Developmental Disturbances -1

(Jaws, Buccal mucosa, Gingiva, Salivary glands, Lip and Palate)

Developmental Disturbances of Jaws.

- Agnathia
- Micrognathia
- Pierre Robin syndrome
- Macrognathia
- Facial Hemihypertrophy / Hyperplasia
- Facial Hemiatrophy / Parry Romberg Syndrome
- Abnormalities of dental arch relations

AGNATHIA

- A- Absence — Gnathia- Jaw
- Absence of Maxilla/Mandible
- In Maxilla-
  - Maxillary process/ Premaxilla
- In Mandible-
  - More commonly missing Ramus
  - Condyle
  - If unilateral ramus missing- Deformed /absent ear (due to failure of migration of neural crest mesenchyme into maxillary prominence)

MICROGNATHIA

- Micro – Small Gnathia- Jaw
- Either jaws

1. True Micrognathia
2. Apparent Micrognathia

- True Micrognathia
  1. Congenital type
  2. Acquired type

- Congenital –

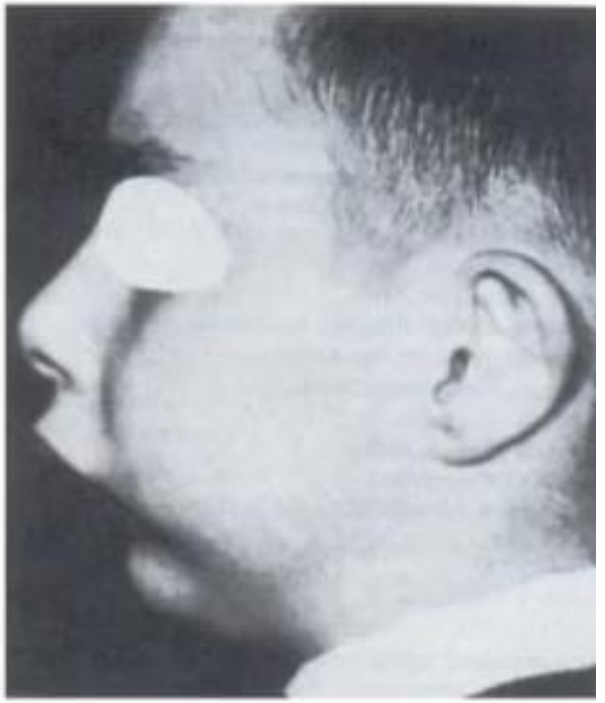
1. It is associated with Congenital heart disease & Pierre Robin syndrome
2. Maxillary micrognathia due to deficiency in premaxillary area
3. Retracted middle third of face
4. Etiology- mouth breathing

- Mandibular micrognathia may be due to posterior positioning of mandible, Steep mandibular angle, agenesis of condyle

- Acquired type is postnatal-
- Due to disturbance in TMJ region
- Ankylosis due to trauma or infection of mastoid

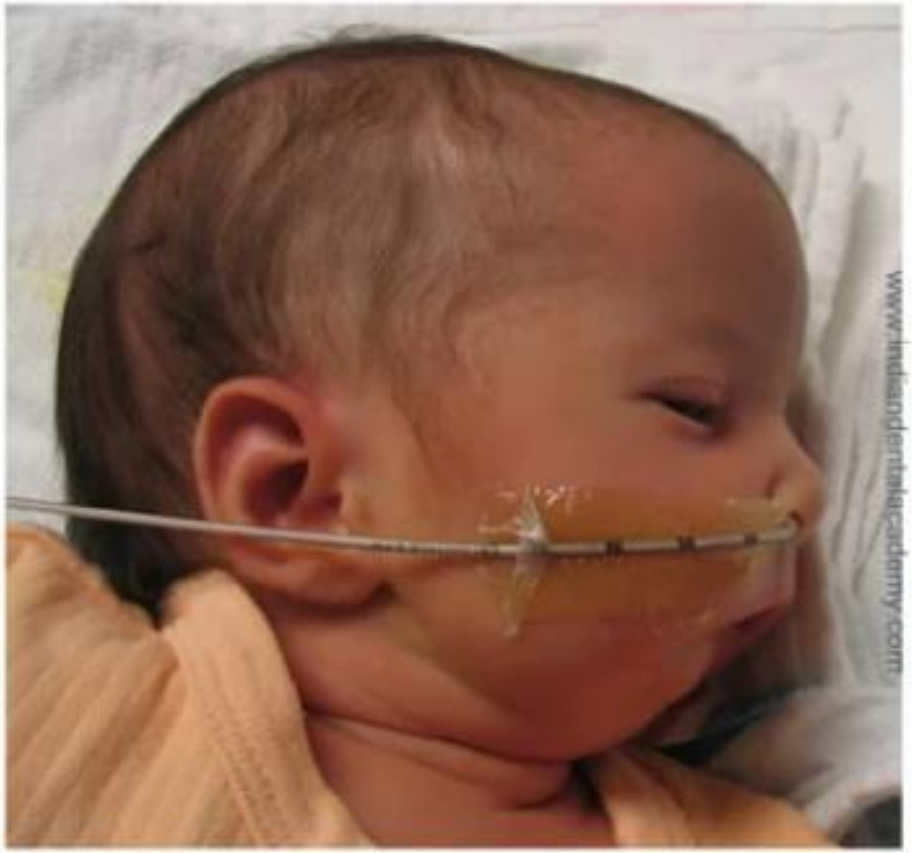
Clinical features

- Severe retrusion of chin
- Steep mandibular angle
- Deficient chin button



Pierre Robin syndrome

- Cleft palate
- Micrognathia
- Glossoptosis
- Congenital heart defects
- Ocular anomalies
- Skeletal defects

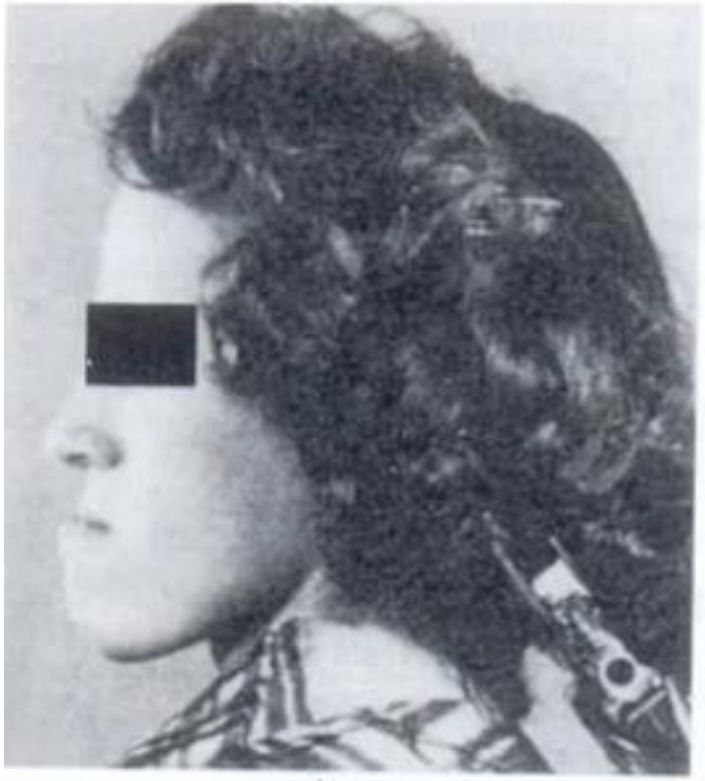


MACROGNATHIA

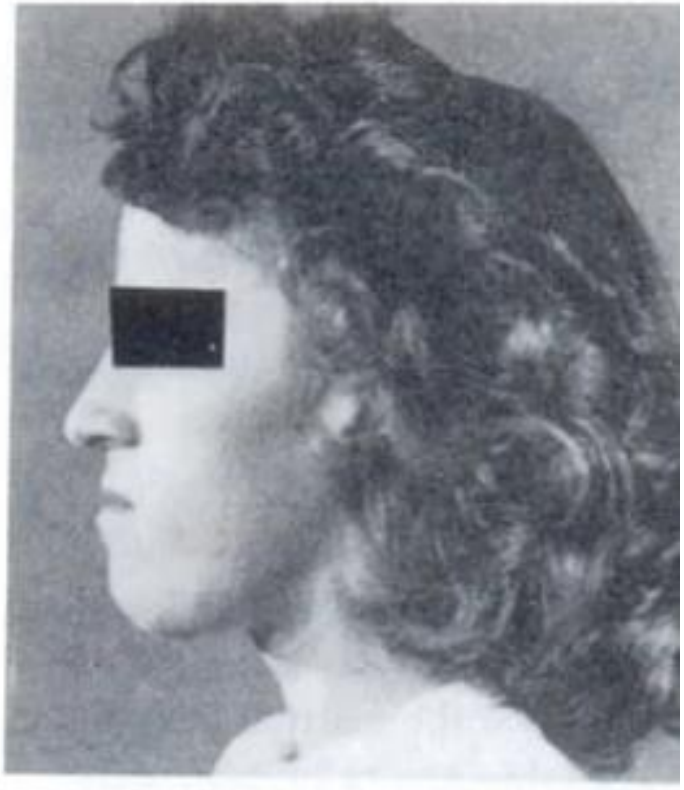
- Abnormally large jaws
- Pituitary gigantism – both jaws large
- Maxillary enlargement- Paget's disease, Leontiasis ossea, Cherubism
- Mandibular enlargement- Acromegaly

Treatment

- Surgical correction of the defect



A



FACIAL HEMIHYPERTROPHY/HYPERPLASIA

- Characterized by asymmetric overgrowth of one or more body parts
- Etiology
  - Hormonal imbalance
  - Incomplete twinning
  - Chromosomal abnormalities
  - Lymphatic abnormalities
  - Vascular abnormalities
  - Neurogenic abnormalities

ANATOMIC CLASSIFICATION BY HOYME ET AL

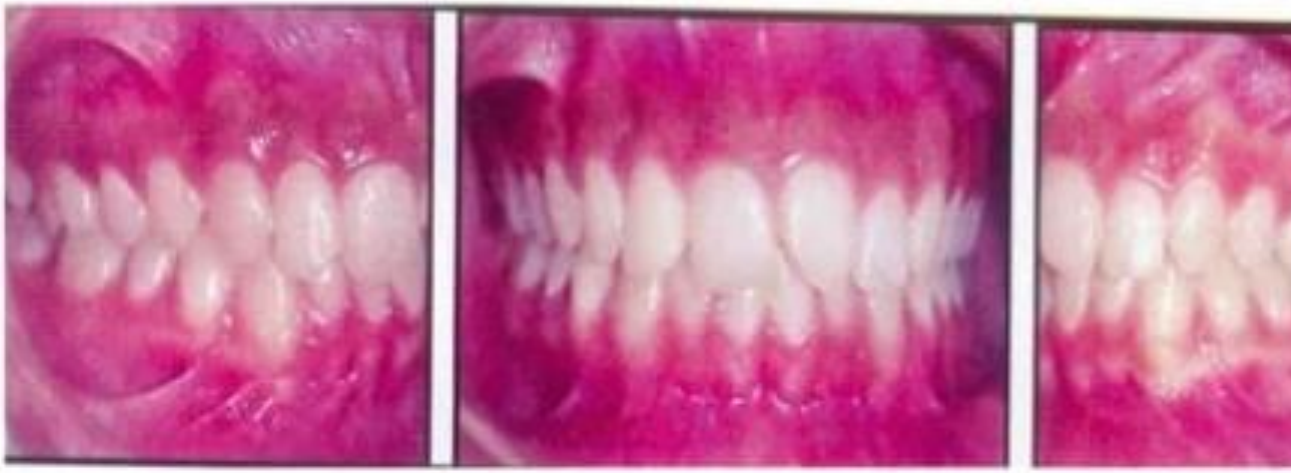
A. Complex hemihyperplasia- Involvement of half of the body
B. Simple hemihyperplasia- Involvement of single limb
C. Hemifacial hyperplasia - Involvement of one side of the face

- Treatment
  - Cosmetic repair
- Differential diagnosis
  - Neurofibromatosis
  - Fibrous dysplasia

ORAL MANIFESTATIONS

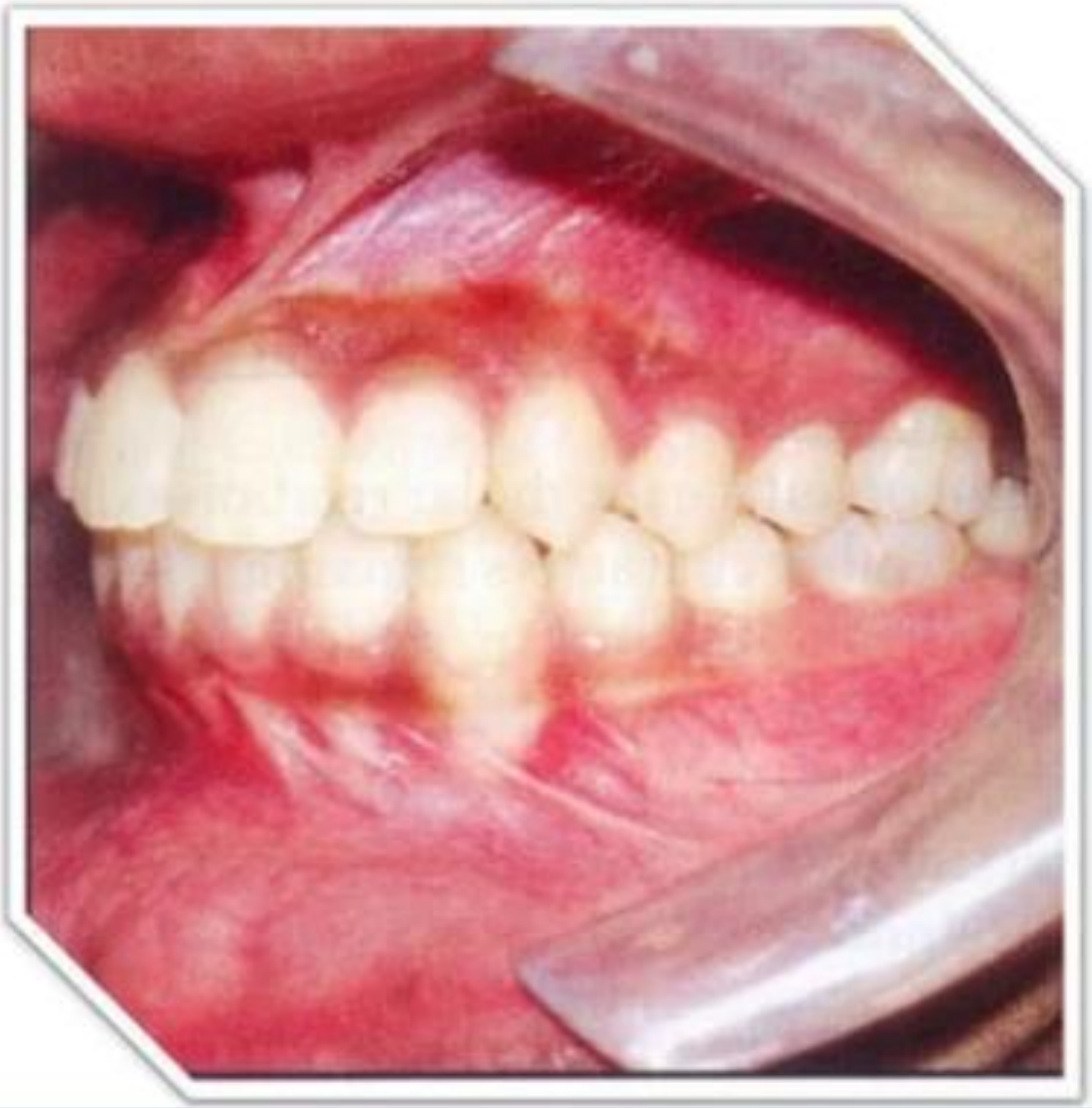
- Atrophy of half lip and tongue
- Shorter ramus and body of mandible resulting in malocclusion
- Delayed eruption of teeth on affected side

ABNORMALITIES OF ARCH RELATIONS

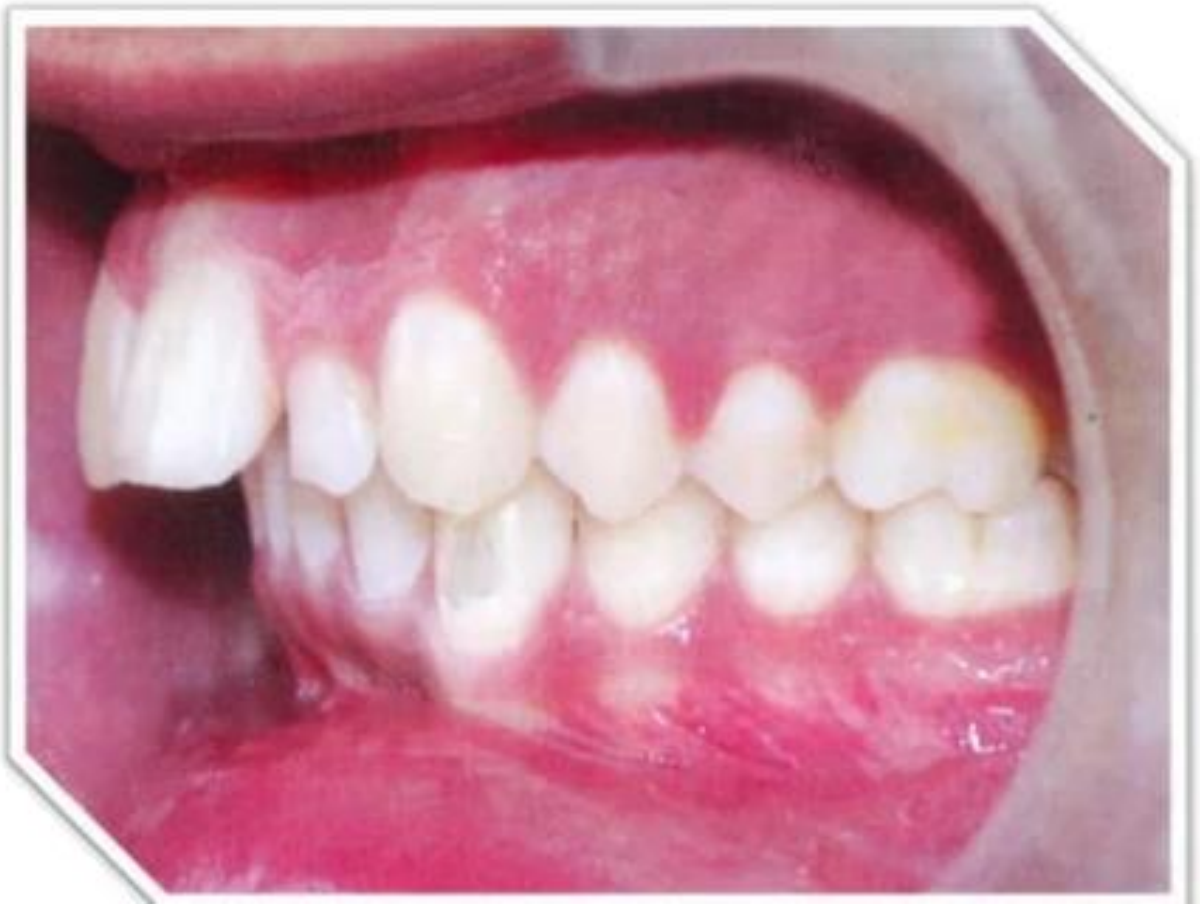


ANGLE'S CLASSIFICATION

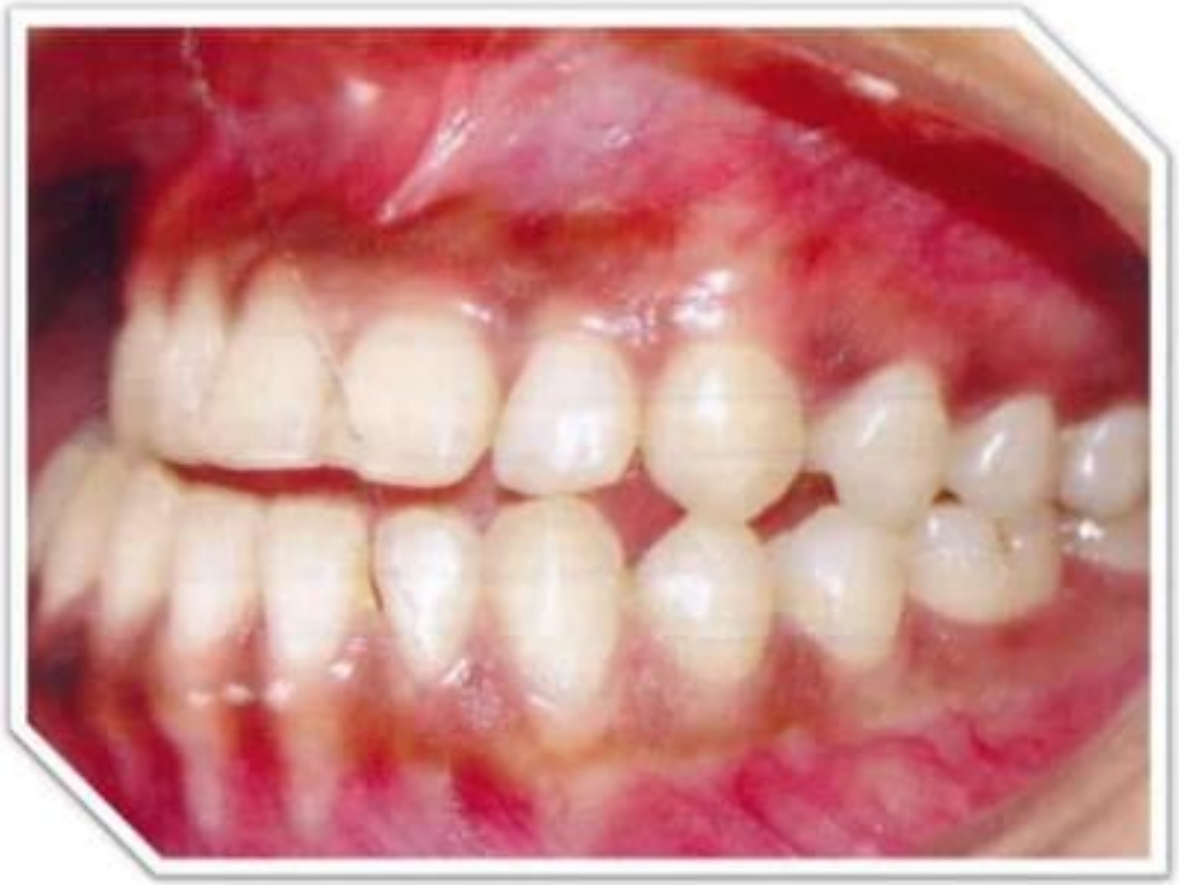
- Class I- Arches in normal mesiodistal relation



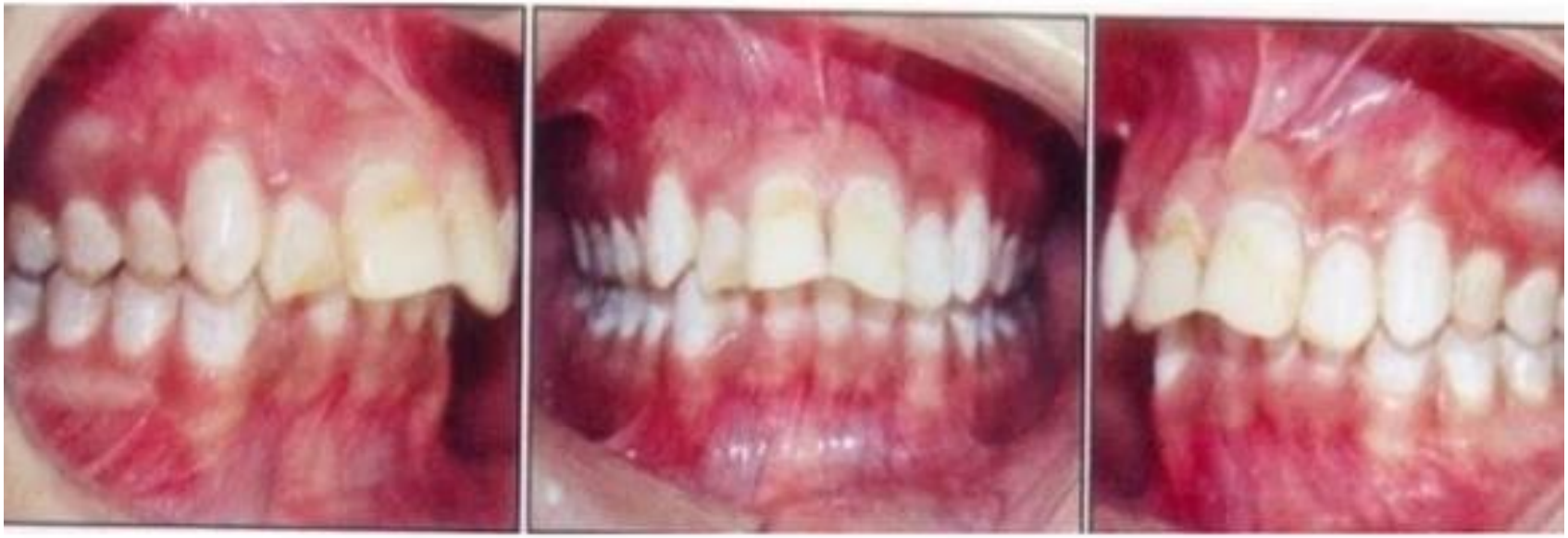
- Class II- Mandibular arch distal to normal in its relation to maxillary arch



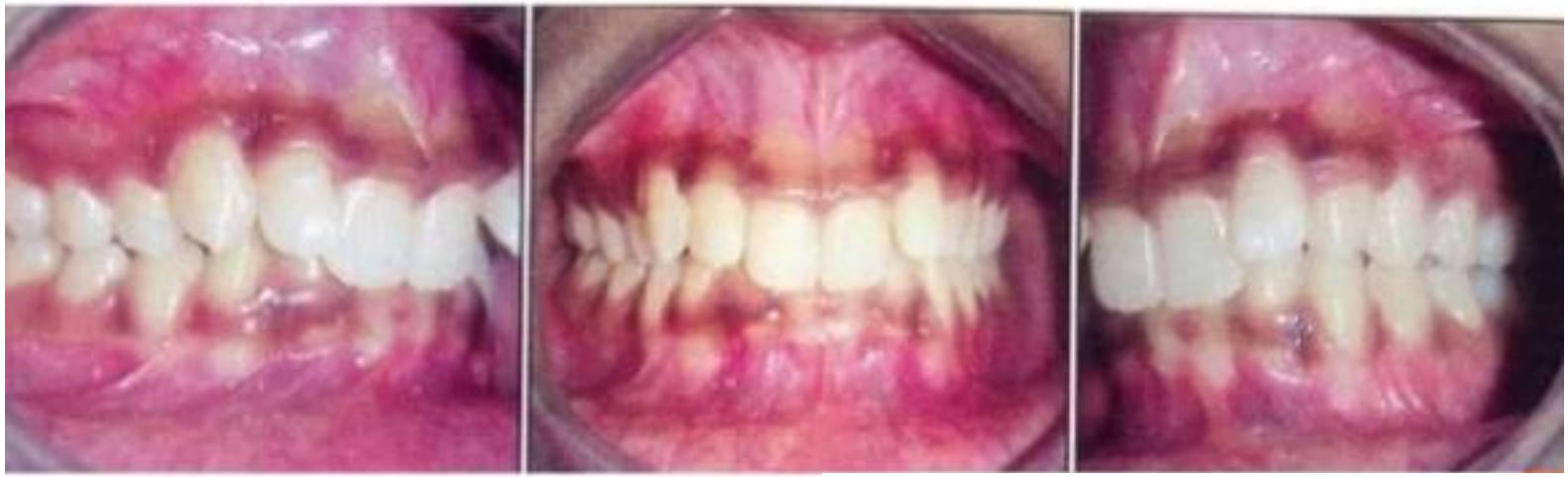
- Class III- Mandibular arch mesial to normal in its relation to the maxillary arch



- Division 1- Bilaterally distal, protruding maxillary incisors
  - Subdivision- Unilaterally distal, Protruding maxillary incisors



- Division 2- Bilaterally distal, retruding maxillary incisors
  - Subdivision- Unilaterally distal, Retruding maxillary incisors

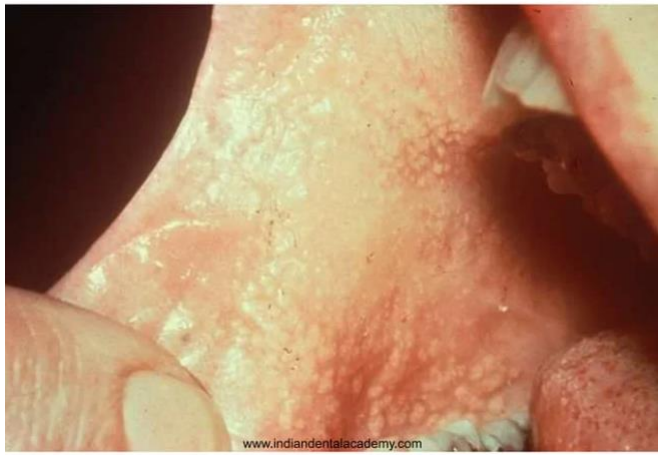


Developmental Disturbances

BUCCAL MUCOSA

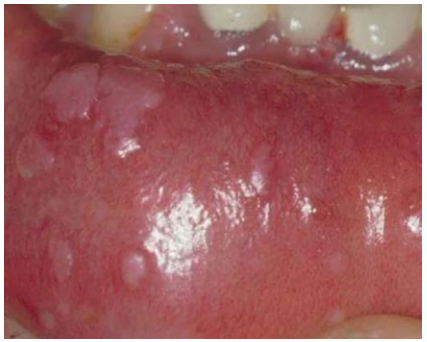
Fordyce's Granules

- Heterotopic collection of sebaceous glands
- Due to inclusion of ectoderm having some potentialities of skin
- Small yellow spots
- Bilaterally symmetrical
- Commonly involved areas- Buccal mucosa, lips, tongue, gingiva, frenum
- Adults > Children
- Males=Females



Focal Epithelial hyperplasia
Heck's Disease

- Multiple nodular lesion with sessile base
- Common seen on lips, buccal mucosa, commisure, tongue,
- 1-5 mm in diameter
- Same color as adjacent mucosa
- Seen commonly in children 3-18 yrs
- Undergo spontaneous regression in 4-6 months

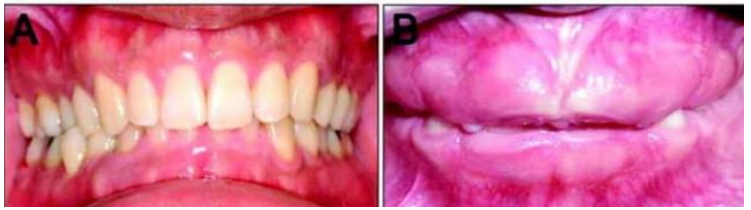


Developmental Disturbances

GINGIVA

Fibromatosis Gingivae

- Dense, diffuse, smooth, nodular overgrowth of gingival tissues of one or both arches
- Appears at the time of eruption of incisors
- Normal color, not painful, non hemorrhagic
- H/F
  - Thick epithelium
  - Elongated rete pegs
  - Dense fibrous connective tissue
  - Few interspersed fibroblasts
  - Inflammation may or may not be present
- Treatment
  - Surgical resection



Retrocuspid papillae

- Small elevated nodule on lingual mucosa of mandibular cuspids
- Sessile, bilateral, regresses with age
- Lies between free gingival margin and mucogingival junction
- Hyperparakertatinized/ Hyperorthokeratinized
- No treatment required

Developmental Disturbances

Salivary Glands

- Aplasia
  - Congenital absence of salivary glands
  - Xerostomia – Dry mouth
  - Oral mucosa appears dry, smooth, pebbly
  - Lips are crackled and fissures at corner of mouth
  - Rampant caries and early loss of teeth
  - No specific treatment

- Atresia
  - Congenital occlusion or absence of salivary gland duct
  - Retention cysts
  - Severe Xerostomia
- Aberrancy
  - Presence of salivary glands in abnormal locations
  - Lead to formation of retention cyst
  - Neoplasm like Central mucoeidermoid carcinoma

Hyperplasia of Palatal Glands

- Hyperplasia of minor salivary glands
- Etiology
  - Endocrinal disorders, Gout, Diabetes mellitus, menopause, hepatic disease, starvation, alcoholism, inflammation, benign lymphoepithelial lesion, sjogren's syndrome, aglossia-adactylia syndrome, uveoparotid fever etc.

- C/F
  - Small localized swelling, usually on hard palate or junction of hard and soft palate,
  - Intact surface, sessile, normal color, asymptomatic

LIP AND PALATE

Congenital lip and commissural pits and fistula

- It is malformation of the lips ,often following a hereditary pattern.
- It may occur alone or in association with other developmental anomalies such as various oral clefts.
- 75-80% of all cases of congenital labial fistulas ,there is an associated cleft lip or cleft palate.

ETIOLOGY:

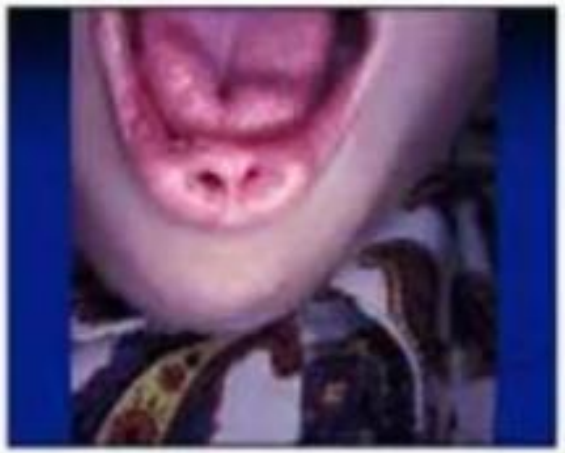
- Many theories have put up but none has been universally accepted.
- Notching of the lip.
- Fixation of the tissue at the base of the notch.

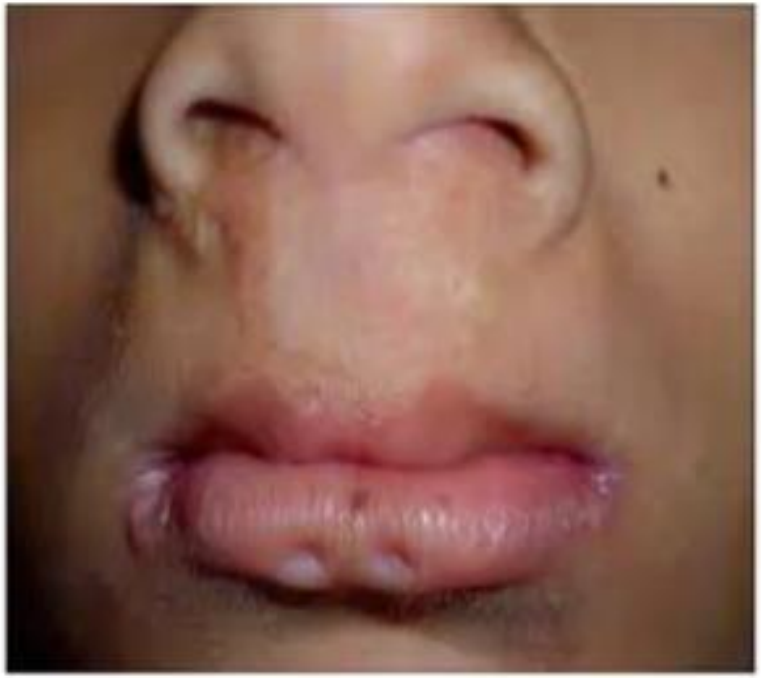
C/F:

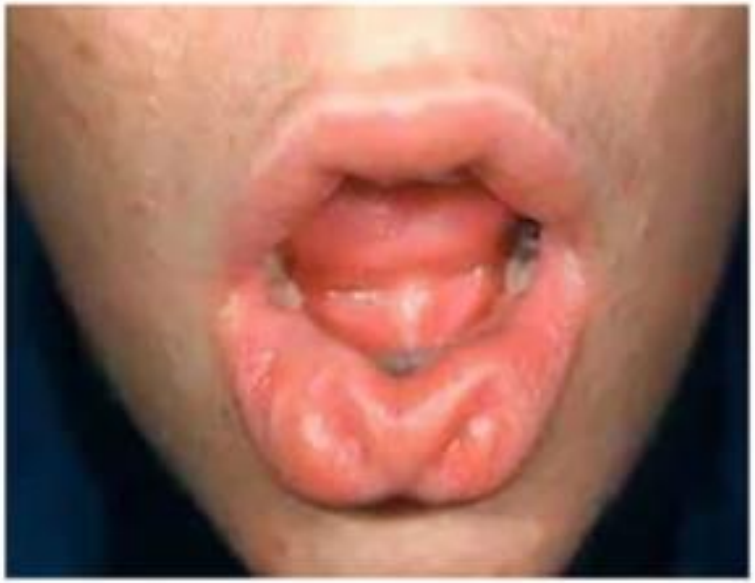
- Lesion:unilateral or bilateral depression or pit ,accentuating
- Site : vermilion surface of either lip (mostly on lower lip)
- Secretion: shows sparse may exudate from the base of pit

TREATMENT:

- ✓ Surgical excision
- ✓ However it is harmless and seldom manifest complications







VAN DER WOUDE SYNDROME

- **It is an autosomal dominant syndrome typically consisting of cleft lip or cleft palate and distinctive pits of the lower lip**

ETIOLOGY:

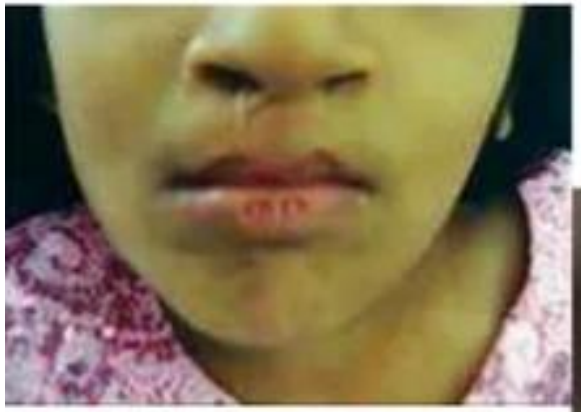
- The most prominent feature is orofacial anomalies
- Caused due to abnormal fusion of palate and lip , at days 30-50 postconception

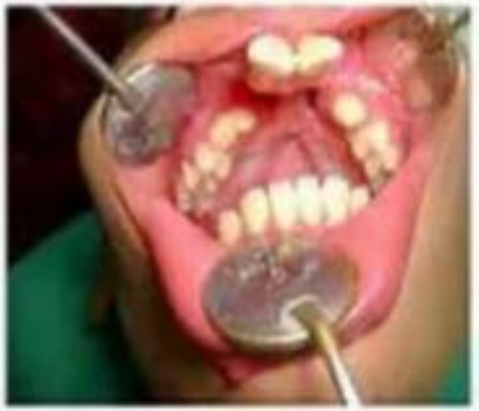
C/F:

- **Occurences**: affects about 1 in 100,000-200,000.
- **Sex**: no sex prediliction
- **Lesion**: isolated ,usually medial
- **Site** : on the vermilion portion of lower lip

TREATMENT:

- ✓ Examination and genetic counseling by a pediatric geneticist.
- ✓ Surgical repair of clept lip and palate





CLEFT LIP AND CLEFT PALATE

- It is a common congenital malformation.
- Failure in the fusion of the nasal and maxillary prosses leads to cleft of primary palate ,can be unilateral or bilateral.
- Incidence of cleft of the lip and palate varies from 1 in 500 to 1 in 2500 depends on geographic origin.

ETIOLOGY:

- Heredity.
- Environmental factors
- Insufficent nutrition to pregnant women

OTHER FACTORS:

- Defective vascular supply
- Size of the tongue prevent union of affected parts
- Infections , certain alcohol ,drugs and toxins
- Lack of inherent developmental force

C/F:

- **Sex** : male predilection
- **Lesion**: unilateral or bilateral anomaly

Types :

i. The cleft anterior to the incisive foramen is defined as cleft of primary palate.

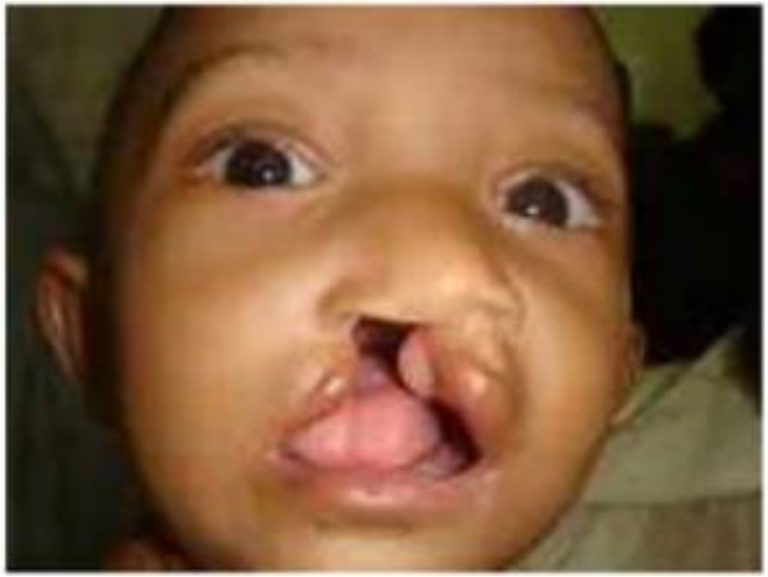
ii. The cleft posterior to the incisive foramen is defined as a cleft of secondary palate.

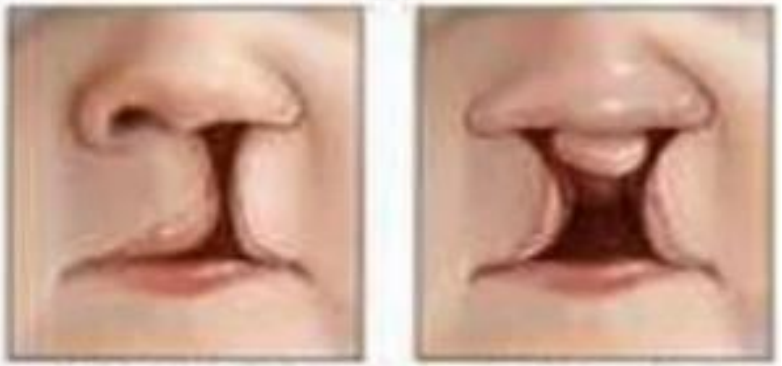
CLINICAL SIGNIFICANCE:

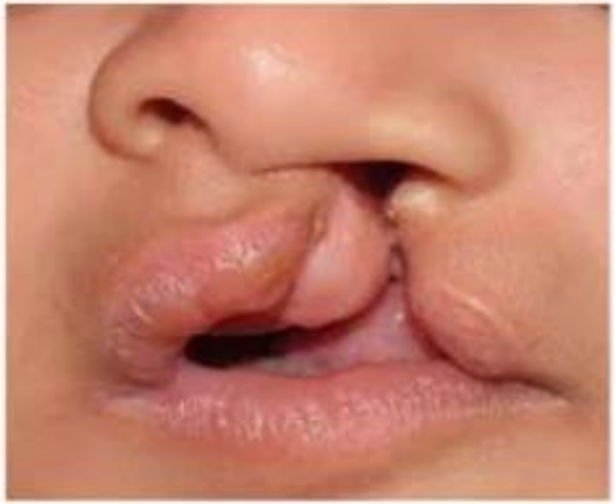
- ❖ Most cases can be surgically repaired with excellent cosmetic and functional results.
- ❖ Eating and drinking are difficult because of regurgitation of food and liquid through the nose.

TREATMENT:

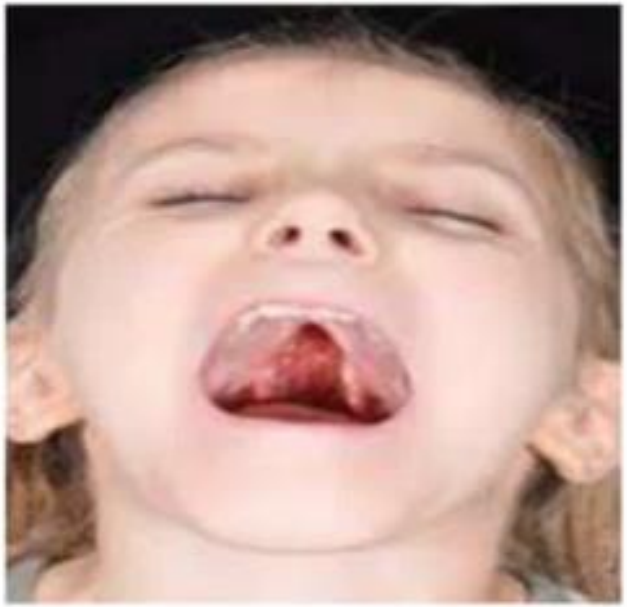
- ✓ Surgical treatment

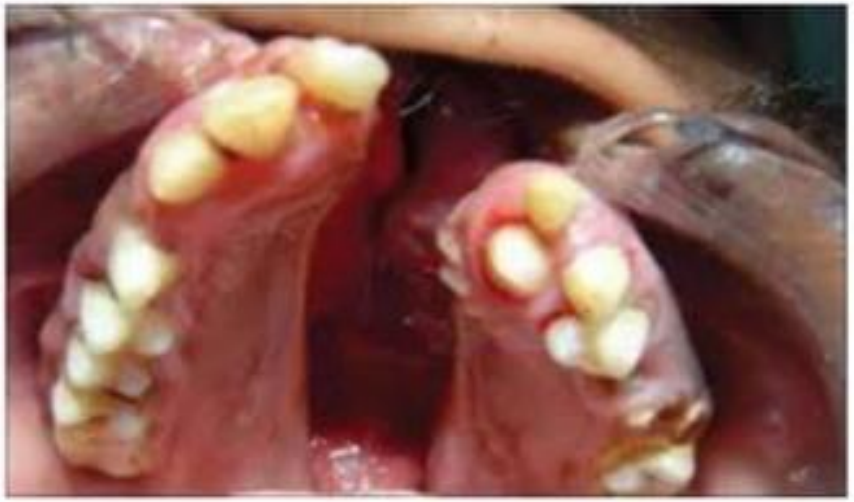




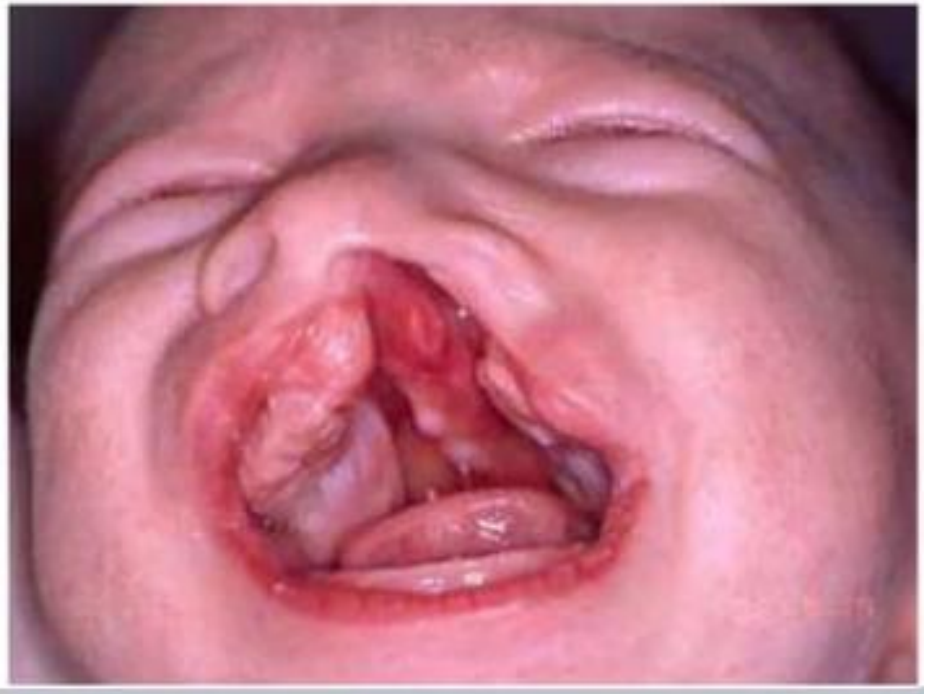


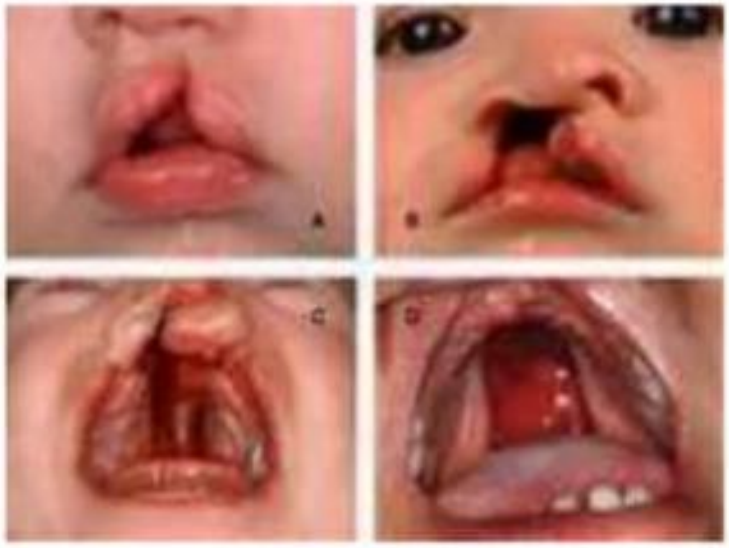
CLEFT LIP



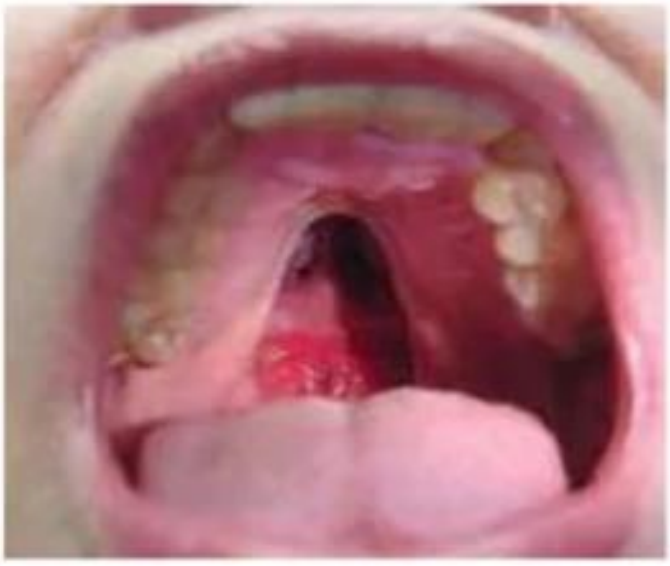


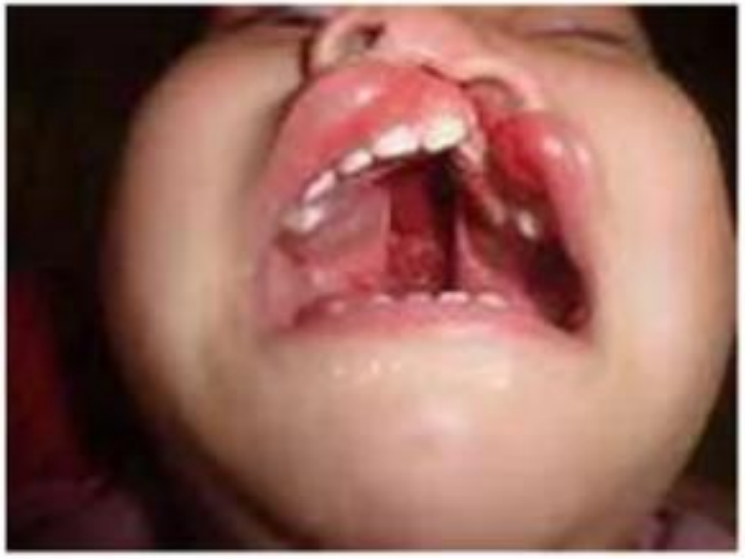
CLEFT PALATE





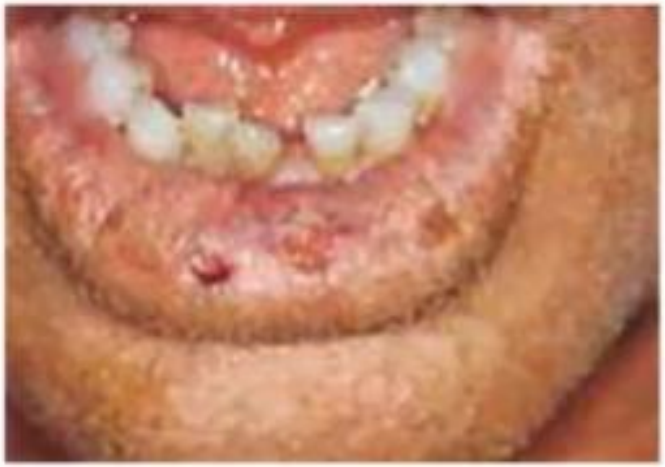

BEFORE
AFTER

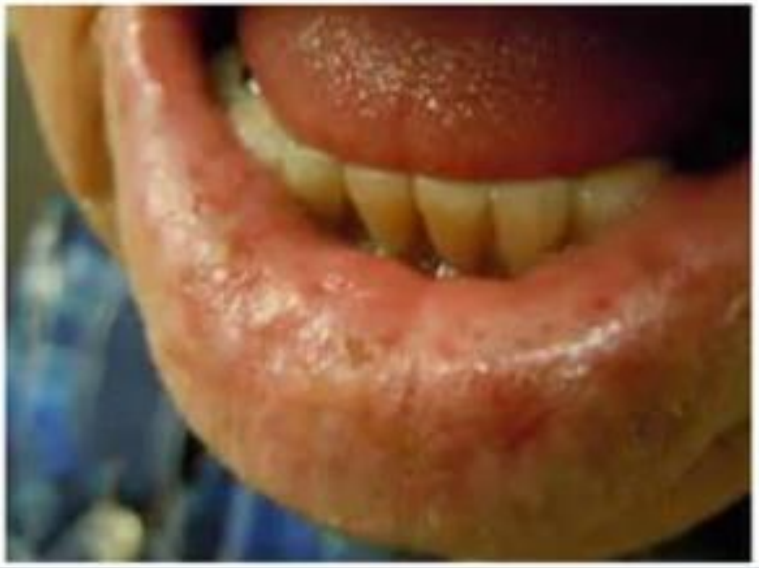




CHELITIS GLANDULARIS

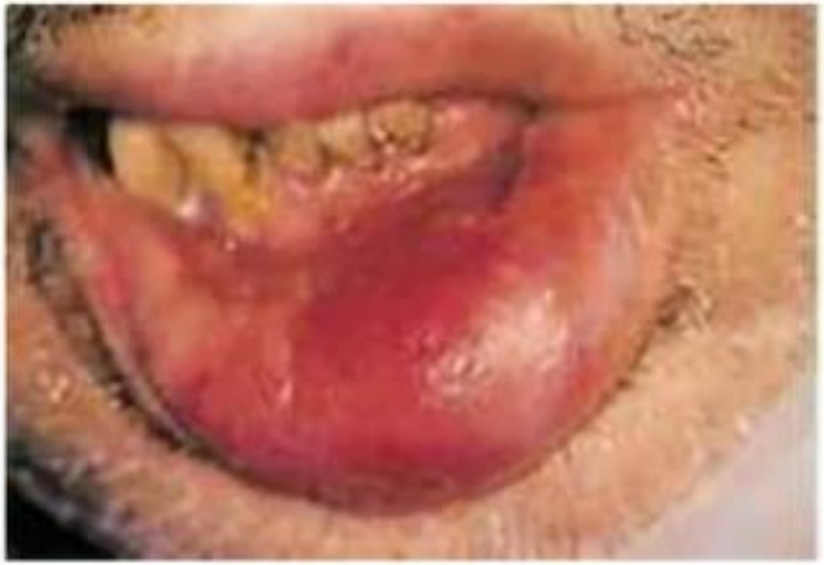
Characterized by progressive enlargement and eversion of the lower labial mucosa that results in obliteration of the mucosal-vermillion interface.





CHEILITIS GRANULOMATOUS

- **Cheilitis granulomatosa is a chronic swelling of the lip due to granulomatous inflammation.**



Etiology:

- Cause is unknown.