- Seborrheic keratosis – only on skin, benign, no malignancy, esthetics is problem.

(2) Basal cell Ca. – Not in oral cavity, – Sun exposed areas, NO metastasis readily.

(3) Verrucous – no metastasis, better prognosis than squamous cell ca., tobacco chewing

(4) Squamous epithelium tumors – papilloma, verrucous ca., epidermoid Ca.,

(5) Malignant melanoma – most common site – Palate + Max alveolar ridge.

(6) Leukoplakia – white patch on mucous membrane, precancerous, Histo = can have hyperkeratosis → know scale of Histo changes

(7) salivary gland tumor – most common on jn. of hard/soft palate

(8) oral Leukoplakia – cause = ~~Debris~~ Unknown assoc. w/ tobacco use. not synergistic w/ alcohol use!

(9) most common oral cancer site = lateral border of tongue

(10) Xerostomia – sjogrens, radiation _-_ . 398 box 11-1

(11) Salivary gland tumor – most common is pleomorphic (mixed) adenoma. benign tumor

(12) Sublingual gland tumor – rare, but often malignant

(13) Swiss cheese appearance – adenoid cystic ca.

(14) Perineural invasion – polymorphous low grade + adenoid cystic

(15) Sjorgren – 1° / 2° – 1° has dry mouth/eyes 2° has autoimmune (RA, SLE). (Sicca)

(16) Sialolithiasis – most common in submandibular gland.

(17) Mucocele – most likely cause is severed duct
– occur on lower lip. , SCC on ~~lower~~ lip, salivary gland neoplasm – upper lip.

(18) Muco Ep. criteria – TABLE 11-11

(19) Transformation potentials for erythroplakias – P.357 ① PVL ② Reverse smoking ③ Erythroplakia

(20) Erythroplakia = 90% malignant transformation potential.

PVL – higher
stomatitis, nicotini – zero transformation, reverse smoking high.

(21) Sialadenosis – Hormonal malnutrition, Alcohol, drug rxns

(22) – oral cancer associations – tobacco, alcohol synergistic, ~~plummer~~ viruses, syphilis,

(23) papilloma – no malignant change most common Epith. lesion, tx = conservative excision, don't cut through stalk.

(24) Necrotizing sialometaplasia – ~~DDX~~ Necrosis of acinar cells, can be difficult to separate from cancer.

(25) rare metastasis – verrucous, basal cell.

(26) basal layer to surface change – Ca. in situ (intraepithelial ca.).

(27) site metastasis – size, degree of differentiation

DR SAWYER'S QUESTIONS for EXAM

Soft Tissue Tumors

Fibroma : Firm nodules on lower lip, buccal mucosa. From fibrous repair / trauma / irritation

Giant stallite pegs are f'n retro

Giant Cell Fibroma → Hallmark = large stellate fibroblasts.
- Can Create Retrocuspid Papillae. Thin Epithelium, long, narrow Rete pegs)

Epulis Fissuratum → Hyperkeratosis, Inflammatory papillary Hyperplasia, PEH

Inflammatory Papillary Hyperplasia → Cobblestone Palate, Red, not Pre-malignant.

Craving pus

Pyogenic Granuloma → ~~cobble~~ hormonal changes (pregnancy) help this grow. - it is from trauma / irritation. has Granulation tissue

red G Giants drinks Cups of Baby teeth

Peripheral Giant Cell Granuloma → red, on Gingiva of edentulous area of former deciduous teeth (Adults) Cup - Shaped lucency in edentulous area.
Cause - Trauma / irritation. Can't differentiate btw. This and Pyogenic Granuloma

Peripheral Ossifying Fibroma → Reactive Gingival growth. Get fibrous proliferation with mineralized product. Nodular mass from Interdental papilla

Lipoma - Rare in Mouth

Traumatic Amputation of Nerve bundle

Traumatic Neuroma (Amputation Neuroma) → damage to Nerve bundle = reactive proliferation. Mental foramen ones can be impinged on by denture

solitary dome house on palisaded No Verocay, No Men, No malignant neurologists

Palisaded Encapsulated Neuroma → Interlacing fascicles of schwann cells in a solitary dome-shaped Nodule. Palisading but NO Verocay Bodies of Antoni-A tissue
- Not Assoc w/ Neurofibromatosis, MEN, No malignant change.

Neurilemoma (Schwannoma) → benign schwann-cell neoplasm, Tongue.
- Encapsulated Tumor w/ Antoni A: (Streaming fascicles of spindle-shaped Schwann cells forming palisaded arrangement around eosinophilic areas (Verocay bodies) and Antoni B (less cellular + organized)
- Verocay Bodies = duplicated B.M. + cytoplasmic processes.
- No Neurites

Nerd delema President Verocay w/ the Anti A & B

Reckless Van

~~Neurilem~~ Neurofibromatosis → Soft nodules covered by epithelium on tongue, buccal mucosa + vestibule (or anywhere else).
~~***~~ von Recklinghausens - if multiple fibromas, cafe-o-lait spots
Men III - Mucosal Neuroma → Men III can cause multiple neuromas
- **Box 12-1** = Pt needs 2 of these to have Neurofibromatosis:
① 6+ Cafe-o-lait spots >5mm ② 2+ Neurofibromas ③ axillary/inguinal freckling ④ Optic glioma ⑤ 2+ Lisch nodules ⑥ osseous lesion ⑦ 1st degree relative with it.

GCT looks like SCC

Granular Cell Tumor - Dorsum of tongue., can look like SCC.

Congenital Epulis → Tumor on Gingiva of infants

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HEMANGIOMA → Common tumors of Infancy. at birth = pale macule w/ telangiectasias — develops rapidly in first few weeks. Self-resolves by age 5-9

VASCULAR MALFORMATION → Present at birth + persist for life. PORT WINE STAIN - on trigeminal nerve distribution.

STURGE-WEBER ANGIOMATOSIS (encephalo-trigemino angiomatosis) → has port-wine or nevus flammeus. Can involve ~~eyelid~~ meninges, cerebral cortex = CONVULSIVE disorders / seizures, retardation. GINGIVAL PROLIFERATION resemble Pyogenic granulomas. TRAM LINE Calcifications on skull radiograph.

NASOPHARYNGEAL ANGIOFIBROMA → Vascular / Fibrous neoplasm in nasopharynx
- Seen in Youth / Males. Creates nasal obstruction / nosebleeds, * BOWING of Post. wall of Maxillary Sinus.

LYMPHANGIOMA → Lymphatic vessels proliferate. * Treat = MUST excise. TONGUE involved.

LEIOMYOMA → BENIGN NEOPLASM OF SMOOTH MUSCLE

RHABDOMYOMA → " " SKELETAL " → Floor, soft palate, base of tongue.
- CROSS STRIATIONS to diagnose

SOFT TISSUE SARCOMAS → rare Malignant tumors

FIBROSARCOMA → Malignant Fibroblast tumor. Creates HERRINGBONE PATTERN = fascicles of spindle-shaped cells

NEUROFIBROSARCOMA → 50% of Pt's w/ Neurofibromatosis. Peripheral Nerve Sheath

KAPOSI'S SARCOMA → HHV-8 causes.

RHABDOMYOSARCOMA → Malignant - skeletal muscle MOST Common Soft tissue tumor of Children. PALATE. 3 types: Embryonal, Alveolar + pleomorphic - Most are embryonal (resembles various stages in embryogenesis of skeletal muscle).

PEH - Misdiagnosed often.

LEUKOPLAKIA → White patch that isn't any other disease. - strictly a clinical term.

→ From thickened keratin.
→ Considered Pre-malignant, but has only 4% malignant transformation potential.
→ Most common Pre-cancer but not the highest transformation risk.
→ MALES, SMOKERS — 80% of Leukoplakias are in Smokers., Can disappear when smoking stops.
- ALCOHOL NOT ASSOCIATED. SANGUINARIA usage = Maxillary alveolar Leukoplakia.
- UV Radiation causes Lower Lip Leukoplakia. → along w/ actinic cheilosis.
- Treponema (dorsal tongue), Candida, HPV Also assoc.
- Nicotine Stomatitis (pipe smokers palate), Frictional keratosis are trauma/irritations that create hyperkeratosis but Not considered Leukopl. b/c it isn't pre-malignant.
- Age 40+
- Mostly on Lip vermillion, buccal mucosa + Gingiva - sinister locations are floor of mouth, Ventral tongue + vermillion of Lip. (show dysplasia).

Smooth/thin → Thick/fissured → Granular/Verruciform → Erythroleukoplakia
——— MORE MALIGNANT transformation ———→

PROLIFERATIVE VERRUCOUS LEUKOPLAKIA → a High Risk form. has rough surface projections
- Spreads slowly, transforms into SCC. STRONG FEMALE Assoc. (overall Leukoplakias more in men)

- Leukoplakia Histo: Epithelium has teardrop-shaped Rete-ridges, loss of polarity, keratin pearls
- Tx: Biopsy - remove if dysplastic, check every 6 mo. if not., tell pt to stop smoking

ERYTHROPLAKIA - Red patch that isn't any other condition.

- Significant epithelial dysplasia, Carcinoma in situ, or invasive SCC.
- Tougher to see than Leukoplakia, much more dangerous.
- Older males.
- Floor of mouth, tongue, palate.
  Well demarcated erythematous macule or plaque w/ soft velvety texture
- 90% are either severe dysplasia, Ca. in. Situ., or superficial ~~cancer~~ invasive SCC.
- Lack of keratin.
- Biopsy, long-term follow up.

6

* Malignant transformation potential of Pre-cancerous lesions:
① Proliferative Verrucous Leukoplakia
② Nicotine Palatinus (reverse smoking)
③ Erythroplakia
⋮
Thick leukoplakia
Thin leukoplakia

PLUMMER-VINSON SYNDROME - assoc. w/ Iron deficiency anemia (* ∴ this is pre-cancerous)
- Thin epithelium, high freq. of oral + esoph. SCC.
- Burning tongue, red tongue, smooth angular cheilitis
- dysphagia from esophageal webs, spoon-shaped nails, fatigue, SOB, weak

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Oral Cancer — Smoking is major cause. Alcohol alone = nothing alcohol+Smoking = more cancer
- Phenols, Radiation (UV and therapeutic), Iron deficiency (Plummer-Vinson) - all are causative.
- Vitamin A protects against cancer (deficient pts at risk)

Squamous Cell Carcinoma

- Can be exophytic, endophytic, Leuko/Erythroplakic
- Underlying bone may be invaded = Moth-Eaten pattern

Carcinoma of the Lip vermillion

- Seen in light-skinned individuals w/ long UV exposure
- LOWER LIP, Slow growth

Intraoral Carcinoma: ① Lateral Tongue, ② Floor of mouth.

- Floor of Mouth region starts as leukoplakia/erythroplakia in midline near frenum.
- Gingival carcinomas invade/destroy underlying bone, least assoc. w/ tobacco use.

Oropharyngeal Carcinoma: Most in tonsillar area, Soft palate. the rest @ base of tongue.

- Pain + dysphagia. Metastasis likely (pt. unaware until late). goes via lymph (- HARD NODES - Fixed (for all metastases))

Staging - TNM system. best indicator of prognosis (better than grading).
Grading - how much the tumor resembles parent tissue - differentiated = I anaplastic = III/IV

Oral SCC - 58% 5yr survival Rate [redacted].

- Tx = excision. Lower lip carcinoma much better prognosis than upper lip.

Oral Squamous Papilloma - occurs all over oral cavity. Roughened texture.

- painless exophytic to cauliflower-like.
- most due to papillomavirus.
- * No known Malignant potential

HEMATOLOGIC DISORDERS

Lymphoid Hyperplasia – Acute Rxns - large, tender, moveable nodules, Chronic Infections - Firm, moveable nodes

HEMOPHILIA : Hemophilia A = FACTOR VIII deficiency, X-linked
Hemophilia B = FACTOR IX "
Von Willebrand's = Von W. factor deficiency = MOST Common Inherited bleeding disorder. (2)
↳ mild cases
- tissue hemorrhage produces "pseudotumor of hemophilia", ~~from tissue trauma~~.
- Consult physician Before any surgery.

ANEMIA = decrease in O_2 carrying capacity of Blood — ↓ RBC's or ↓ Hemoglobin
- Tiredness, lightheadedness, Pallor of mucus membranes

SICKLE CELL — S.C. crisis - severe sickling - pain from ischemia + infarctions - 3-10 day episode.
- susceptible to infections (Strep. Pneumoniae).
ORAL Radiograph = ↓ trabecular pattern in mandible, hair on end skull occasionally.

Thalassemia - disorders of Hemoglobin Synthesis (α or β chain)

β-Thal-minor = only one defective gene for β-globin molecule (no clinical manifestation)
β-Thal-Major = 2 defective genes. → Microcytic, hypochromic Anemia (1st year of life) → get ↑ hematopoiesis - causes Marrow hyperplasia, hepatosplenomegaly, + lymphadenopathy.
- The big bone marrow can make big maxilla/mandible.
- Hair on end skull radiograph.

α-Thal - can involve 4 genes (β only has 2). 1 gene alteration = nothing bad.
2 genes = mild anemia + microcytosis
3 genes = (Hb disease) = hemolytic anemia/splenomegaly - Tx = splenectomy.
4 genes = Hydrops fetalis - fatal after birth.

APLASTIC ANEMIA → erythrocyte deficiency → (anemia), platelet deficiency (bleeding), WBC deficiency (infection).
→ Gingival Hemorrhage, mucosa petechiae, purpura/ecchymoses, pale mucosa, Ulcerations.

NEUTROPENIA → low Neutrophils. Oral mucosa infection is early sign. Congenital or acquired from other causes.
- get gingival mucosal ulcerations.

Agranulocytosis → low Neutrophils + other granulocytes (low production or ↑ destruction) - a cause is chemotherapy (1)
→ get infection, Necrotizing lesions of cheek, tongue, palate. / NUG in gingiva.

Cyclic Neutropenia - a periodic Neutrophil reduction. Get oral ulcerations in trauma-prone areas, Gingiva is most severely affected → Bone loss, recession, mobility

Thrombocytopenia — low platelets (↓ production or ↑ destruction) — get oral hemmorhages.

Polycythemia Vera — Thick mexican blood - get CVA's, MI's, Hypertension, Splenomegaly, Erythromelagia (burning sensation in hands + feet leading to thrombosis/gangrene).

LEUKEMIA → Malignant hematopoietic stem cells Acute/chronic, myeloid or Lymphocytic (2)
→ symptoms from ↓ in normal #'s of blood cells from crowding out by malignant
→ petechiae of palate, spontaneous hemorrhage w/ low platelet count., Ulcerations due to impaired combat of Normal flora.
→ Severe Gingival ulcers - deep/punched out w/ necrotic base., get oral candidiasis, herpes
→ Chloroma - diffuse swelling of oral soft tissues from infiltration of Leukemic cells
→ Tx - chemo, good oral health

LANGERHANS CELL HISTIOCYTOSIS → Monoclonal proliferation of dendritic mononuclear cells
3 subtypes: (1) Monostotic or polyostotic eosinophilic granuloma → bone lesions, no visceral involvement
(2) Chronic disseminated Histiocytosis → Bone, Skin, + Visceral lesions (Hand-Schüller-Christian dx)
(3) Acute " " → Bone Marrow, Skin, Viscera (Letterer-Siwe dx)

- Men, ~~Women~~ Kids
- can involve Jaws - creates "punched out"/ill defined radiolucency - can mimic periapical disease
  - gives "teeth Floating in Air" appearance on radiograph - massive bone resorption
- can have ulcerations, or mucosa/gingiva proliferation
- Diagnosis → Mixture of histiocytes + eosinophils
  ↳ BIRBECK GRANULES (rod-shaped "racket" bodies)

Hodgkins Lymphoma - a malignant Lymphoproliferative disorder
- get ~~large~~ enlarging masses in lymph node region (OWL EYE nucleus)
- oral involvement is RARE

Non-Hodgkins Lymphoma → Non tender swellings in vestibule, gingiva, post. hard palate

Mycosis Fungoides → a cutaneous t-cell lymphoma.
3 stages: Eczematous (erythematous) stage → well demarcated Scaly patches
plaque Stage → elevated red lesions
Tumor stage → become papules + nodules
- affects gingiva, palate, tongue. - get ulcerated indurated plaques + nodules.

Burkitt's Lymphoma → B-lymphocyte malignancy. American → Neoplasm is abdominal mass some jaw lesions
African → children, jaws affected (maxilla > mand)
- Tumor growth can produce facial swelling, proptosis, mobility
- get radiolucent bone destruction
- patchy loss of Lamina dura

Angiocentric T-cell lymphoma → destroys midline structures of palate/nasal fossa. Tx - chemo/radiation.
→ palate swelling can create ulceration / oronasal Fistula.

Multiple Myeloma - plasma cell Malignancy. Bone Pain. Poor prognosis
- multiple "punched out" radiolucencies on skull, sometimes jaws.
- can get fractures from tumor destroying bone.
- fatigue, Fever, Metastatic calcifications of soft tissues, renal failure, Amyloid deposits in oral mucosa/periorbital skin petechial hemorrhages.

Plasmacytoma - Monoclonal prolif. of plasma cells - progresses to multiple myeloma.
- presents centrally within a bone (can. Myeloma is multicentric).
- Swelling, bone Pain
- Extramedullary plasmacytoma - a soft tissue mass in Maxillary sinus, tonsillar region, or parotid gland.
- Well defined UNILOCULAR Radiolucency w/ no other identifiable lesions.