Mutilated Dentition in Aging Population

1. Introduction & Presentation
2. Anterior Missing Teeth
3. Posterior Missing Teeth
4. Analyze, Visualize and Optimize
5. Case Presentation
6. Challenge & Conclusion

Intra-Oral A-P
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Initial Records

38Y 2M

Diagnostic wax set-up

Transfer of duplicated teeth
Interfering teeth clearance

Model rim and occlusal surfaces registration with heavy putty
Transfer to the original model
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Patient needs

1. maxillary expansion
2. maxillary advancement
3. lower dental asymmetry correction
4. incisor compensation correction
1. maxillary expansion
2. maxillary advancement
3. lower dental asymmetry correction
4. incisor compensation correction
5. good perio management
6. dental arch coordination
7. teeth replacement and cosmetic dentistry
Clinical Progress

5 M

Maxillary: Space closure
Mandible: Arch Form coordination

10 M

Maxillaire: Space closure and Arch Form coordination
Mandibule: Space closure and Arch Form coordination

age: 52 Y 7 M.
Maxillary: .021 X .025 Post, reduced
Mandibule: .018 X .025 SS

Clinical Progress

1 Week post SARPE
Clinical Progress

6 Weeks post SARPE

Maxillary: .018 X .025 SS segmented
Mandibule: .021 X .025 SS posterior reduced

Stadie of traitement:
Maxillary: Expansion stabilization
Mandibule: Posterior space closure

AP Cephalogram

Panogram Comparison

Clinical Progress

1 Y 2 M
Age: 53 Y 4 M
Maxillary: .016 NITI
Mandibule: .021 X .025 SS posterior reduced
Stadie of traitement:
Maxillary: Alignment
Mandibule: Posterior space closure

Clinical Progress

1 Y 5 M
Age: 53 Y 8 M
Maxillary: .018 X .025 SS
Mandibule: .018 NITI
Stadie of traitement:
Maxillary: Space closure
Mandibule: LL8 Alignment
Clinical Progress

Age: 53 Y 11 M
Maxillary: .018 X .025 SS
Mandibule: .018 X .025 SS

Stade of traitement:
Maxillary: Space closure
Mandibule: Ach form coordination

Clinical Progress

Age: 54 Y 1 M
Maxillary: .021 X .025 SS
Mandibule: .021 X .025 SS

Stade of traitement:
Maxillary: Ach form coordination, Dental decompensation
Mandibule: Ach form coordination, Dental decompensation

Clinical Progress

Age: 54 Y 3 M
Maxillary: .021 X .025 SS
Mandibule: .021 X .025 SS

Stade of traitement:
Maxillary: Ach form coordination, Dental decompensation
Mandibule: Ach form coordination, Dental decompensation

Class III - Obstructive Sleep Apnea

Class III - Obstructive Sleep Apnea

Panogram Comparison
Pre-Op Appointment

Age: 54 Y 6 M

Maxillary: .021 X .025 SS
Mandibule: .021 X .025 SS

Stade of traitement:
Maxillary: Trillium Surgical Hooks
Mandibule: Trillium Surgical Hooks

LeFort I
11.0 mm Advancement

STO

Ceph Tracing (Pre-op)

Initial Cephalogram
Pre-op Cephalogram

Trillium Hooks
Post-Op Appointment
3 weeks post-op

Age: 54 Y 8 M
Maxillary: .021 X .025 SS
Mandibule: .021 X .025 SS

Stade of traitement:
Maxillary: Surgical Consolidation
Mandibule: Surgical Consolidation

Debonding Appointment
2 Y 10 M
Debonding App.
Age: 55 Y 1 M
Maxillary: VFR
Mandibule: VFR

Stade of traitement:
Maxillary: Retention
Mandibule: Retention
LeFort I 10 mm advancement
4 mm Anterior Impaction
2.5 mm post. left Impaction
1.5 mm post. right Impaction
BSSO 2.0 mm lateral right
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AIMS:
- Correct masticatory difficulties
- Establish occlusal stability & comfort
- Restore dental & facial aesthetics
- Replace missing teeth with fixed appliances

CHALLENGES:
- Severe dento-alveolar mutilation & compensation
- Critical anchorage insufficiency
- Dental & skeletal closed bite
- High patient expectations

Cream of the crop: severe mutilation redemption

Multiple missing teeth
Mesial tipping #17, 26, 18, 47
Localized peri-implant conditions
Mild root resorption
Incisor attrition
Dento-alveolar supra-eruption

Intra Oral Sequence
Treatment sequence

1. Initial periodontal assessment & stabilization
2. Pre-implant alveolar & sinus grafts
3. Diagnostic wax-up
4. Implant surgical guide
5. Implant insertion #14-15-24-36
6. Interim temporization
7. Pre-surgical orthodontics
8. Bilateral sagittal split osteotomy
9. Post-op orthodontics
10. Prosthetic wax-up
11. Final temporization
12. Final restorations
13. Orthodontic retention
14. Periodontal & general follow-up

Mandibular dento-alveolar retrusion
Brachycephaly (FMA : 17°)
U/L incisor linguoversion (I/SN : 72°)
U/L incisor supra-eruption
L, molar mesial tipping
Treatment sequence
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Treatment sequence
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5. **Implant insertion #14-15-24-36**
6. Interim temporization
7. Pre-surgical orthodontics
Light & constant orthodontic forces
Efficient orthodontic appliances
Flawless orthodontic design
Light & constant orthodontic forces
Efficient orthodontic appliances
Flawless orthodontic design
Pre-op ortho objectives
- Level curve of Spee
- Decompensate incisors
- Parallel roots
- Coordinate dental arches
- Level dento-alveolar bone margins
- Align marginal muco-gingival contours

Pre-op

STO: Mandibular advancement with clockwise rotation
46.6°
40°

Treatment sequence
8. Bilateral sagittal split osteotomy
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Correction des Proportions
Correction Transversale
Obtention de l’Intercuspidation
Fermeture de l’Occlusion Ouverte
Finalisation du Plan Occlusal

4 months latency on temps

mechanical retention designed in final crowns
Treatment sequence

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14. Periodontal & general follow-up
Looking back in the mirror...

Mandibular vertical dento-alveolar

Micro-Screw
Intrusive Force

Post- Treatment Records
Age: 62 Y 6 M
4 Y 5 M Post-Retention

Age: 66 Y 9 M
8 Y 7 M Post-Retention

Conclusion:
-uncompromising result through a combination of basic and technical knowledge and skills,
-but even more so, through constant dialogue and interaction within a multidisciplinary team

P.S.: Ideal planet alignment for a stable high quality result fulfilling all our initial aims and the patient's expectations
Definition:

A coordinated venture centred on patients needs and means aimed at creating or restoring optimal function, aesthetics and stability in a compromising or unbalanced oro facial environment.