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healthcare*

Space gaining in orthodontics: Arch expansion and molar distalization

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	Dental	Skeletal
Sagittal	Angle I/II/III Overjet	I/II/III
Vertikal	Overbite	Divergency
Transversal	Dental arch constriction, Dental midline	Jaw constriction Skeletal midline

TRANSVERSE DISCREPANCIES

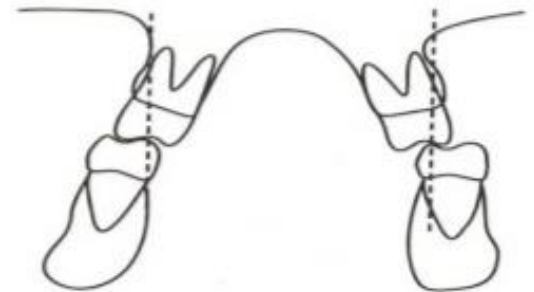
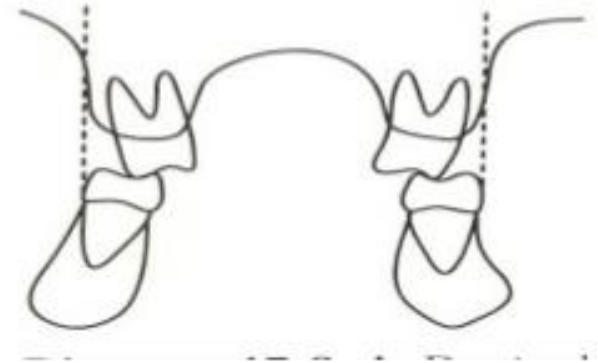


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Skeletal/ dentoalveolar transverse discrepancy



Signs of the narrow maxilla

- Lateral crossbite
- Empty buccal corridor



WALA

↪ WALA (Will Andrews + Lawrence Andrews)

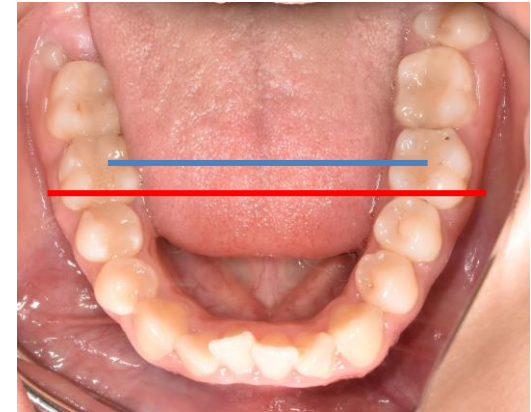
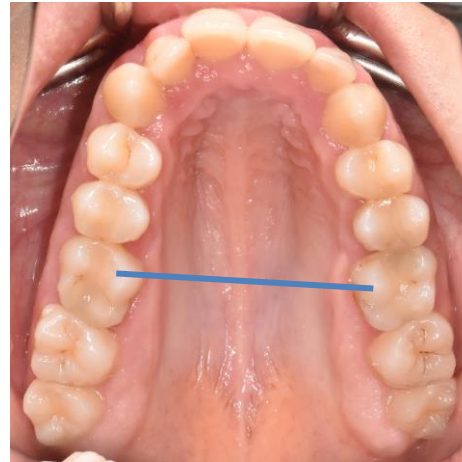
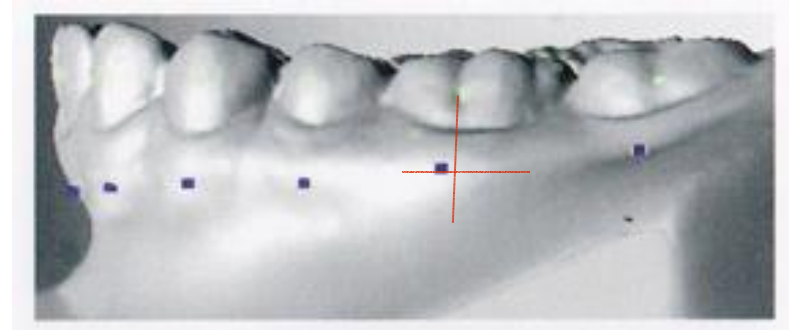
↪ Lower 6 – central groove

↪ Upper 6 – palatal cusp

↪ difference: 13-14 mm

↪ (WALA-dental measurements=13 mm)

↪ Consider the buccal tilting of the molars



Upper arch constriction

↪ WALA discrepancy < 5 mm

↪ Treatment options:

↳ Expansion plate

↳ Quad-Helix

↳ Goshgarian



Goshgarian TransPalatal Arch



Upper jaw constriction

↪ WALA discrepancy > 5 mm

↪ Treatment options:

↳ Splint-hyrax

↳ Hyrax

↳ Hybrid Hyrax

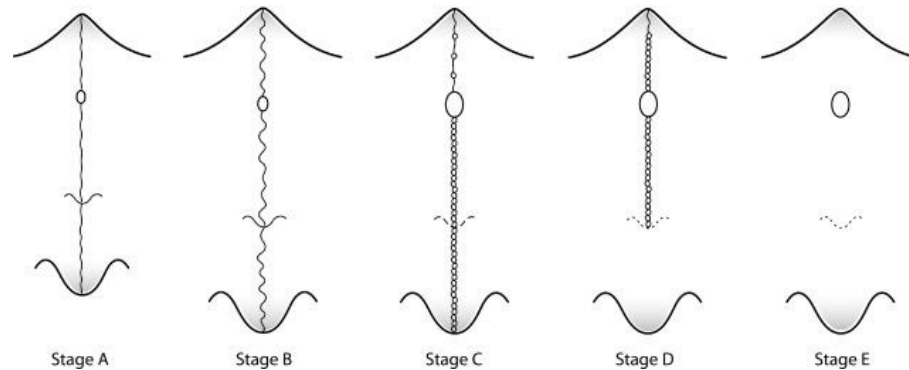
↳ MAPE

↳ SARME



Assessment of the midpalatal suture maturation

↙ CBCT



Angelieri et al. 2013.



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Treatment of skeletal transverse discrepancy

Splint-hyrax

Hyrax



Treatment of skeletal transverse discrepancy

↳ Hybrid Hyrax



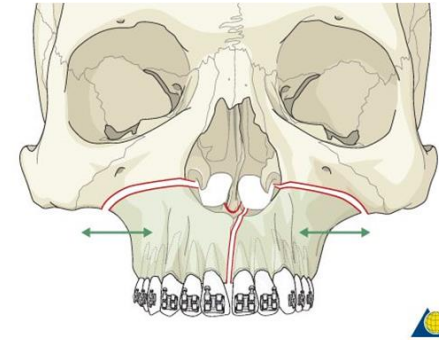
Treatment of skeletal transverse discrepancy

↪ MICRO2

↪ MICRO4



Surgically assisted rapid maxillary expansion (SARME)



SAGITTAL DISCREPANCIES



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Etiology

- ↪ Early loss of primary molars
- ↪ Malposition of the teeth



LOWER ARCH

- ↪ lip bumper
- ↪ lingual arch
- ↪ miniscrew (interradicular/retromolar)



Lip bumper

- ↪ Uprighting the molars
- ↪ Transversal
- ↪ Sagittal
- ↪ Leeway-space



Lingual arch

- ↪ Uprighting the molars
- ↪ Transversal
- ↪ Sagittal
- ↪ Leeway-space



Orthodontic miniscrew

- ↪ Retracting the lower arch
- ↪ Buccal shelf miniscrew/miniplate



UPPER ARCH

↪ Headgear

↪ Mucosal/dental anchored devices: Pendulum,
Frog, Nance

↪ Skeletally anchored devices: Sliders, MCPP, IZC screw



Headgear

- ↪ Headgear
 - ↪ cervical
 - ↪ occipital
 - ↪ combination



Take home message

- ↪ Diagnose the severity of the anomaly
- ↪ Plan the anchorage



Thank you for your
kind attention!



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