MEDINAZ

LAST BITE

NEET MDS

ORAL PATH & MEDICINE

1ST EDITION

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Last Bite NEET MDS

Oral Pathology & Medicine

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Kolkata | Mumbai

“Dedicated in the feet of my master and grandfather, Dr. Chandragupta Gupta”

Dr. Ankit Gupta

“Dedicated to the mentor and guru, Dr. HR Umarji”

Dr. Nazmul Alam

Medinaz App Review

26. Harsh dadhich

★★★★★ 08/02/2021

Amazing app.Truely brilliant.I mean the manner in which signs and symptoms of the diseases have been presented pictorially helped me to form a photographic memory of the relevant data. It is very consice,point to point and fully authentic as per the latest international editions. I sincerely recommend this to every student ,be it neet aspirant or DDS aspirant,etc.

Medinaz - Medical/Dental/Nurse

Ratings and reviews for Phone

A Aburaihan Mondal

★★★★★ 27/09/24

Since getting the Last Bites and visual mnemonic books, I've realized how beneficial they are for my NEET MDS exam preparation. I'm excited to see more books and test series added soon!

Was this review helpful? Yes No

A Ashik Chaudhary

★★★★★ 26/09/24

Medinaz was a lifesaver for my 2nd prof exam. I hope to see the 3rd year books as soon as possible.

Was this review helpful? Yes No

R Raihan Mondal

★★★★★ 23/09/24

Helpful content for exam preparation. Liked a lot.

Was this review helpful? Yes No

g gayathri sivakumar

★★★★★ 17/11/2020

This app enables everyone to learn the fun way. I have always been a stickler for "understanding while learning" and this app is perfect for ppl with similar expectations/mindset!!

P Poonam Thorat

★★★★★ 20/07/24

This is one of the best apps for memorizing medical content. I have already tried Picmonic, but I find Medinaz images easier to remember. This is likely because each image provides a comprehensive explanation with an authentic medical touch. However, the books and subjects are currently limited. I am hoping for more content to be added soon.

4 people found this helpful

Was this review helpful? Yes No

R Rohon Sk

★★★★★ 13/07/24

I recently purchased all the visual mnemonic books. So far, I find them very helpful. The images are unique and easy to understand, although I did find some mnemonics difficult to remember. Otherwise, everything is perfect!

Was this review helpful? Yes No

A Akash Adhikari

★★★★★ 26/06/24

It is one of the best platforms for medical visual learners to remember and understand the difficult to remember medical topics. The App is also neat and clean. Highly recommended.

Was this review helpful? Yes No

Medinaz App Review

Namita Dadgal

★★★★★ 08/02/2021

Best app for exam preparing students. The daily cards helps to keep revising in your freetime like you scroll through social media. Illustrations makes it easy to go through lot of information in short time. I personally found it very helpful. Highly recommended app.

Jimit Desai

★★★★★ 25/11/2020

As a fellow of medical field I can relate to the content and the method in which it is presented. I so envy the current generation students who have access to such creative and easy ways of learning. Wish you had started the app few years back. Cheers to medinaz team. Great work guys. Keep rocking and help more students 🔥🔥

Harshit Jain

★★★★★ 08/10/2021

Very precisely selected and high yielding dental study material. Highly recommended for NEET PG preparation and other government exam preparation. The Contents and diagrammatic presentation of knowledge is nice so that a person can retain it for a longer period of time. The new book of Dr Ankit Gupta sir "High yield visual book of Dental Cement" is a colourful amazing book with various colorful diagrams are really easy to understand. Hope for new add on title on dental topics...

Khushboo Gupta

★★★★★ 03/12/2020

I have been following the free content for quiet some time. And i must say its visually appealing and really easy to understand and remember. Got the new book on your app- High yield visual book of Dental Cyst.. Its an amazing book with lots of pictures and really easy to understand..Hoping for more titles in dentistry...

Shreeya Sharma

★★★★★ 09/01/2021

This app is perfect for all Medical & Dental PG aspirants as well as practitioners.It's a precise and concise collection of all important concepts with visual pnemonics.The daily card books section helps to grab all the important and volatile points so easily. Found it very very useful to remember signs and symptoms of all important syndromes. A quick glance at the daily cards section helped in revising many points of different subjects so smoothly. Looking forward for more interesting updates.

Dr. Shantanu Hazra

★★★★★ 25/10/2020

If you are bored from mundane way of just by-hearting the big heavy medical books, then you must definitely try Medinaz. It not only helps you to memorise but also helps you to remember basic idea for a longer time.

086. Siddhesh Mohite

★★★★★ 27/10/2020

Creativity at it's best!!! One of the best medical app available in the market ❤️ Free content is really good but trust me the premium content is even better.Very helpful for remembering all the key points. I will highly recommend it for all the competitive exams. Absolute value for money 💯

061. Aniket Pandey

★★★★★ 30/10/2020

The only medical app which teaches difficult concepts in fun and efficient way! Loving all your cards and so very excited for Golden cards to launch. If you're in any way related to Medicine or Dentistry, YOU CANNOT MISS THIS. The content is gold. Wishing all the best to creators of this app for further advancements!

Sikender Singh

★★★★★ 05/11/2020

A must have app for medical professionals and students. Combination of art and science makes learning a fun on this app. Pictorial representations are very good which makes remembering very easy. Great job...

Iram Contractor

★★★★★ 19/12/2020

This app is designed perfectly to help medical students. The free content section is so good, it feels like you're scrolling social media while learning so much! Would highly recommend this app, along with it's paid content - it's worth every penny. I purchased the book 'Foramina & Canals', and honestly, the illustrations and mnemonics are super helpful in remembering these complex chapters. They also have some free books that are awesome. Download it to experience a beautiful new way to study.

genica quilatan

★★★★★ 04/08/2021

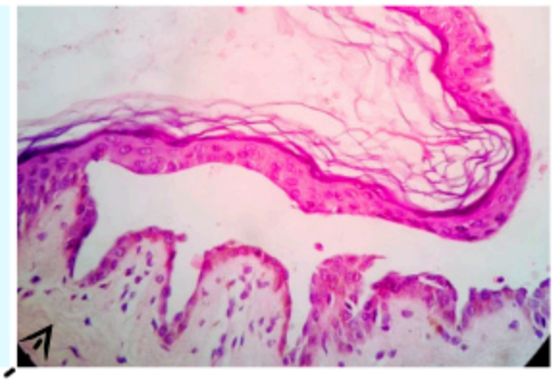
Upon purchasing this app, i went through some of the mnemonics so i would know if it's the type that would work for me. Medinaz's mnemonics are simple and effective especially if you are a visual learner, of course, most of the work you have to do by yourself! They only provide you how to make memorizing and recall much better and convinient. After browsing, i try to recall from my memory box the images they published and still works. :) Im glad. Thanks for helping me, Medinaz!

Investigations

- **Tzanck smear** of the **vesicle**
- **Histopathology** of **bulla** by **skin biopsy**
- **Direct** immunofluorescence

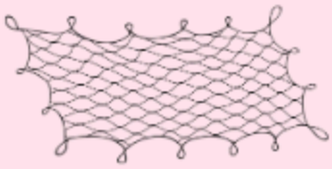
Histopathology of skin:

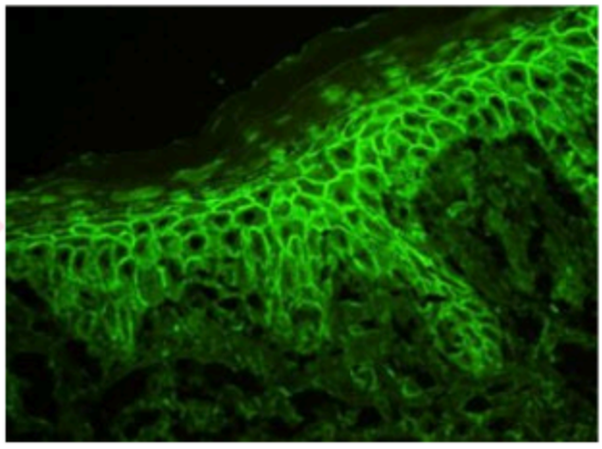
- **Suprabasal split**
- **Acantholytic cells** (Round cells, large nuclei, peri nuclear halo)
- **Row of tombstone** appearance



Direct immunofluorescence (DIF):

- **Investigation of choice**
- Detect "**intraepidermal**" & "**intercellular**" deposition of **IgG** & **C3**
- Shows "**Fishnet**" or "**Chicken-wire**" pattern

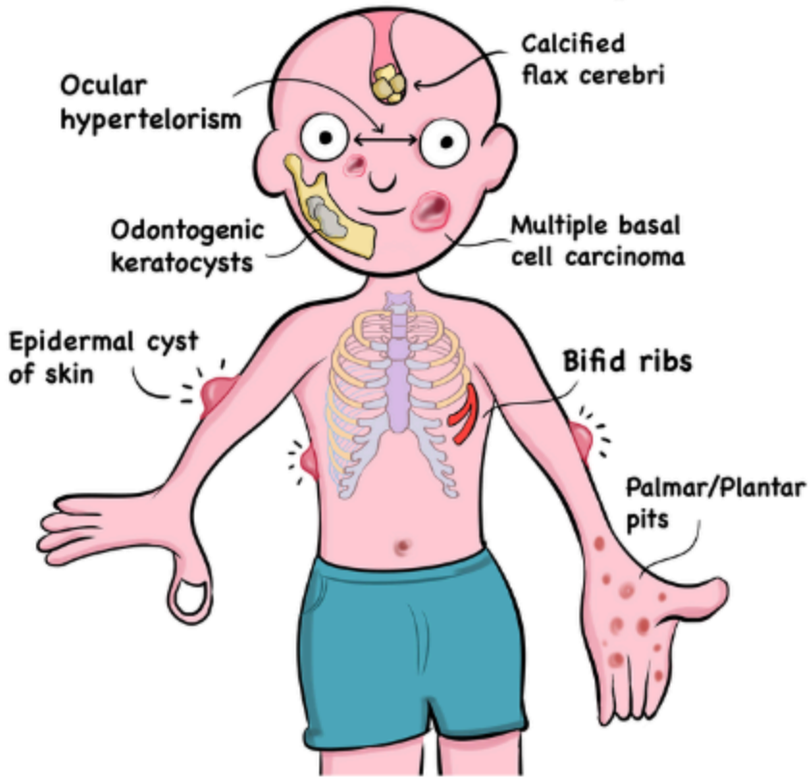




Treatment

- **Systemic steroids** are the main treatment modality
- **Cyclophosphamide**
- **Rituximab (Anti-CD20)** (FDA approved in 2018) for moderate to **sever** pemphigus vulgaris.

Nevoid Basal Cell Carcinoma Syndrome



Radiological types

- **Replacement** type
- **Envelopmental** type
- **Extraneous** type
- **Collateral** type

High recurrence rate. More common with OKC **associated with syndrome.**

- **Cysts perforating** the bony plate show **higher recurrence** as **cyst lining** may **get associated** with **overlying epithelium**.
- **Such recurrence** from basal cells of oral mucosa is called **basal cell hamartias.**
- **True multilocular lesions** may be seen sometimes - they are seen almost **exclusively in mandible.**
- **Cystic Fluid**: soluble protein **< 3.5gm/100ml** (mean: 2.2)
- If the **protein content** in the cystic fluid is **less than 4.5 grams/100ml,** it is **diagnostic for keratocyst,** whereas if the **protein level** is **more than 5 grams/100ml**, it is **diagnostic** for **non-keratinizing cysts.**

Epithelium in OKC

- **Narrow**, Keratinized, **Stratified** squamous.
- **5 - 8 cell layer** thick.
- **Rete ridges** are **absent**.
- Basal cells show **'Tomb Stone' pattern**.
- **Keratinization - Parateratinized** - 80 - 90%; **Orthokeratinized** - about 10%.

STURGE-WEBER SYNDROME

- **Brain** and **face** vascular abnormalities
- mutation in **GNAQ gene**
- Dermal capillary malformation (**port wine stain**) in **trigeminal nerve** distribution.
- Intraoral lesions resemble **vascular dilatation**.
- **Gingival hyperplasia** may be present.

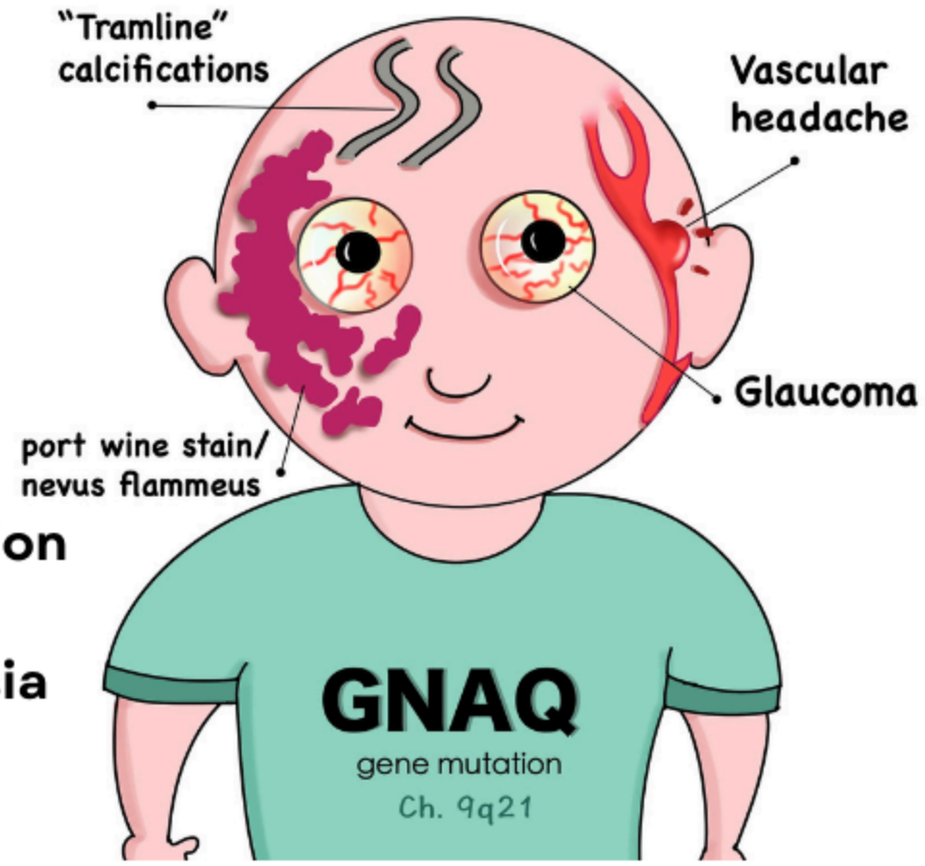
Stain
(Port wine)

TRamline
calcification

STRUGE

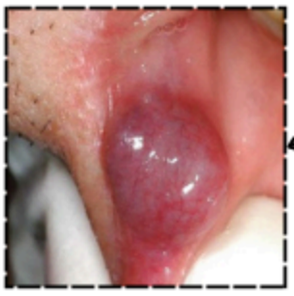
GNAQ gene mutation
Glaucoma
Gingival hyperplasia

STURGE-WEBER SYNDROME



LEIOMYOMA

Leiomyoma on **L**ips



- Benign **smooth muscle** tumors.
- **Slow-growing**, firm mucosal nodules.
- Common sites - **L**ips, **tongue, palate**, and **cheek**.
- **Rare intraosseous** examples may present as jaw **radiolucencies**

STAFNE DEFECT

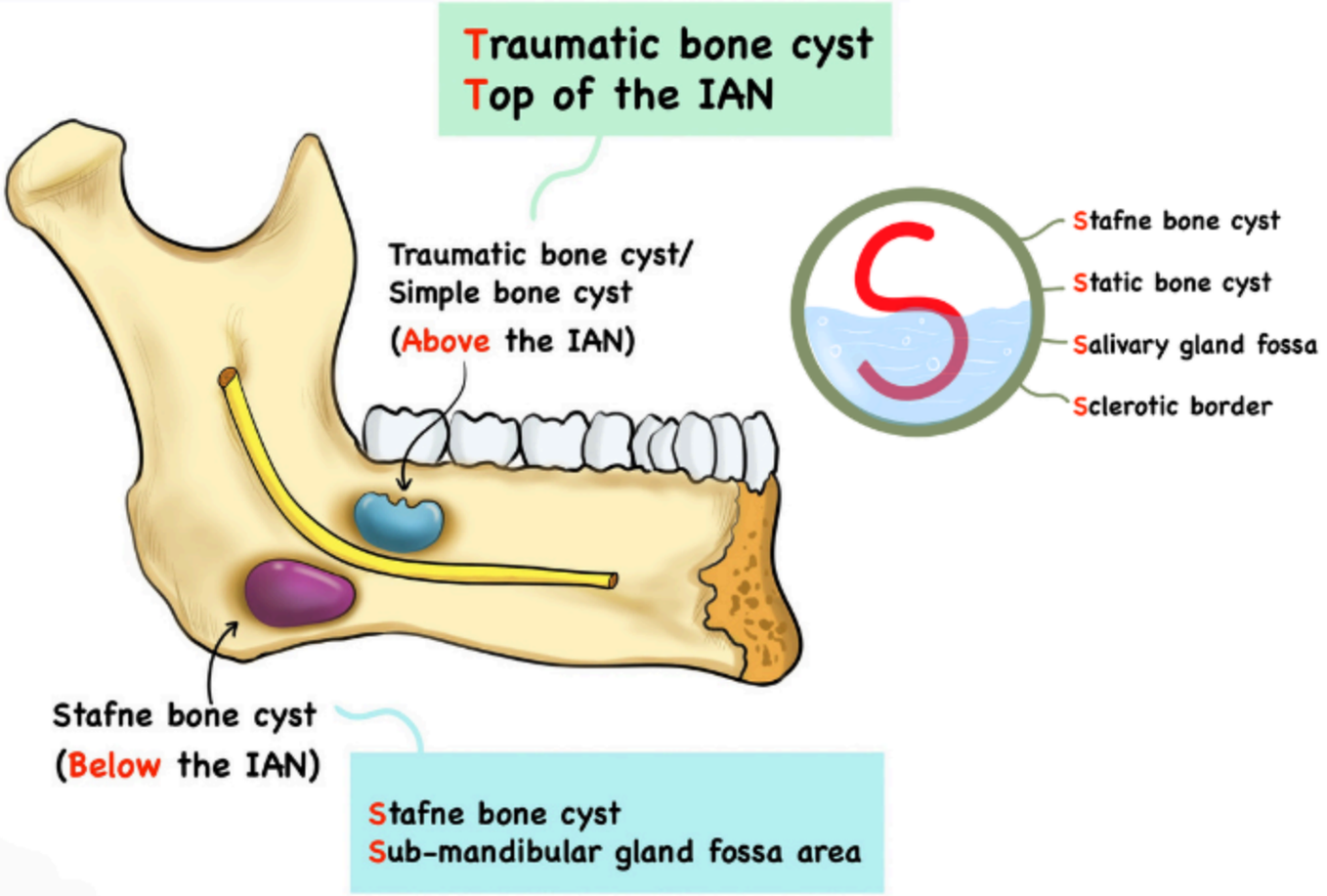
- **Not a cyst**; though it appears like a **cyst on radiograph**.
- Seen on **lingual surface** of **mandible**.
- In most of the cases it contains **normal salivary gland**.

Also known as:
- **Stafne bone** cyst
- Developmental lingual mandibular **salivary gland depression**
- **Latent** bone cyst
- **Static** bone cyst

- May at times be **confused with Solitary bone cyst** (**Stafne defect** lies below the IAN canal while **solitary bone cyst** lies **above the canal**).

- **Asymptomatic**
- **Round or ovoid** radiolucencies varying from **1 to 3cm diameter**
- **Well circumscribed** with sclerotic border.
- **Size is stable** in most of the cases, hence the name – Static bone cyst.

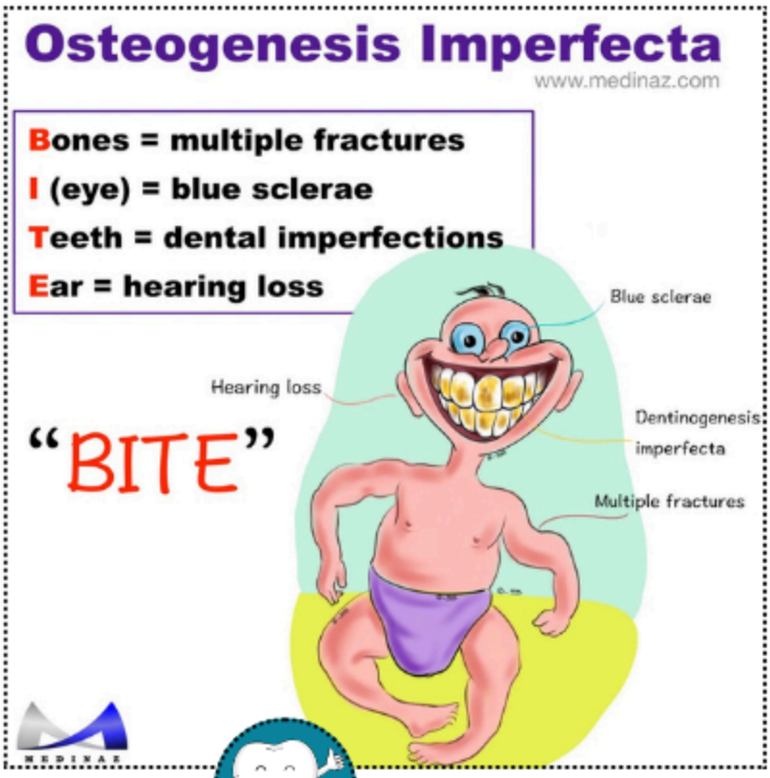
Stafine vs Traumatic bone cyst



BONE DISORDERS

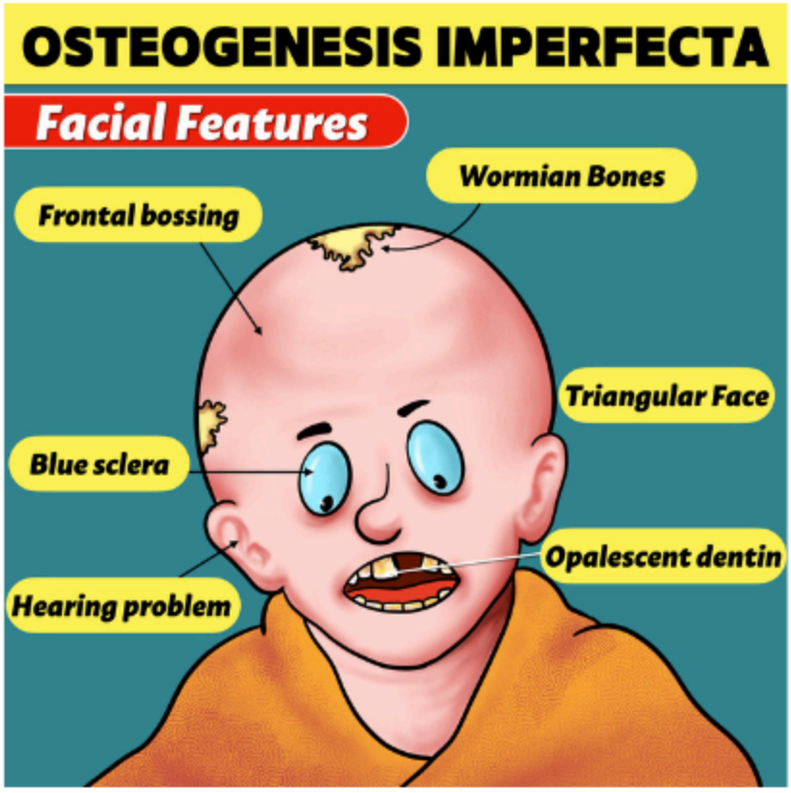
OSTEOGENESIS IMPERFECTA

- Also called **“Brittle Bone Disease”**



- **Autosomal dominant** (90% cases)
- Mutations in **COL1A1** and **COL1A2**, which code for **type I collagen**
- **Type II** is the **most severe**
- Treat with **bisphosphonates** to ❓ reduce fracture risk

- **types III** and **IV** can appear similar to **dentinogenesis imperfecta**
- **premature pulpal obliteration**, and the tooth **roots** may appear narrow or **corncob-shaped**.
- Term "**opalescent teeth**" used for dental defects



TREATMENT

- **Penicillin G**: Drug of choice for all stages.
- **Doxycycline or Azithromycin**: In penicillin-allergic patients.

Jarisch-Herxheimer Reaction

Acute febrile reaction following treatment due to **endotoxin** release from **dying spirochetes**

REMEMBER

- **Primary - Painless chancre**
- **Secondary - Systemic symptoms, Skin rash**
- **Latent - Lies low**
- **Tertiary - Tumors (gummas), Tabes dorsalis, Total body affected**

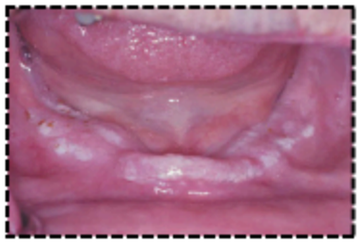
TUBERCULOSIS

- Caused by **Mycobacterium tuberculosis**.
- Oral lesions are **rarely seen** and **Painful**
- **Tongue** ulcerations (**most common site**) and mandibular swellings seen.
- Oral lesions may coexist with palpable lymph nodes, resembling squamous cell carcinoma.
- **Miliary TB (Extrapulmonary TB)** - Blood born spread of primary TB results in miliary TB characterized by widespread involvement of many organs.

PACHYONYCHIA CONGENITA

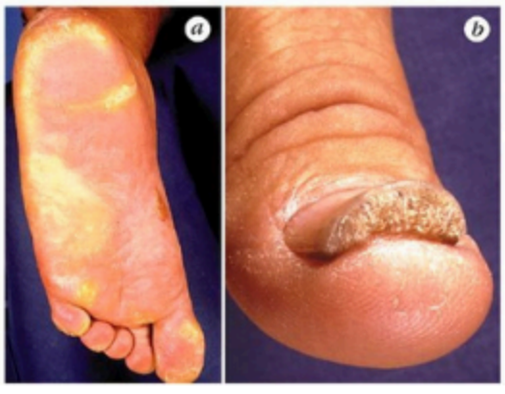
- **Autosomal dominant**
- **Oral lesion** most frequently with **Keratin 6a** gene mutation
- **Neonatal teeth** with **Keratin 17** gene mutation

Minor trauma may develop thickened white patches



FEATURES

- **Nail changes** (**tubular** configuration due to **keratin** accumulation beneath the nail bed)
- Palmar & plantar **hyperkeratosis**
- **Hyperhydrosis** of palm & sole
- Severe **pain** with **walking**

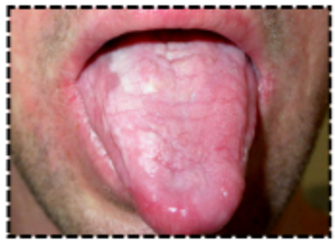


DYSKERATOSIS CONGENITA

- **X-linked recessive** trait; Primarily affects **males**
- Mutations in the **DKC1** gene disrupt **telomerase**

Dyskeratosis - **D**KC1

Potentially premalignant leukoplakic lesions on the tongue and buccal mucosa



FEATURES

- **Reticular skin pigmentation** on the face, neck, and chest, and **abnormal nail** changes.
- **Intraorally**, patients develop **bullae**, **erosions**.
- **Rapidly progressive periodontal** disease.
- Hematologic problems: **thrombocytopenia**, and **aplastic anemia**
- Oral lesion may undergo malignant transformation (**squamous cell carcinoma**)
- **Anabolic steroids** may temporarily boost **telomerase** activity.

BASAL CELL vs SQUAMOUS CELL CARCINOMA

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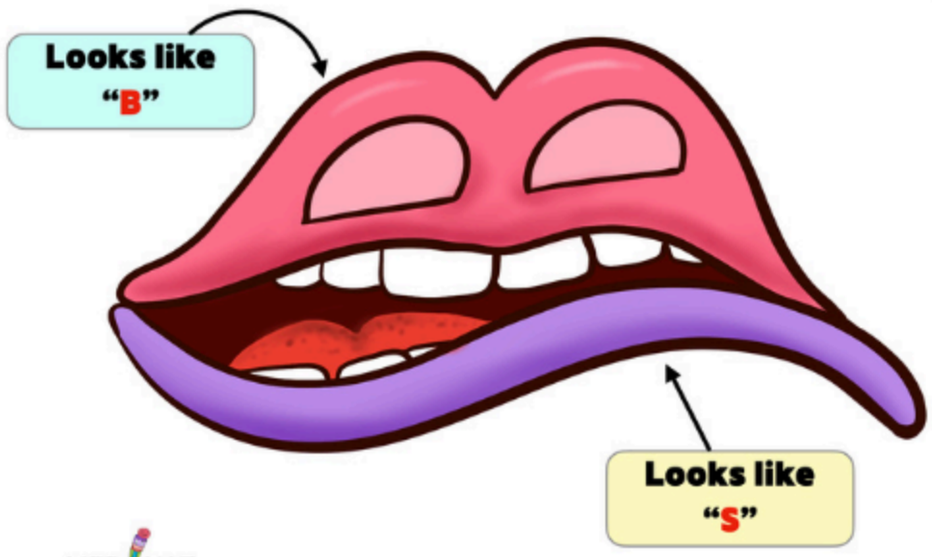

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Basal cell carcinoma more common above upper lip

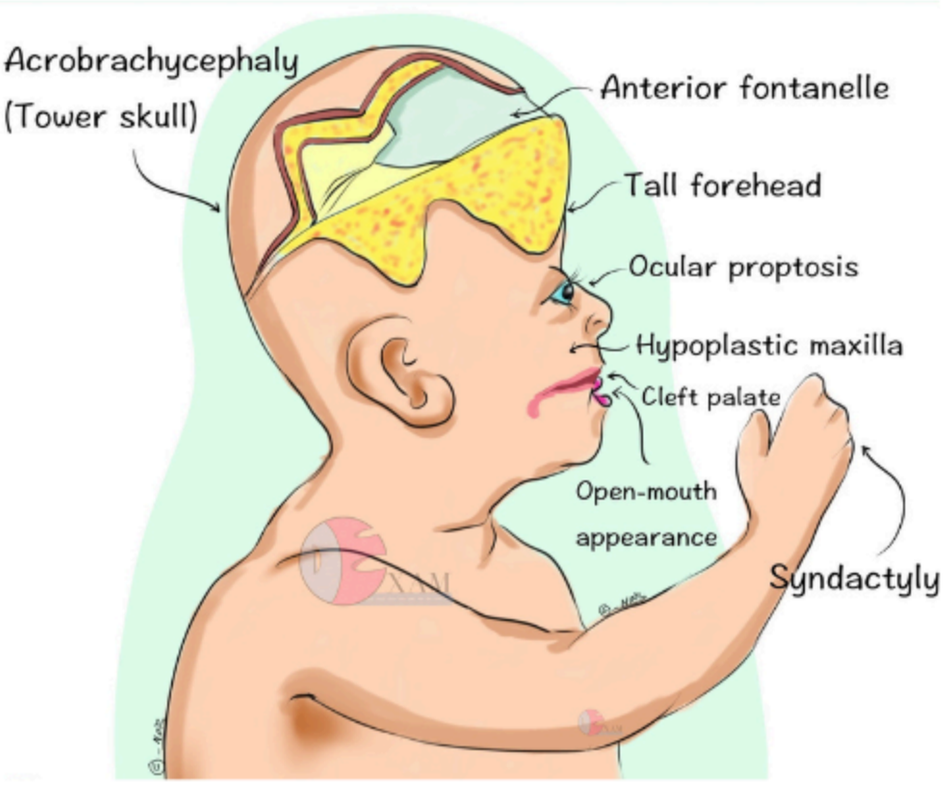
Squamous cell carcinoma more common below lower lip

ACTINIC KERATOSIS (SOLAR KERATOSIS)

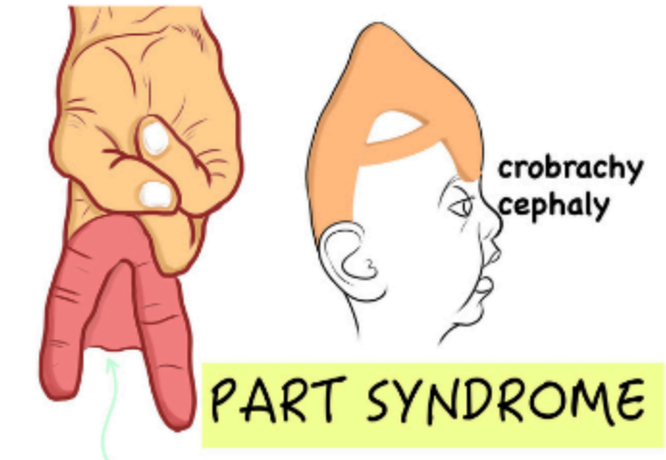
- Caused by **chronic, high-level UV radiation exposure**.
- **Additional risk factors:** Fair skin, old age, immunosuppression, **arsenic** exposure, certain genetic abnormalities, and **HPV** infection.
- Affects **white** adults (**over 40 years**) with significant sun exposure.
- Irregular, scaly plaques, rough texture, occasionally forming **keratin "horns"**.
- hyperparakeratosis, acanthosis, **teardrop-shaped rete ridges**
- **Low** malignant transformation

APERT SYNDROME

- Rare **craniosynostosis** syndrome caused by one of two **FGFR2 point mutations** on chromosome **10q26**.
- **autosomal dominant**
- **acrobrachycephaly** ("tower skull") or severe **cloverleaf skull**

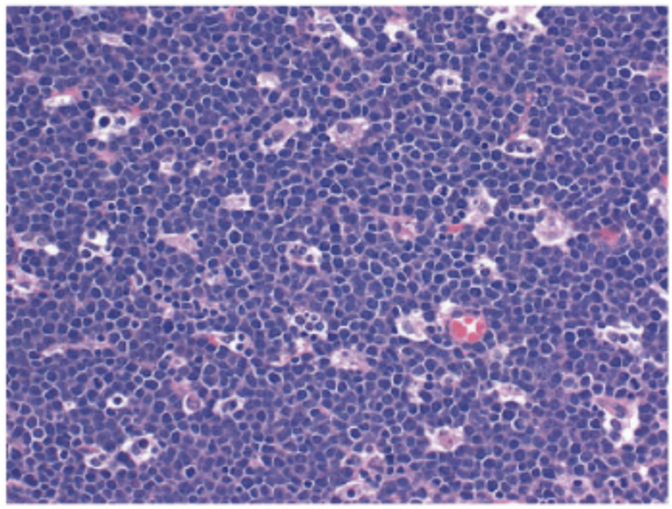


- **Midface hypoplasia** and retrusion cause relative **mandibular prognathism**, a **V-shaped maxillary arch**, and **occlusal disharmony** (Class III malocclusion, open bite, crossbites).



- "**open-mouth**" appearance and potential **sleep apnea**.
- **Syndactyly** (fusion) of the 2nd, 3rd, and 4th digits of hands and feet
- **Intellectual disability**
- **Cleft** of the soft palate or a **bifid uvula, missing permanent teeth**

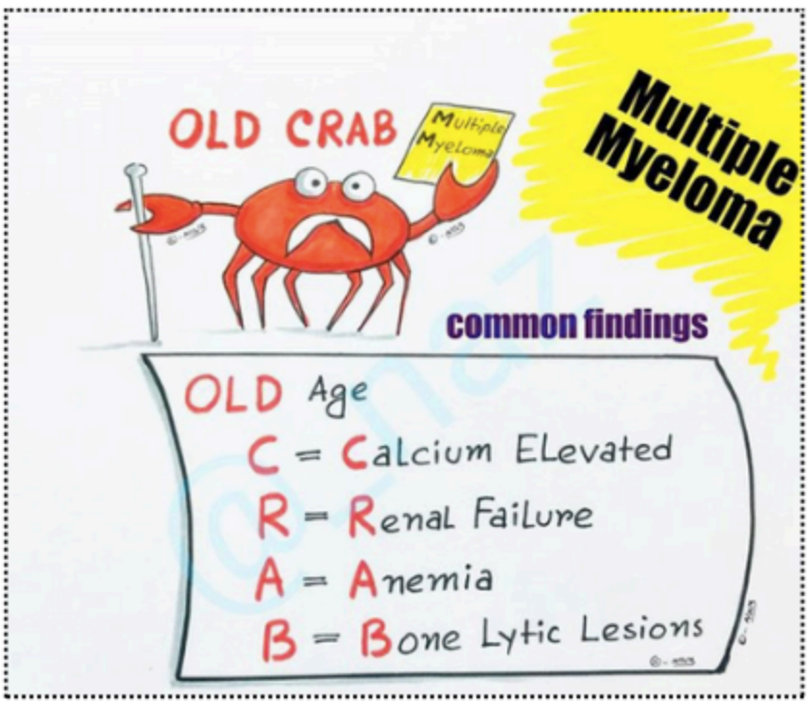
- "**Starry-sky**" pattern due to **macrophages** with abundant cytoplasm.
- Characterized by specific translocations like **t(8;14)(q24;q32)**, resulting in **c-myc oncogene overexpression**.



- "**Burkid**" lymphoma (more common in **kids**)

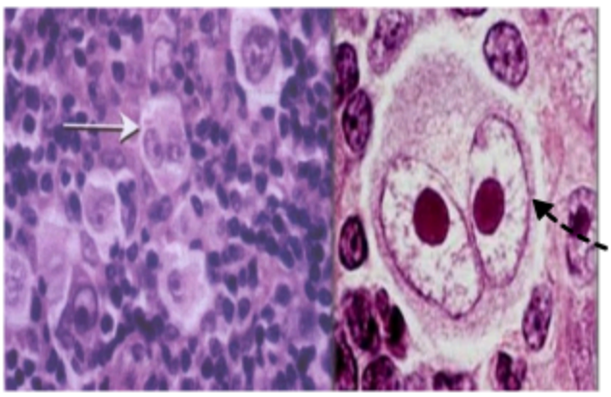
MULTIPLE MYELOMA

- Originating from **plasma cells** within bone.
- Arises from a **single malignant precursor cell**, leading to **monoclonal** abnormal plasma cells.
- Overproduction of **IgG** (**most common**) > IgA > Ig light chains.



HODGKIN LYMPHOMA

- Malignant **lymphoproliferative** disorder.
- **Reed-Sternberg cells** ("**owl-eye**" appearance due to **bilobed nucleus**)
- RS cells are **CD15+** and **CD30+**
- Likely originates from **B-lymphocytes**.
- **Epstein-Barr virus (EBV)** infection linked to some cases.
- Commonly presents in **cervical** and **supraclavicular nodes.**
- **Constitutional ("B") signs/symptoms:** low-grade fever, night sweats, weight loss.
- **Localized, single group of nodes** with contiguous spread (stage is strongest predictor of prognosis). **Better prognosis**.



"owl-eye" appearance

- **Bimodal distribution**: young adults, > 55 years.

B **B-lymphocytes**

B **Bilobed nucleus**

B **B - Signs**

B **Epstein-Barr virus**

B **Better prognosis**

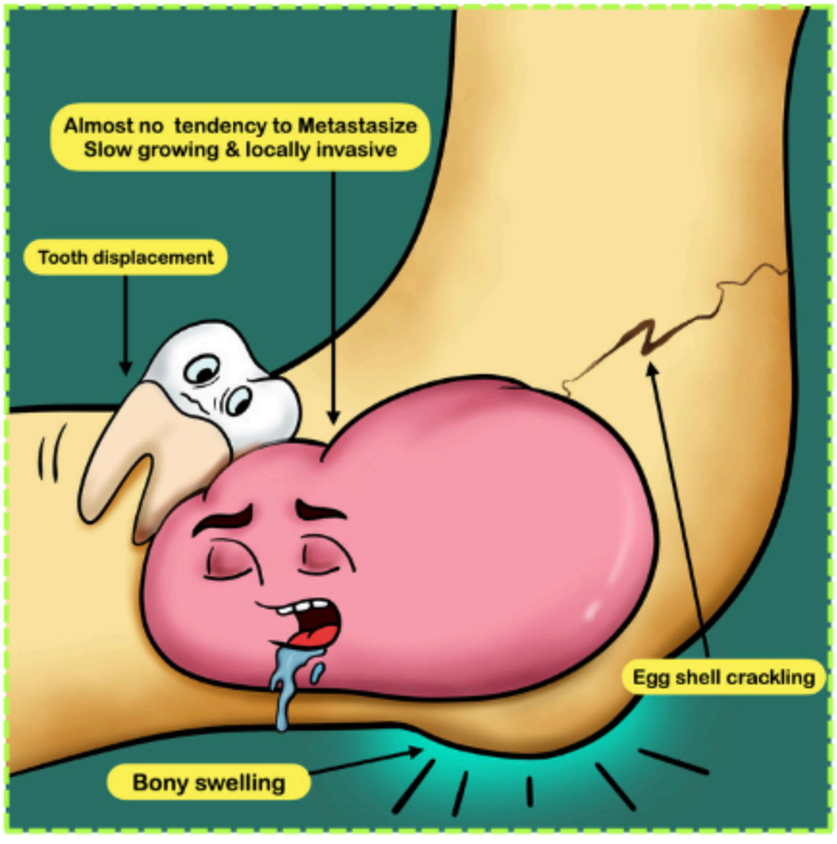
B **Bimodal distribution**

UNICYSTIC AMELOBLASTOMA

- **Well defined**, often **large Unicystic** cavity with a **lining**.
- On the **Luminal surface** of cyst, one or several **polypoid** or **papillomatous**, **pedunculated** exophytic masses may be seen: These are called **Intracystic**, **Luminal** or **Intraluminal** ameloblastoma.
- Epithelial **nodules** may grow **within** the **connective tissue**: Called **Mural** or **Intramural**.
- **Mandible** > Maxilla
- **Posterior mandible** & **ascending ramus** is most commonly involved.

CONCEPT

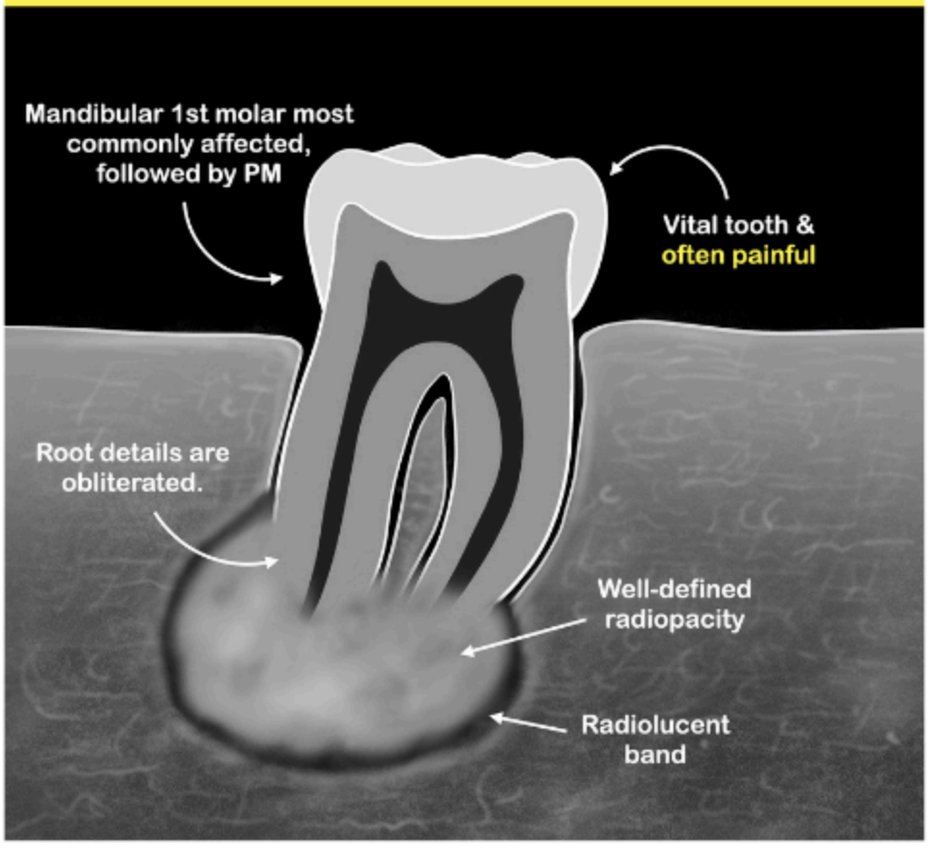
If **crown** of **unerupted tooth** is involved, it is displaced by cystic tumour rather than project into cystic lumen – **Differentiation** from **Dentigerous cyst.**



PATHOLOGY

- May arise from **pre-existing odontogenic cyst** (commonly **Dentigerous cyst**) or **de novo**.
- According to **Leider et al.**: They may arise from: **REE**, **Dentigerous** or another **odontogenic cyst**, and **Solid ameloblastoma** undergoing cystic degeneration.

BENIGN CEMENTOBLASTOMA



- Histopathology: contain numerous **reversal lines**.
- **Basophilic reversal lines** – similar to those seen in **Paget's disease.**
- Fibrous tissue with **multinucleated clastic giant cells**

ODONTOMAS

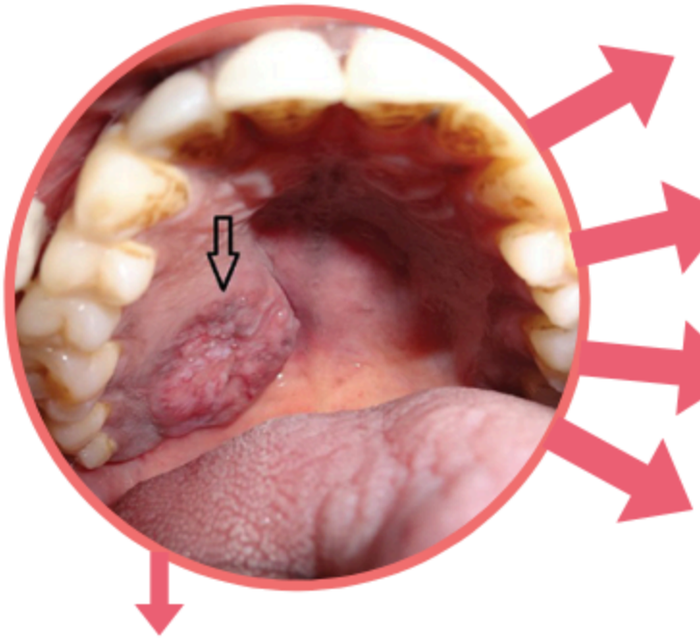
- **Shafer** and **Gorlin** defined odontoma as a tumor that has developed and differentiated enough to produce **enamel** and **dentin**. (Variable amount of pulp & cementum)
- Three types of odontomas: **odonto-ameloblastoma**, **complex** and **compound odontoma**.

- **Complex odontoma:** mass of **disorganized** odontogenic tissue.
- **Compound odontoma: well organized** tooth like structure.

TIPS

Remember, it is very **Complex** to differentiate the tooth structure in a **Complex** odontoma.

MUCOEPIDERMOID CARCINOMA



primarily found in **Parotid gland (**Asymptomatic initially**)**

Most Common Salivary Gland **Malignancy**

Second most common site, is the **palate**

Pain or **facial nerve palsy** can develop, primarily in association with **high-grade tumors.**

Radiation exposure is considered a potential risk factor

- **Translocation** involving **CRTC1-MAML2 fusion oncogene** is often associated with **low**- and **intermediate**-grade tumors.
- **Most common malignant** salivary gland tumor in **children**.
- Lesions may resemble **mucoceles** in color.

MUCOEPIDERMOID

Most common salivary gland **M**alignancy

Mixed cell type **M**ucous production

Mucocele resemblance

- Oral erythroplakia has the **highest risk of malignant transformation** compared to all other oral mucosal lesions at risk for transformation (oral leukoplakia, oral lichen planus, oral submucous fibrosis and others).

ORAL LICHEN PLANUS (OLP)

- OLP is an **immunologically mediated** mucocutaneous disorder

Remember these 3 imp. etiologic factors:

- **Stress** & anxiety
- **Hepatitis C** virus
- **T cell** mediated apoptosis of **basal keratinocytes** (Auto reactivity)

OLP Clinical types:

1. Reticular
2. Plaquetype
3. Papular
4. Atrophic
5. Bullous
6. Erosive/ulcerative

Syndromes associated with OLP

- **G - G**rinspan Syndrome
- **G - G**raham Little Syndrome
- **G -** Vulvo Vagino**G**ingival syndrome.

3G

General Features

- **Female** predominance.
- **Buccal mucosa** most common site, although occurs at any mucosal site.
- **Burning sensation** & **pain**, exacerbated with acidic and spicy foods

6P's of Lichen Planus

P	Purple
P	Polygonal
P	Pruritic
P	Planar
P	Papules
P	Plaques