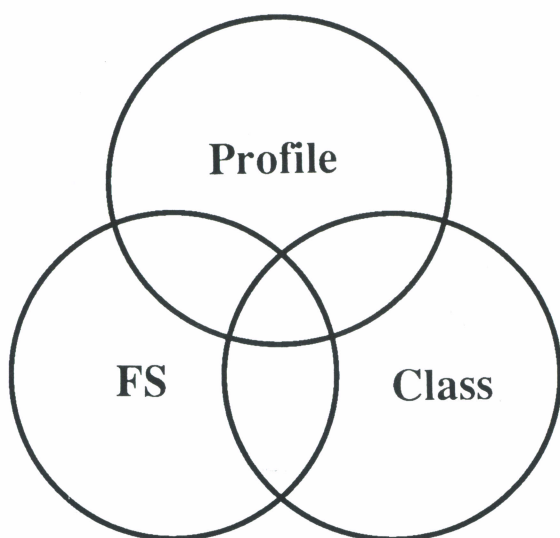


## 7. Differential Diagnosis of anterior crossbite



*pseudo C III with F S and good orthognathic profile at CR means very good prognosis*

*true C III without F S and severe prognathic profile means very poor prognosis*

### (1) Class : molar classification, CI or CIII

- \* Pseudo CIII ( CI buccal segment ) - - - - -good prognosis ( P. 13 ,25 , 29 , 49 , 51 )
- \* True CIII with orthognathic CR profile - - - -good prognosis ( P. 17 , 19 , 27 , 53 , 55 )
- \* True CIII with prognathic CR profile - - - - - poor prognosis ( P. 17 )
- \* True CIII with deep over bite - - - - - better prognosis (P. 17 , 19 , 53 , 55 )
- \* True CIII with open bite - - - - -poorer prognosis ( P. 17 )
- \* CIII sub - - - - - watch for asymmetric growth ( P . 59 )

### (2) FS : functional shift

- \* with FS - - - - - better prognosis
- \* without FS - - - - - poorer prognosis
- \* True CIII with orthognathic CR profile - - - - - good prognosis
- \* True CIII with prognathic CR profile - - - - - poor prognosis

Not all the functional CIII with good prognosis ( P. 19, 53, 55, 57 )

CIII with orthognathic CR profile usually has good prognosis ( P. 53, 55 ). CIII with prognathic CR profile usually has poor prognosis, even early correction still can not change the prognathic profile and the occlusion is not stable usually it will relapse through growth ( P. 57 ).

- \* The presence of FS alone does not indicate a pseudo C III malocclusion. True C III cases, even with FS, are not as easy to treat as pseudo C III cases with FS. Don't miss defining functional true C III as pseudo C III.

### **? reference:**

@ Moyers, R E. : Handbook of Orthodontics , 4th Edition, P. 410, Year Book Medical Publishers Inc., Chicago 1988.

" Three rather distinct types of malocclusion may all appear to be mesiocclusions. True Angle C III, or mesiocclusion, is a skeletal dysplasia involving mandibular hypertrophy, marked shortening of the midface, or a combination of these two. The pseudo-, or apparent, C III is a positional malrelationship; a reflex functional mandibular protraction. A third condition, simple linguoversion of one or more maxillary anterior teeth, is an abnormal axial inclination of maxillary incisors with no real C III features. It will be noted that the first condition is a problem of skeletal morphology and osseous growth, the second an acquired muscular reflex, and the third a problem in dental positioning."

### **(3) Profile : Profile at CR ( Centric Relation )**

- \* with orthognathic CR profile - - - - - better prognosis
- \* with prognathic CR profile - - - - - poorer prognosis

#### **f.u. & re - evaluation to make correct diagnosis**

*Sometimes it is difficult to evaluate the severity of the malocclusion in the primary or early mixed dentition . By following up in the later stages and re-evaluating the patient, a more accurate diagnosis can be made.*

- \* Among the 3 circles the profile is the most important diagnostic factor, because no orthodontic treatment alone can change the patient's CR profile.

**@. Family history.**

- \* The famous Hapsburg royal family had thirty three true C III members out of a total of forty family members. Most orthodontists believe there is a strong hereditary influence on the occurrence of true C III malocclusions.
- \* Pseudo C III, just like Class I crowding can result from heredity also.
- \* Don't rely on family history too much. **Make differential diagnosis on individual patient is more reliable than on family history.**

**@ ANB difference. ( FS of 3 circles diagnostic system )**

- \* ANB difference at CO is a poor diagnostic indicator for treatment of anterior crossbite.
- \* ANB difference at CR is a more reliable cephalometric evaluation for treatment of anterior crossbite.

**@ Gonial angle.**

- \* The value of the Gonial angle in pseudo C III is relatively small. If the mandibular plane angle is close to 90 degrees, the chance of being a pseudo C III is higher.

**8. Prognosis of anterior crossbite****Prognosis of Anterior Crossbite**