Operational techniques in periodontology

Paul Nagy DMD

Department of Periodontology
PERIODONTIUM
SUPPORTING TISSUES OF THE TEETH
1. GINGIVA
2. CEMENTUM
3. PERIDONTAL (SHARPEY’S) LIGAMENTS
4. ALVEOLAR BONE
DENTAL PLAQUE - CAUSATIVE FACTOR OF MOST PERIODONTAL DISEASES
MASSIVE SUPRAGINGIVAL DENTAL CALCULUS
QUITE GOOD ORAL HYGIENE, BUT HUGE QUANTITY SUBGINGIVAL CALCCULUS FORMATION
Periodontitis

Gingivitis

Dental plaque

Periodontitis
GINGIVITIS:
DISEASE OF THE FREE GINGIVAL MARGIN
DEFENSIVE MECHANISMS AGAINST DENTAL PLAQUE
PERIODONTITIS: IRREVERSIBLE DERANGEMENT OF THE ATTACHING APPARATUS RESULT OF THE INSUFFICIENT GINGIVAL IMMUN-DEFENSE

TOOTH MOBILITY

ATTACHMENT-LOSS
WHY DOES NOT EVERYBODY WITH POOR ORAL HYGIENE SUFFER FROM PERIODONTITIS???
Risk factors:
- Genetics
- Behavioural
- Systemic conditions
- Local factors

Dental plaque

Gingivitis

Periodontitis

Severe periodontitis
ROBUST SUPRA- AND SUBGINGIVAL PLAQUE AND CALCULUS

THE SUBGINGIVAL PLAQUE EXISTS INDEPENDENTLY, CREATES A MASSIVE BIOFILM, WHICH CAN BE ELIMINATED ONLY BY MECHANICAL MEANS OF PROFESSIONAL CLEANING
Progression: pocket formation, bone- and attachment loss
SEVERE ALVEOLAR BONELOSS
Cause related periodontal treatment: forgo the surgical therapy
Types of periodontal surgical therapy, aims

1. **Resective period. surgery**
   - support cause related period. treatment, thorough root surface debridement with visual control
   - pocket depth reduction (establish complete inflammation-free state)
   - regain attachment, improve prognosis of the teeth
   - gain a marginal gingiva and bone contour, which functions and looks like as the original one
   - improve esthetics, (reduce cervical hypersensitivity)

2. **Regenerative surgery**

3. **Mucogingival (perio plastic) surgery**
I. Resective period. surgical techniques

- Gingivectomy (conventional, internal bevelled reversed)
- Apically transpositioned flap
- Modified- Widman flap
I. Resective: Gingivectomy
Internal bevelled reversed incision
I. Resective: internal bevelled reversed gingivectomy
I. Resective: internal bevelled reversed gingivectomy
THE INCISION FOLLOWS THE ORIGINAL GINGIVAL CONTOUR AND WE CUT THROUGH THE PAPILLA INTERDENTALLY IN THE MIDDLE, TRY TO PRESERVE AS MUCH GINGIVAL TISSUES AS POSSIBLE TO GAIN A BETTER INTERDENTAL FLAP CLOSURE
I. Resective: apically transpositioned flap
APICALLY TRANSPOSITIONED FLAP AIMING POCKET DEPTH REDUCTION
APICALLY TRANSPOSITIONED FLAP + OSTECTOMY
I. Resective: modified-Widman flap
I. Rezektív: modified-Widman flap
I. Resective: modified-Widman flap
II. Regenerative surgical techniques:

- GTR (guided tissue regeneration) = MEMBRANES
- Biological modifiers (ENAMEL MATRIX PROTEIN = Emdogain)
- Bone fillers
- Combined techniques
II. Regenerative: GTR

Initial state
II. Regenerative: GTR
Incision, flap elevation
II. Regenerative: GTR

Flap releasing, membrane shaping
II. Regenerative: GTR
Defect filling with bone substitute, covering it with the membrane
II. Regenerative: GTR

Wound closure, control X-ray
II. Regenerative: GTR

1 week postoperative

2 weeks postoperative
II. Regenerative: GTR

Initial
II. Regenerative: GTR
Half year postoperative
II. Regenerative: Emdogain (enamel matrix protein)

II. Regenerativ: Emdogain (zománcmártix protein)

Preoperative clinical and radiological pictures
II. Regenerative: Emdogain (enamelmatrix protein)
II. Regeneratív: Emdogain (zománcmártix protein)
9th month result
II. Regenerative: Bone fillers
II. Regenerative: Combination (Emdogain + bone filler)

Preoperative clinical and radiological pictures
II. Regenerative: Combination (Emdogain + bone filler)

Root surface modification with Emdogain and filling the defect with mixed bone fillers
II. Regenerative Combination (Emdogain + bone filler)

Root surface modification with Emdogain and filling the defect with mixed bone fillers.
II. Regenerative: Combination (Emdogain + bone filler)

6 months radiological result
III. Mucogingival surgery

- Gingival recession’s coverage
- Narrow attached gingiva widening
- Negative papilla
- Gingival asymmetry
- Shallow vestibular fold
III. Mucogingival surgery: recession coverage

Initial state

The modified coronally advanced flap (MCAF) + connective tissue graft
The modified coronally advanced flap (MCAF)

III. Mucogingival surgery: recession coverage

Submarginal bevelled incisions, the flap, deepithelialisation of the papillas, connective tissue graft from the palate
Root surface biomodification, securing the connective tissue graft

EDTA

Emdogain
Sutures, coronally positioning

Palate
Preoperative and postoperative pictures 1 year after
III. Mucogingival surgery: recession coverage

Initial and current state

Initial

Current
III. Mucogingival surgery: recession coverage

III. Mucogingival surgery: recession coverage

- Root planing
- Conditioning (EDTA)
- Coronally advanced modified tunnel technique
III. Mucogingival surgery: recession coverage

Connective tissue graft harvesting from the palate

III. Mucogingival surgery: recession coverage

Pulling in the graft under the tunnel flap
III. Mucogingival surgery: recession coverage

Stabilize the tunnel flap coronally with sutures and applying Emdogain
III. Mucogingival surgery: recession coverage

Preoperative and postoperative pictures
QR code is coming

ATTENTION!
Thank You for Your attention 😊