

Craniofacial disorders...

- Aperts syndrome
- Crouzons (Williams) syndrome
- Pierre Robin syndrome
- Cleft Palate

Craniofacial Anaomalies

1

Aperts syndrome

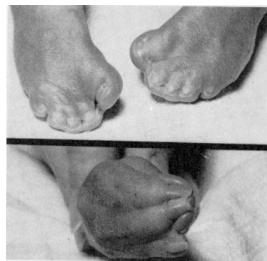
- Fusion of skull bones. Often found with high arched palate which can affect speech production.
- High incidence of middle ear difficulties including hearing loss.
- Genetic disorder



Craniofacial Anaomalies

2

Aperts syndrome



Craniofacial Anaomalies

3

Crouzons syndrome

- Also known as William's syndrome
- Somewhat similar to Aperts because of premature closure of cranial sutures.
- High incidence of cleft palate.
- Also, a high incidence of middle ear problems including hearing loss.

Craniofacial Anaomalies

4

Crouzons (Williams) syndrome



Craniofacial Anaomalies

5

Pierre Robin syndrome

- Characterized by micrognathia (small mandible), downward displacement or retraction of the tongue.
- High incidence of speech and hearing problems.
- 1/30,000 incidence.

Craniofacial Anaomalies

6

Cleft Lip or Palate

- Incomplete formation of the lip (cleft lip) or palate (cleft palate) during pregnancy which occurs sometime between the sixth and ninth week following conception.
- Incidence: 1 of 750 live births
- Other demographics:
 - 25% have cleft lip only
 - 25% have cleft palate only
 - 50% have both
- Clefts can be either unilateral or bilateral.

Craniofacial Anaomalies

7

Unilateral Cleft



Craniofacial Anaomalies

8

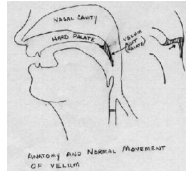
Bilateral Cleft



Craniofacial Anaomalies

9

Basic Anatomy

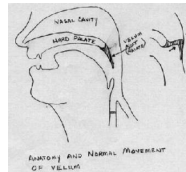


Craniofacial Anomalies

10

Nasal Cavity

- Large opening superior to the palate which communicates with the sinuses and nasopharynx.
- Purpose is to cleanse, warm and humidify the air during the breathing process.



Craniofacial Anomalies

11

Speech Patterns

- People with cleft palate will have hypernasal speech because of the abnormal opening between the oral and nasal cavities. This is most noticeable with vowels.

Craniofacial Anomalies

12

Speech Patterns (continued)

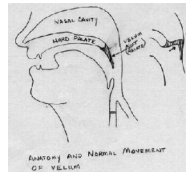
- People with cleft palate may also have characteristics of hyponasal (denasal) speech due to structural problems with the palate and nasal cavity.
- This is most noticeable with nasal consonants such as "m, n, and ng"

Craniofacial Anomalies

13

Velopharyngeal Complex

- Velum - soft palate
- Nasopharynx - space behind and above the velum
- Posterior pharyngeal wall - back of throat
- Levator palatini muscle - used to close off the velopharyngeal port.

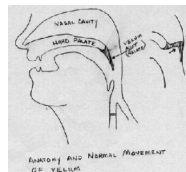


Craniofacial Anomalies

14

Swallowing Process

- When we swallow or produce certain speech sounds the levator palatine muscle contracts which has the effect of lifting the velum superiorly and posteriorly (up and back) and closes off the velopharyngeal port.



Craniofacial Anomalies

15

How Do Cleft Palates Develop?

- During 6th and 9th week of pregnancy the palate will develop.
- Small bones which eventually will become the hard palate fuse together.
- In cases of cleft palate, they never fuse.

Craniofacial Anomalies

16

Speech of Children with Cleft Palate

- Characterized by a combination of hypernasal and hyponasal speech
 - Vowels will be hypernasal
 - Nasal sounds such as “m,n,ng” often will sound hyponasal.
- Tend to substitute glottal stops for normal stops.
 - e.g., Bottle becomes bau*el. That is you close of the airstream in the glottis instead of the oral cavity.
- Omit fricative sounds such as “sh, s, f, th”

Craniofacial Anomalies

17

Assessment and Treatment of Cleft Palate.

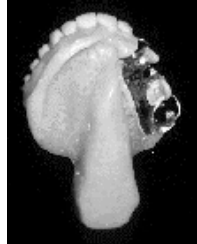
- Cleft Palate Team
 - Speech-language pathologist
 - Audiologist
 - Otolaryngologist (ENT physician)
 - Orthodontics
 - Oral and Maxillofacial surgery
 - Social worker
 - Psychologist
 - (see text page 272 for complete list)

Craniofacial Anomalies

18

Medical Management and Treatment

- Surgery
- Pharyngeal flap
- Prosthetic device



Craniofacial Anaemolies

Speech treatment

- Articulation testing
- Examination of speech production mechanism
- Listener judgments of nasality.
- Treatment involves working to correct articulation errors and have patient work on reducing nasality problems.

Craniofacial Anaemolies



Craniofacial Anaemolies
