

CASE REPORT

PRE-TREATMENT



PROFILE RELAXED



RELAXED



SMILING

How would you treat this malocclusion?

Case A.K. 10 years, 8 months

INTRODUCTION

A 10-year old girl presents with a chief complaint by the parents that they are “concerned about their daughter’s poor bite.” Etiology is a long-standing thumb-sucking habit, attendant tongue thrust and hereditary factors. Her medical history is non-contributory including airway obstruction. Her overall dental health is very good.

EXTRAORAL FINDINGS

Facial analysis reveals a convex profile and increased lower face height. There is a slight deviation of the mandible to the left. The lips are competent. Palpation of the lateral poles of the condyles reveals a faint early opening click emanating from the left TM joint. Range of motion is good.



RIGHT BUCCAL



FRONTAL INTRAORAL



LEFT BUCCAL

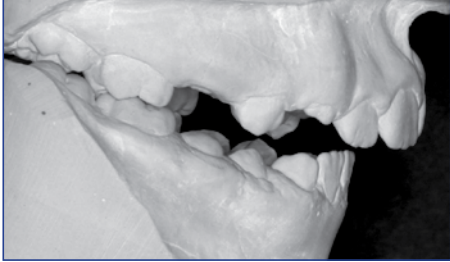


MAXILLARY OCCLUSAL



MANDIBULAR OCCLUSAL

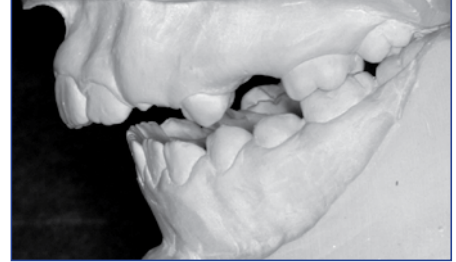
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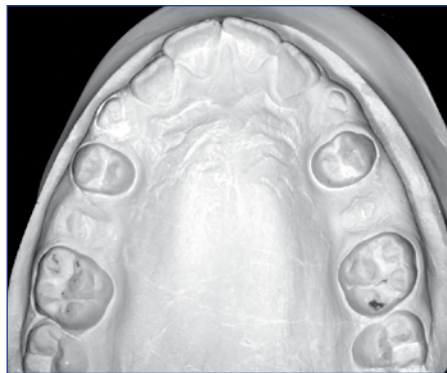
RIGHT BUCCAL MODEL



FRONTAL INTRAORAL MODEL



LEFT BUCCAL MODEL



MAXILLARY OCCLUSAL MODEL



MANDIBULAR OCCLUSAL MODEL

INTRAORAL AND MODEL FINDINGS

Evaluation reveals a late mixed dentition with Class I molar on the right and a tendency towards a Class II molar on the left side. An anterior open bite is present and the mandibular dental midline is deviated to the left. The maxillary model reveals a mesially rotated upper left first molar. There is incomplete eruption of the permanent dentition.

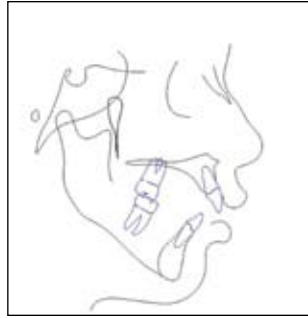
PERTINENT MOUNTED MODEL FINDINGS

Hinge axis mounted models in centric reveal a severe open bite with occlusal contact between the left first molars. A 4mm CR/CO discrepancy in a downward and backward direction and a slight, 0.5mm, transverse shift to the left were recorded using Condyle Position Indicator instrumentation.

CASE REPORT



INITIAL CEPHALOMETRIC X-RAY



INITIAL CEPHALOMETRIC TRACING



PANORAMIC RADIOGRAPH

RADIOGRAPHIC FINDINGS

Panoramic radiograph shows all permanent teeth are present and there are no anomalous findings.

The lateral cephalometric radiograph reveals a large ANB, short posterior face height, steep mandibular plane angle and a retrognathic profile.

INITIAL CEPHALOMETRIC MEASUREMENTS

	INITIAL	MEAN
SNA (°)	85.1	82.0
SNB (°)	76.0	80.0
ANB (°)	9.2	2.0
U1 - NA (mm)	2.5	4.3
U1 - NA (°)	16.8	22.8
L1 - NB (mm)	6.4	4.0
L1 - NB (°)	30.5	26.8
MP to SN (°)	42.7	33.0
FMA	34.4	23.0
IMPA (L1-MP) (°)	91.8	95.0

TREATMENT OPTIONS

1. Two-Phase non-extraction treatment plan:
 - a. *Phase I* – Eliminate harmful habit, centric discrepancy and initial growth modification measures.
 - b. *Phase II* – Continue growth modification and full fixed appliance treatment.
2. Wait for all permanent to erupt, and then start comprehensive orthodontic treatment utilizing skeletal anchorage devices to intrude the posterior teeth for open bite closure.
3. Wait for all permanent teeth to erupt, and then begin comprehensive orthodontic treatment with extraction of four bicuspids to assist with open bite closure.
4. Wait for all permanent teeth to erupt and for growth to cease, then treat as a surgical orthodontic case.

For Progress and Post-Treatment of Case A. K., see page 38.