Connective tissue lesions

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Connective tissue lesions

- C.T hyperplasia
- Benign and malignant tumors (sarcomas)
Fibroepithelial polyp:

• Reactive fibrous tissue (= scar)
• Buccal mucosa, lip & tongue (OL)

• Clinically:
  • Pedunculated/sessile
  • Firm
  • Painless
- Variable in size
- Normal color/white
- Established
“Leaf Fibroma”
• **Hist:** fibrous C.T
“Giant cell fibroma”
Denture induced (irritation) hyperplasia:

- Periphery of ill-fitting denture
- Sulci & u post edge
- Single/multiple
- **Clin:** ≥ one firm, broad-based, leaf-like folds
- Embracing the flange
- ± linear ulcer
- Mandible > maxilla
- F>M
Hist:
Papillary hyperplasia of the palate (Inflammatory PH):

- Clinically:
  - Numerous small, tightly packed papillary projections
  - 3-4mm in diameter
  - Covering part or all of denture-bearing area
  - Over a red edematous mucosa
  - “Field of confluent reddish mushrooms”
• **Aetiology:**
  - Poor OH, loose, ill-fitting & sleeping with denture.
  - + low grade infection by bacterial or Candida

• **Hist:**
  - **Core:** dense fibrous & G.T with CICI

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In dentate?
Psuedoepitheliomatous hyperplasia

Epithelium:
Atrophic, acanthotic or occasionally

Psuedoepitheliomatous hyperplasia
Epulides:

- **Epulis**: reactive focal C.T proliferation confined to gingiva
  - Common
  - Trauma or chronic irritation
  - 80% ant to molar
  - Interdental papillae
  - F > M
  - Recurrence
Vascular epulides:

- 28%, 14% LRR

- Clinically:
  - Polypoid
  - Soft, bright red,
  - Often ulcerated,
  - Hemorrhage, ± rapid growth
End of 1st trimester

Following delivery: FE

Pregnancy epulis
- **Hist:**
  - Solid sheets of endothelial Cs or
Capillaries & large, dilated, thin-walled vascular spaces

Delicate F.C.T stroma with variable ICI
Pyogenic Granuloma

Percentage affecting gingiva?
Fibrous epulis:

- 65%, 2% LRR

- Clinically:
  - Ped/sessile
  - Firm,
  - Pink,
  - ↓ Ulceration
Hist:

- Collagen bundles w diffuse sheets of fibroblasts
- Variable CICI (plasma Cs)

Origin of bone

bone
Peripheral giant cell granuloma (giant cell epulis):

- 7%, 36% LRR

Clinically:

- Sessile/ped, soft, reddish/bluish, ulcerated
Interdentally, “hour-glass” shape
Loosening & movement of teeth
Occasionally:
edentulous areas:

**Rx:** ± superficial erosion:
interdental crest/alveolar bone margin
Hist:

- Nodular collection of MNGCs lying in a richly vascular stroma of plump spindle-shaped Cs
- Giant cells: numerous with variations
- Mononuclear stromal Cs
- Vascular channels, hemosiderin, extravasated RBCs
- Osteoid/trabeculae

Pathogenesis: ?
Connective tissue tumors
Fibrous tissue:

- **True fibromas**: very rare

**Benign and Malignant fibrous histiocytoma**:

- Derived of Cs with fibroblastic & histiocytic differentiation.
- Aggressive tumor

C&C with FEP?
**Fibrosarcoma:**

- Rare, children, clinical signs of malignancy
- Spindle-shaped Cs with histological signs of malignancy
Vascular tissue:

- Hemangioma and vascular malformations:
  - **Hgoma**: common, not present at birth, 8 wks → rapid growth → gradual involution (50% at 5 years, 90% at 9 years).
  - **VMF**: present at birth and persist throughout life.
Classification

- Hemangiomas
  - Capillary H.
  - Mixed H.
  - Cavernous H.

- Vascular malformations
  - Capillary M.
  - Venous M.
  - Arteriovenous M.
• Clinically:
  • Skin of H & N
  • Flat, raised or multinodular
  • Soft, reddish/blue/purple
  • Asymptomatic

• Blanch
- **Complications**: thrombosis, calcification, trauma
- Hist:
  - Cellular
  - Capillary type
- Cavernous type
Dental aspects:

- Lips/tongue/cheeks/palate,
- intramuscular, SGs, bone
Port-wine stain:

- Unique type of VMF on the face
- Unilateral
- 1/2/3 divisions of 5th nerve

- Purplish
- Diffuse
- ± nodular elevations
- Irregular but sharply demarcated borders
**Sturge-Weber syndrome**: in 10% of PWS

- Port-wine stain +
- Ipsilateral intracranial hemangioma /calcifications +
- Convulsions ±
- Contralateral hemiplegia ±
- Mental retardation
- Oral hemangiomas
Hereditary hemorrhagic Telangiectasia:

- “Rendu-Osler-Weber syndrome”
- AD
- Defect of vascular walls → multiple vascular dilatations
- Skin & MM of U aerodigestive tract & internal organs
• **Clinically:**
  - Multiple, reddish purple papules
  - Epistaxis

• **Dental aspects:**
  - Tongue/lips, trauma → prolonged hg
  - Anemia
Lymphatic tissue:

**Lymphangioma:**
- Hamartoma
- Malformations of the lymphatic system
- Less common than Hemangioma

**Clinically:**
- Evident at birth or early childhood
- Anywhere, Tongue
- Pale, translucent
- Smooth or nodular
- Hg $\rightarrow$ ↑ size & dark purple

Spontaneous regression?
- Capillary
- Cavernous
- Cystic
Cystic Hygroma:

- Lateral side of neck
- Quite massive, fluctuant
- Covered by skin
- 1st or 2nd year
- Extension
- Dental aspects
Adipose tissue:

- **Lipoma:**
  - **Clinically:**
    - W-d soft, yellowish, movable swelling
    - Asymptomatic, slowly growing
    - Adults, BM (50%) & tongue
- Relation to obesity?
- What will happen to Lipoma if caloric intake is reduced?
• **Hist:** W-d mass of mature adipose tissue, fibrous stroma

**Fibrolipoma**
Herniated buccal fat pads:
- Traumatized buccinator muscle
- Buccal swelling
- = Lipoma (history, ± ulceration & necrosis)

Liposarcoma:
- Rare in H & N (extremities)
Neural tissue:

Neurofibroma:

- Schwann cells & Perineural fibroblasts
- Clinically:
  - Tongue, buccal mucosa, lip, intrabony
  - W-d, painless, submucosal nodules
  - Majority are solitary
Multiple Neurofibromatosis

- > 8 forms

- **MN1**: (Von Recklinghausen Disease)

- Multiple neurofibromas occurring anywhere
  - **AD**
  - Elephantiasis neuromatosa
  - Café-au-lait spots
• Oral lesions: 25%, mucosal (nodular or diffuse) or intrabony

• Malignant change: 5-15%
- **Histology:**
  - Circumscribed/diffuse
  - Haphazardly arranged spindle-shaped Cs
  - Fine sinuous collagen fibers
  - Mast cells
  - Nerve fibers
Neurilemmoma (Schwannoma):

- Clinically:
  - Smooth, firm, movable nodules
  - Dorsal tongue, IAN
• **Hist:** Capsulated & no nerve fibers

• **Antoni A:** parallel rows of spindle elongated Cs

• **Antoni B:** disorderly arranged Cs & collagen in mucinous microcystic stroma

**Antoni A**
Multiple Endocrine Neoplasia Syndrome (MEN-3, 2b):

- Multiple submucosal nodules (neuromas) on LBT (Childhood) +
- Medullary Ca of thyroid, Phaeochromocytoma (2nd decade)
Traumatic neuromas:

- Disorganized overgrowth of nerve fibers, Schwann Cs & Perineural fibroblasts of proximal segment of severed nerve
- Submucosal firm, tender mass
- Along distribution of mental nerve
Muscle tissue:

- **Rhabdomyomas**: rare, heart, tongue 2\textsuperscript{nd} most
- **Leiomyoma**: uterus, orally: angiomyomas

- **Rhabdomyosarcoma & Leiomyosarcoma**: very rare in mouth
Granular cell tumor:

- Schwann cell origin
- Dorsal/LB of tongue, ventral tongue, SP
- Clinically:
  - Slow-growing, painless, firm submucosal nodule
  - Rarely multiple
  - No specific age or gender
Hist:

- Diffuse sheets of large, oval Cs with distinct membranes & granular (lysosomes) eosinophilic cytoplasm
- W-d but lack encapsulation
- Granular Cs extend up between rete pegs
- Pseudoepitheliomatous hyperplasia
Hodgkin’s disease:

- 30%
- Clinically:
  - Males 3rd decade
  - Single LN (CLN) → painless, progressively enlarged → adjacent, distal Ns & extra-nodal sites
  - Low-grade fever & night sweats
  - Rarely occurs extra-nodal

Malignant lymphoma:
- **Intra-orally:** only in widely disseminated stage IV tumors
- **Etiology:** unknown; genetic, viral
- **Hist:** Reed-Sternberg Cs.
  - 4 histological variants
  - **Lymphocyte predominance:** 90% 5-y-survival
  - **Nodular sclerosis:** 70%
  - **Mixed cellularity:** 60%
  - **Lymphocyte depletion:** 20%
Non-Hodgkin’s lymphomas:

- Adults

- **Classification:** cell of origin; cytological & histological features

- **H & N:**
  - Rare
  - Primary or 2ndry

  - **Primary:** CLNs then Waldeyer’s ring

  - **Extra-nodal:** oral ST, SGs (parotid) or jaws

  - **Mucosal lesions:** soft, fleshy, often ulcerated swellings

- AIDS
Burkitt’s lymphoma:

- Equatorial Africa
- Typically involves extralymphoid sites: Jaws & ovaries
- Etiology: EBV
  - Translocation chromosome 8 to 2/14/22
- Three types:
African endemic type:

- 1st decade, 2M: 1F
- Clinically:
  - Massive tumor of maxilla (> mandible)
  - Painless, firm, rapidly growing ± ulceration
  - Displacement & resorption of teeth
  - + Lymphomatous tissue in abdomen
  - Strong α w EBV, Malaria as cofactor
Non-African, non-endemic type:

- Europe, USA, Asia
- Abdominal lesions predominate; 20% jaw lesions
- Not α w EBV, similar chromosomal translocation

AIDS-associated type:

- 2nd most frequent neoplasm & many are Burkitt’s
- Palate & gingiva
- Hist: “Starry-sky” pattern