Orthodontics as an integrated Part of General Dentistry

Birte Melsen, DDS, Dr. Odont
Denmark

Multidisciplinary

Interdisciplinary

Top of the iceberg

A team consists of:

- A periodontologist
- A gnathologist
- An orthodontist
- A prosthodontist
- A surgeon
Periodontal diagnosis  Dental diagnosis  Functional diagnosis  Orthodontic diagnosis

Interdisciplinary discussion

Treatment plan

Clinical examination  X-ray examination  Instrumental examination

Interdisciplinary discussion

Problem list

The level of information can never be high enough!

Communication between colleagues is important by meeting or?

One responsible!
The sequence in the interdisciplinary treatment

1. Preorthodontic periodontal treatment
   - Motivation - Instruction
   - Pocket elimination - Scaling/Surgery

The essential procedures

- Oral prophylaxis
- Restorative therapy
- Endodontics
- Extractions
- Temporary reconstructions
- Pocket illumination

Vertical Pockets
Guided tissue regeneration

Conventional Orthodontic Anchorage Impossible
- More teeth against fewer teeth
- Extraoral Anchorage (EOT)
- Maximum rigidity
- Differentiated Force System
- Free Anchorage
- Extra-Dental Intra-Oral - Zygoma wire

Screw in the infrazygomatic ridge substituting a zygoma fixture

Treated by A Costa and screw inserted by M Raffaini
Lecture Outline:
Background: Do the impossible
The surgeon didn’t have the time

Indications: As anchorage and
- for modelling of alveolar process
- for rebuilding of alveolar process
- for maintenance of bone
- as bridge support
- for displacement of bone

Initial photos - extraoral
With TADs!!

Initial photos - intraoral

CBCT examination
Retroclined lower incisors

Date: 23/6-2010
Month in tx: 1 week

Date: 7/9-2012
Month in tx: 3
Date: 28/6-2011
Month in tx.:12½

Final photos

3 appliances in the lower arch, 3 in the upper arch!!!!

Before and after

Initial – Final: Extraoral

Initial
Final
Super imposition - total

Initial
Final
Super imposition - mandible

Superimposition  Stable structures  Anterior part of sella  Anterior cranial base
Maxillary movement  No change  Maxillary rotation
Mandibular movement  Minor movement  Mandibular rotation  Slight posterior rotation

Superimposition  Stable structures  Mandible  Slight posterior rotation  Lower incisors  Lingual root torque  Lower first molars  Slight extrusion  Lower arch  Slight expansion

Before
After
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Maintenance of bone

Temporary retention
Compare bone density

Combined direct and indirect anchorage

Dog experiment:

Four dogs:
Extraction of first and second Incisors and Premolars

Six weeks later insertion of 2mm transcortical screws at the extraction site on one side chosen at random

In collaboration with M. Dalstra and S. Huja
Relative bone density

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Virtual Implant

TREATMENT OPTIONS in the case of missing lateral incisors

Roberto Chairlatini

Removable plates:
- compliance
- pressure on the palatal mucosa

Adhesive bridges:
- limited retention
- invasive procedure on healthy teeth

Note the difference in the height of the implant
Temporary retention

MATERIALS AND METHODS

3 YEARS 15 cases studied

Two errors!

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- as bridge support
Are all “screws” loaded?

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Dento alveolar retrognathism – prominent chin

Treatment objective
Surgical assisted rapid maxillary expansion
Teeth serve as anchorage

Surgical assisted maxillary expansion
Before

The teeth are maintained, the bone moves back

After six weeks

The maxilla is narrow in relation to the mandible. Mixed dentition – No anchorage possibilities

Satisfactory skeletal effect

Expansion skeletal anchorage – Pre-treatment
Super imposition - maxilla

Superimposition
Best fit
Maxilla
A-point moved forward
Upper incisors
Proclination and forward translation
Upper first molars
Slight distal movement
Upper arch
Expansion

Final photos
Date: 11/6
Month in tx.: 18 months

Dott.ssa Susanna Botticelli
Dott.ssa Monica Cimadamore

Dott.ssa Susanna Botticelli
Dott.ssa Monica Cimadamore
Analog screws

Insertion

Treatment demand ≠
Treatment need