Minimizing Esthetic, Functional and Orthodontic Risk
Pre/Post Orthodontic Periodontal Augmentation (POPA)
Colin Richman DMD

ETIOLOGY
??

AGENDA
Fundamentals
Risk Factors Associated with Orthodontic Therapy
Biology of Corticotomies and Augmentation
Clinical
Case Reports
Evidence
POPA and DSDS
Introducing POPA
Take home message

SUMMARY - 4 R'S + D
Recession
Relapse
Root resorption
Rejection
Demineralization

Why? Evidence?
Eliminate Etiology
Treat Clinical Issues

Harold Loe DDS, PhD
Today, do we have \textit{pre-emptive therapies} to reduce or even eliminate the risk of these 5 \textit{iatrogenic} complications?

4 R’s and a D
- Recession
- Resorption
- Relapse
- Rejection
- Decalcification

\textbf{Fundamentals}

Is \textit{Gingival Recession} a Consequence of an Orthodontic Tooth Size and/or Tooth Position Discrepancy? "A Paradigm Shift"
Colin Richman  DMD

\textbf{Compendium}
Richman, Compend Cont Educ Dent. 2011 May;32(4).
Underlying alveolar bone is source of gingival blood supply.
Loss/deficient bone results in gingival tissue atrophy.


Corticotomy – ‘A cortical bone incision’ - RAP

Ideal
1.5 – 2mm

Corticotomy is not an osteotomy

Full thickness flaps
Decortication
Augmentation
Closure
Activate ortho.
Initiates RAP
Primary Benefit
Hard and soft tissue augmentation
Better stability + less recession

Secondary Benefit
POPA  ➔ RAP effect
Accelerated wound healing – teeth move faster - distraction

BL. Corticotomy adds a biological dimension to tooth movement by exploiting the principles of wound healing (RAP)

Fundamentals
Risk Factors with Orthodontic Therapy
Biology of Corticotomies and Augmentation

Clinical
Representative Cases
Evidence
POPA and DSDS
Take home message

45 year old male
8 months

Phase One Therapy. Including Effective Plaque Control

Localized treatment, 16 year old

Leveling and aligning prior to or thognathic treatment
EARLY INTERCEPTIVE TREATMENT


Adolescent Localized treatment

Orthodontics. Dr James Gray
PATIENT SELECTION

Requires periodontal surgery
Reduction in treatment time
Avoid bicuspid extractions
Wider arch form - smile dynamics
Mento-labial fullness?
Retreatment - apical root resorption
If ankylosis is suspected
>150 Literature Citations

**Agenda**
- Risk Factors Associated with Orthodontic Therapy
- Biology of Corticotomies and Augmentation
- Clinical Representative Case Reports
- Evidence
  - **POPA and DSDS**
- Take home message

**Generational**

**Anthropology + Genetics + Embryology**
POPA: Manipulated wound healing – RAP

Biologically driven - indicated

Distraction versus hyaline necrosis- RAP effect

Lifestyle and obstinate teeth—

Elective, give patient the choice.

‘One Diagnosis,

Multiple Treatment Plans’

DSDS

ETIOLOGY!

Treatment Plan in the FOURTH Dimension.

EBD (Evidence)

CHINESE PROVERB

Be not afraid of growing slowly
Be only afraid of standing still

“There is nothing more powerful than an idea whose time has come”

Victor Hugo French

Philosopher, Novelist, Poet.
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**We deal in New and Used Bone Human and Bovine!**