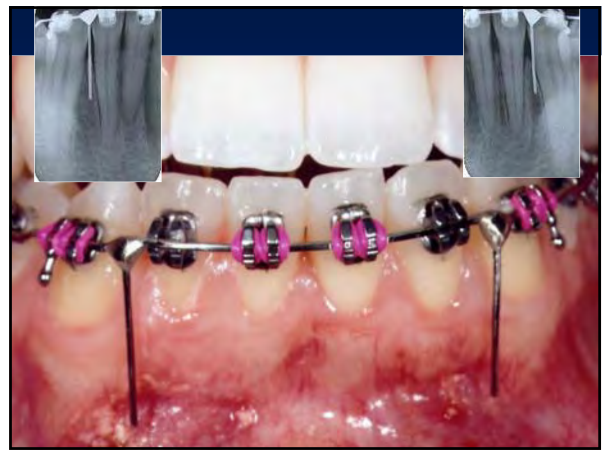

Proper Deglutition and
Lipsesizes (Dr. Korn NYU)
Dr. Adrian J. Palencar
164

December 21, 2010
Welland, Ontario
2.5 minutes of
joy and glory

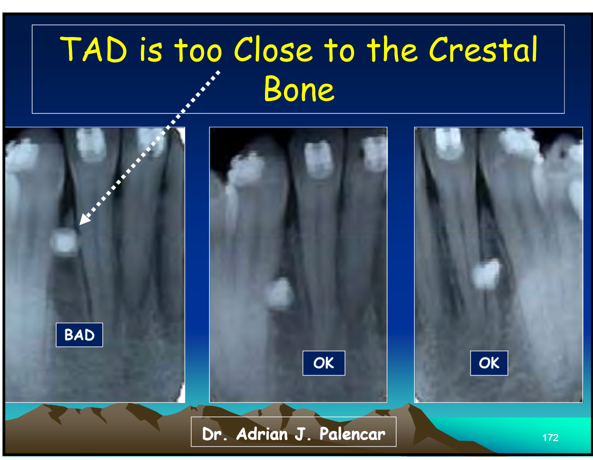
Sharp Tongue Rake
018 NiTi Bio-Kinetix®

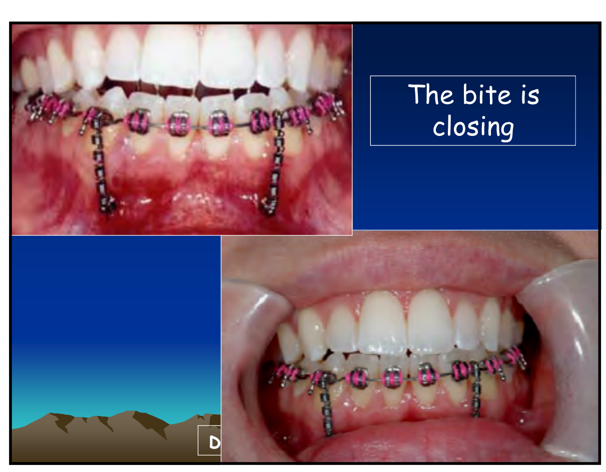

019x025 SS Braded
Dr. Adrian J. Palencar
167


Placement Guide - 018x025 SS
Step ups



Dr. Adrian J. Palencar
170


TAD is too Close to the Crestal Bone
BAD
OK
OK
Dr. Adrian J. Palencar
172

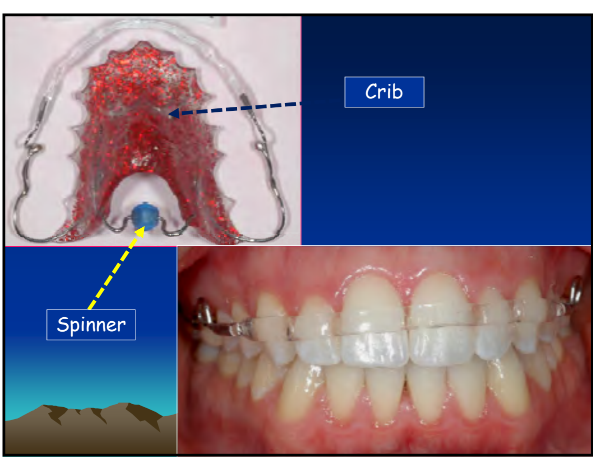

The bite is closing

Two Weeks Later

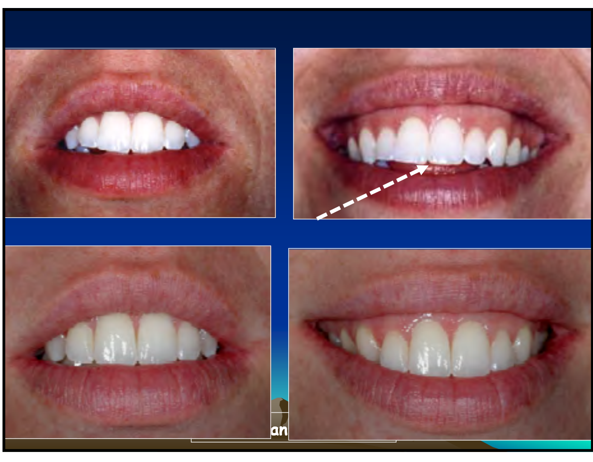
Overgrown Soft Tissue
Dr. Adrian J. Palencar
175

Final Inter-digitation
¼" - 4.5 oz. Lion

Pre-debracketing


Crib
Spinner

179



10 months of treatment
Dr. Adrian J. Palencar
181

Thank you
Merci mille fois
Gracias
Abrigado
Ďakujem pekne
谢谢
Xièxiè
182