

CLASSIFICATION OF ODONTOGENIC TUMOURS

(WHO 1992, Kramer Pindborg and Shear)

A. BENIGN

- I. *ODONTOGENIC EPITHELIUM WITHOUT ODONTOGENIC ECTOMESCHYME.*
 1. Ameloblastoma
 2. Squamous odontogenic tumour
 3. Calcifying epithelial odontogenic tumour / Pindborg's tumour
 4. Clear cell odontogenic tumour.

- II. *ODONTOGENIC EPITHELIUM WITH ODONTOGENIC ECTOMESCHYME, WITH OR WITHOUT HARD TISSUE FORMATION.*
 1. Ameloblastic fibroma
 2. Ameloblastic fibrodentinoma and Ameloblastic fibroodontoma
 3. Odonto ameloblastoma
 4. Adenomatoid odontogenic tumour
 5. Calcifying odontogenic cyst
 6. Compound odontoma
 7. Complex odontoma

- III. *ODONTOGENIC ECTOMESCHYME WITH OR WITHOUT INCLUDED ODONTOGENIC EPITHELIUM.*
 1. Odontogenic fibroma
 2. Odontogenic myxoma/ myxoma/Fibro myxoma
 3. Benign cementoblastoma/ Cementoblastoma/ True Cementoma

B. MALIGNANT

- I. *ODONTOGENIC CARCINOMA.*
 1. Malignant ameloblastoma
 2. Primary intra osseous carcinoma
 3. Malignant variants of other odontogenic epithelial tumours
 4. Malignant variants in odontogenic cysts.

- II. *ODONTOGENIC SARCOMAS*
 1. Ameloblastic fibro sarcomas/ Ameloblastic sarcomas
 2. Ameloblastic fibro dentino sarcoma and Ameloblastic fibro odonto sarcoma
 3. Odontogenic carcinosarcoma.

AMELOBLASTOMA TYPES

1. Peripheral
2. Unicystic
3. Plexiform unicystic
4. Follicular
5. Plexiform
6. Granular
7. Acanthomatous
8. Desmoplastic
9. Basal cell
10. Clear cell
11. Spindle cell
12. Ghost cell
13. Kerato-ameloblastoma
14. Papilliferous kerato ameloblastoma
15. Mucous cell
16. Melanotic
17. Sinonasal tract
18. Pseudo glandular
19. Dentino ameloblastoma
20. Ameloblastoma with myofibroblast
21. Vascular
22. Neural
23. Craniopharyngeal
24. Adamantinoma of long bones

PRIMARY TUMOURS OF NON ODONTOGENIC TISSUE

[Lucas]

- I. ***EPIDERMAL***
 - a. Leukoplakia and other white lesions of oral mucosa
 - b. Squamous cell carcinoma
 - c. Dermatocarcinoma
 - d. Squamous cell carcinoma and its variants, verrucous carcinoma, carcinoma in situ, basal cell carcinoma.

- II. ***FIBROUS CONNECTIVE TISSUE***
 - a. Fibroma, Myxoma, Fibrosarcoma
 - b. Fibrous Epulis, Denture fibrosis, Pyogenic granuloma
 - c. Fibromatosis
 - d. Fibrous histiocytoma.

- III. ***ADIPOSE TISSUE***
 - a. Lipoma and Liposarcoma

- IV. ***CARTILAGE***
 - a. Chondroma, Chondrosarcoma
 - b. Chondroblastoma and Chondromyxoid fibroma

- V. ***BONE***
 - a. Osteoma, Osteomatosis [multiple osteomas]
 - b. Osteoid osteoma, and Osteoblastoma
 - c. Torus Palatinus and Torus Mandibularis
 - d. Osteosarcoma

- VI. ***VASCULAR TISSUE***
 - a. Hemangioma, angiofibroma, Hemangioendothelioma
 - b. Hemangiopericytoma
 - c. Glomus tumour
 - d. Lymphangioma
 - e. Angiosarcoma, kaposi sarcoma

- VII. ***NEURAL TISSUE***
 - a. Traumatic neuroma
 - b. Neuroilemmoma / Schwannoma

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- c. Neurofibroma, Plexiform neurofibroma / Neurofibromatosis
- d. Neurothekeoma / Nerve Sheath Myxoma
- e. Palisaded Encapsulated Neuroma
- f. MEN Type III [Williams and Pollock syndrome]
- g. Melanotic Neuro Ectodermal Tumour of Infancy
- h. Neuroblastoma, Ganglio Neuroma

VIII. MUSCLE

- a. Leiomyoma, Leiomyosarcoma
- b. Rhabdomyoma, Rhabdomyosarcoma
- c. Myoblastoma and Congenital Epulis

IX. LYMPHOID TISSUE

- a. Lymphomas
- b. Leukemias

X. MYELOMA

XI. EWING'S SARCOMA

XII. GIANT CELL LESIONS

- a. Giant cell tumour of long bones
- b. Giant cell granuloma
- c. Giant cell lesions of hyper parathyroidism
- d. Giant cell epulis.

XIII. MELANOMA

XIV. TERATOMA

XV. TUMOURS OF SALIVARY GLANDS.

CLASSIFICATION OF SALIVARY GLAND TUMOURS

(Ellis and Auclair 1996)

I. BENIGN EPITHELIAL NEOPLASMS.

1. Mixed tumour / Pleomorphic Adenoma
2. Myoepithelioma/ Myoepithelial adenoma
3. Warthin's Tumour/ Papillary cyst adenoma lymphomatosum
4. Basal cell adenoma
5. Canalicular adenoma
6. Oncocytoma/ oncocytic adenoma
7. Cystadenoma
 - a. Papillary
 - b. Mucinous
8. Ductal papillomas
 - a. Sialadenoma Papilliferum
 - b. Intra ductal papilloma
 - c. Inverted ductal papilloma
9. Lymph adenomas and sebaceous adenoma

II. MALIGNANT EPITHELIAL NEOPLASMS

1. Muco epidermoid carcinoma
2. Acinic cell carcinoma
3. Adenoid cystic carcinoma
4. Polymorphous low grade adenocarcinoma/ PLGA
5. Malignant mixed tumour
 - a. Carcinoma ex pleomorphic adenoma
 - b. Carcinosarcoma
 - c. Matastasizing mixed tumour
6. Squamous cell carcinoma
7. Basal cell carcinoma
8. Epithelial - Myo epithelial carcinoma
9. Adeno carcinoma
10. Cystadeno carcinoma
11. Undifferentiated carcinoma
12. Small cell carcinoma
13. Lympho epithelial carcinoma
14. Oncocytic carcinoma
15. SALivay duct carcinoma
16. Sebaceous adenocarcinomaand Lymphoadeno carcinoma
17. Myo epithelial carcinoma
18. Mucinous adenocarcinoma

III. MESENCHYMAL NEOPLASMS

1. Benign
2. Malignant

IV. MALIGNANT LYMPHOMAS

V. METASTATIC TUMOURS

VI. UNCLASSIFIED TUMOURS

VII. NON - NEOPLASTIC TUMOUR LIKE CONDITIONS

1. Sialadenosis
2. Oncocytosis
3. Necrotising Sialometaplasia
4. Benign lympho epithelial lesions/ Sjogren's Syndrome
5. Salivary gland cysts
6. Cystic lymphoid hyperplasia in AIDS
7. Chronic sclerosing sialadinitis of sub mandibular gland/ Kuttner's tumour

CYSTS OF HEAD AND NECK REGION

(Kramer, Pindborg and Shear; 1992)

I. JAW CYSTS

1. EPITHELIAL 2. NON EPITHELIA

A. ODONTOGENIC CYSTS

I. DEVELOPMENTAL

- | | |
|--------------------------------|----------------------------|
| a. Odontogenic keratocyst | 1 Radicular cyst |
| b. Dentigerous/ eruption cyst | 2. Residual cyst |
| c. Lateral periodontal cyst | 3. Inflammatory co lateral |
| d. Gingival cyst of adults | 4. Paradental cyst |
| e. Gingival cysts of infants | |
| f. Calcified odontogenic cysts | |

B. NON ODONTOGENIC / FISSURAL CYSTS

I. RETENTION CYSTS

- a. Mucous retention cysts
- b. Sebaceous cysts

II. FISSURAL / INCLUSION CYSTS

a. INTRA BONY

- 1. Globulomaxillary cysts
- 2. Incisive canal duct cysts
- 3. Maxillary median alveolar cysts
- 4. Median palatal cysts
- 5. Median mandibular cysts

b. SOFT TISSUE

- 1. Cysts of palatine papilla
- 2. Epstein pearls
- 3. Bohn's nodules
- 4. Naso alveolar, nasolabial [Kjellstad's cysts] cysts
- 5. Tyroglossal cysts
- 6. Benign cervical lympho epithelial cysts
- 7. Dermoid cysts
- 8. Heterotopic oral gastrointestinal cysts

2. NON- EPITHELIAL CYSTS

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1. Anurysmal bone cyst
2. Traumatic bone cyst/ Hemorrhagic bone cyst

II. CYSTS OF MAXILLARY ANTRUM

1. Benign mucosal cyst
2. Surgical ciliated cyst

III. CYSTS OF SOFT TISSUE

1. Dermoid and Epidermoid cysts
2. Brachial cleft cysts
3. Thyroglossal duct cyst
4. Cystic hygroma
5. Anterior Medial Lingual cysts
6. Cysts of Salivary gland
7. Oral cysts with gastric and intestinal epithelium
8. Parasitic cysts, etc

PERCENTAGE OF ITS OCCURANCE

1. Radicular cysts	60 – 70%
2. Dentigerous cysts	10 – 15%
3. O K C	5 – 10%
4. Paradental cysts	3 – 5%
5. L P C	< 1%
6. Nasopalatine cyst	5 – 10%
7. Rest about	1%

FIBRO OSSEOUS LESIONS OF THE JAWS

(Waldron CA; 1985)

- I. **FIBROUS DYSPLASIA.**
 1. Polyostotic
 2. Monoostotic

- II. **FIBRO OSSEOUS (CEMENTAL) LESIONS PRESUMABLY ARISING IN THE PDL.**
 1. *Periapical cemental dysplasia*
 2. *Localised fibro osseous cemental lesions (probably reactive in nature)*
 3. *Florid cemento- osseous dysplasia*
 4. *Ossifying and cementifying fibroma*

- III. **FIBRO OSSEOUS NEOPLASM OF UNCERTAIN OR DEBATABLE RELATIONSHIP TO THOSE ARISING IN THE PDL.**
 1. *Cementoblastoma, Osteoblastoma and Osteoid Osteoma.*
 2. *"Juvenile active ossifying fibroma" and other so called "Aggressive, Active" ossifying/ cementosifying fibromas.*

FIBRO OSSEOUS LESIONS

[Waldron C.A. 1993]

I. FIBROUS DYSPLASIA

II. REACTIVE / DYSPLASTIC LESIONS, arising in the tooth-bearing areas. These are presumably of periodontal ligament origin. It is convenient to divide them into 3 types based on their radiologic features although they seem to represent the same pathologic process.

1. *Periapical cemento osseous dysplasia*
2. *Focal cemento osseous dysplasia*
3. *Florid cemento osseous dysplasia*

III. FIBRO OSSEOUS NEOPLASMS

They are widely designated as

1. *Cementifying fibroma*
Or
2. *Ossifying fibroma*
Or
3. *Cemento ossifying fibroma*

FIBRO-OSSEOUS LESIONS OF THE JAWS

Fibro-osseous lesions of the jaws are a group of bone disorders where there is a replacement of normal bone by tissue comprising collagen fibres and fibroblasts, containing varying amounts of mineralized substance which may be osseous or cementum-like in appearance. The lesions are essentially benign, and frankly malignant lesions (e.g., osteosarcoma) showing osteoid/cementoid are not included in this category.

CLASSIFICATION

There is no dearth for classifications on fibro-osseous lesions. The classification given below is a compromise of classifications by Waldron (1985) and Makek (1987).

Developmental/Hereditary

- Cherubism
- Gigantiform cementoma (Florid osseous dysplasia)

Reactive/Reparative

- Traumatic periosteitis
- Garre's osteomyelitis
- Sclerosing osteomyelitis (focal and diffuse)
- Central giant cell granuloma
- Osseous keloid
- Periapical cemental dysplasia
- Aneurysmal bone cyst

Neoplastic

- Osteoma
- Osteoid osteoma
- Osteoblastoma
- Ossifying fibroma (periodontoma, fibro-osteoma)
- Juvenile ossifying fibroma (aggressive periodontoma)

Metabolic

- Brown tumour of hyperparathyroidism

Idiopathic

- Fibrous dysplasia
- Paget's disease of the bone
- Solitary bone cyst

NEOPLASMS AND OTHER LESIONS RELATED TO BONE
(WHO Classification 1993)

- I. OSTEOGENIC NEOPLASMS
 - 1. Cemento - Ossifying Fibroma (Cementifying fibroma, Ossifying Fibroma)

- II. NON- NEOPLASTIC BONE LESIONS
 - 1. Fibrous Dysplasia of the jaws
 - 2. Cemento - Osseous Dysplasia
 - a. Periapical cemental dysplasia
 - b. Florid cemento osseous dysplasia
 - c. Other cemento osseous dysplasia

 - 3. Cherubism (familial multilocular cystic disease of the jaws)
 - 4. Central giant cell granuloma
 - 5. Aneurysmal bone cyst
 - 6. Solitary bone cyst/ traumatic bone cyst

- III. OTHER TUMORS
 - 1. Melanotic Neuro Ectodermal Tumour of Infancy

GIANT CELL LESIONS – 1

{Working classification of giant cell lesions of the oral cavity}

I. LESIONS WHERE GIANT CELLS ARE PATHOGNOMONIC

1. Hodgkin's lymphoma
2. Peripheral / Central giant cell granuloma
3. Giant cell fibroma

II. LESIONS WHERE GIANT CELLS ARE CHARACTERISTIC BUT NOT PATHOGNOMONIC

1. Tuberculosis
2. H.S.V. infections
3. Measles
4. Xanthoma {localized deposits of lipo protein found in skin, subcutaneous tissue or tendons.}

III. LESIONS ASSOCIATED WITH PRESENCE OF GIANT CELLS.

1. Oro facial granulomatosis
2. Fungal infections
3. Syphilis
4. Browns tumour of hyperpara thyroidism
5. Fibrous dysplasia
6. Cherubism
7. Ossifying Fibroma
8. Pagets Disease
9. Wegener's granulomatosis
10. Actinomycosis
11. Foreign body reactions
12. Neoplasms
13. Chronic Diffuse Sclerosing Osteomyelitis
14. Odontogenic giant cell fibromatosis
15. Sarcoidosis
16. Aneurysmal Bone Cyst.

GIANT CELL LESIONS ----- 2

I. FOREIGN BODY GIANT CELL LESIONS

1. Leprosy - Lepra cells/ Virchow's cell
2. Tuberculosis - Langhans cell
3. Periapical granuloma
4. Other infective granuloma

II. LANGHANS GIANT CELL LESIONS

1. Tuberculosis
2. Sarcoidosis
3. Chelitis granulomatosis

III. TAUTON GIANT CELL LESIONS

1. Xanthoma / Fibrous histiocytoma

IV. TUMOUR GIANT CELL LESIONS

{Not formed due to the fusion of macrophages but from dividing nuclei of neoplastic cells}

1. Carcinoma
2. Sarcoma

V. MISCELLANEOUS TYPES

1. Aschoff cells - Rheumatic nodule[
Activated histiocytes]
2. Anitschikow cells
3. catter pillers cells
4. Reed-sternberg cells - hodgkin's lymphoma
5. Osteoclasts - C.G.C.G.
6. Warthin Finkeldy cells - Measles

GIANT CELL LESIONS--- 3

I. TRAUMATIC

1. Peripheral giant cell granuloma
2. Central giant cell granuloma
3. Pyogenic granuloma
4. Internal resorption

II. INFECTIONS

1. Tuberculosis
2. Syphilis
3. Leprosy
4. Actinomycosis
5. Candidiasis
6. Osteomyelitis

III. CYSTIC

1. Traumatic bone cyst
2. Aneurysmal bone cyst

IV. METABOLIC

1. Cherubism
2. Paget's disease
3. Fibrous dysplasia

V. NEOPLASMS

1. Giant cell tumours
2. Osteosarcoma
3. Wegener's granulomatosis
4. Hodgkin's disease
5. Burkitt's lymphoma.

ORAL LESIONS IN DERMATOLOGICAL DISORDERS

- I. **GENITIC**
 - a. **THOSE PRESENTING DYSPLASIA**
 - i. Papillion lefevre syndrome
 - ii. Incontinentia pigmena
 - iii. Hereditary palmoplantar keratosis
 - iv. Ehler danlos syndrome
 - v. Down's syndrome
 - b. **THOSE WITH MUCOSAL ABNORMALITIES**
 - i. Dyskeratosis congenital
 - ii. Pachyonychia congenital
 - iii. Tylosis
 - iv. Darier's disease
 - v. Peutz jegher's syndrome
 - vi. Hereditary hemorrhagic telangectasia
 - vii. Struge weber syndrome
 - viii. Epidermolysis bullosa
 - ix. Tuberculous sclerosis
 - c. **THOSE WITH BONY ABNORMALITIES**
 - i. Gardner's syndrome
 - ii. Gorlin's syndrome
- II. **TRAUMATIC**
 - i. Denture
 - ii. Orthodontic appliances
 - iii. Sharp teeth
 - iv. Smoking
 - v. Cheek / lip biting
 - vi. Chemical and thermal burns, etc
- III. **INFECTIOUS -- INFLAMATORY**
 - i. Candidiasis
 - ii. HSV I AND II
 - iii. HZV
 - iv. Chicken pox
 - v. Syphilis
 - vi. Tuberculosis
- IV. **NON - INFECTIOUS INFLAMATORY**
 - i. Lichen planus

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- ii. Lupus erythematosus
- iii. Erythema multiforme
- iv. Pemphigus
- v. Pemphigoid
- vi. Linear Ig A bullous diseases
- vii. Dermatitis herpetiformis
- viii. Aphthous
- ix. Drug reaction
- x. Psoriasis

V. *PIGMENTARY*

- i. Racial pigmentation
- ii. Melanotic macules
- iii. Black hairy tongue
- iv. Drug induced hyper pigmentation
- v. Post inflammatory hyperpigmentation
- vi. Post inflammatory hypo pigmentation[vitiligo]

VI. *NEVOID*

- i. Intra mucosal nevi
- ii. Blue nevi
- iii. Fibroangiomas

VII. *NEOPLASMS*

a. *PRENEOPLASTIC*

- i. Leukoplakia
- ii. Erythroplakia

b. *BENIGN*

- i. Fibroma
- ii. Lymphangioma
- iii. Hemangioma

c. *MALIGNANT*

- i. Squamous cell carcinoma
- ii. Malignant melanoma
- iii. Kaposi sarcoma

ORAL LESIONS MAY MANIFEST AS ULCER, EROSION, BLISTER, PIGMENTATION, SCLEROSIS AND SWELLING.

VESICULLO BULLOUS LESIONS

I. DEPENDING ON THE SITE

1. Intra epithelial vesicle - Pemphigus
2. Sub epithelial vesicle - Pemphigoid

II. DEPENDING ON AETIOLOGY

a. HEREDITARY

1. Familial pemphigus
2. Epidermolysis bullosa
3. Dyskeratosis congenital

b. TRAUMATIC

1. Thermal burns

c. INFECTIONS

1. Herpetic infections
2. Varicella zoster
3. Coxsackie virus infections
4. Infectious mononucleosis
5. Foot and mouth disease

d. ALLERGIC

1. Stomatitis medicamentosa
2. Stomatitis venenata

e. AUTO IMMUNE

1. Pemphigus
2. Pemphigoid

f. MISCELLANEOUS

1. Erythema multiforme
2. Stevens-johnson syndrome
3. Toxic epidermolysis bullosa
4. Bullous lichen planus
5. Oral sub mucous fibrosis
6. Dermatitis herpetiformi

III. DEPENDING ON THE LEVEL OF BLISTER FORMATION

I. INTRA EPIDERMAL

a. SUB CORNEAL OR ST. GRANULOSUM

1. Sub corneal pustular dermatoses
2. Miliaria crystalline

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3. Impetigo
4. Staphylococcal skin scalded syndrome
5. Erythema toxicum neonatarum

b. STRATUM SPINOSUM

1. Pemphigus foliaceus
2. Familial Pemphigus
3. HSV and VZ
4. Variola
5. Eczema dermatitis
6. Dyshidrosis
7. Incontinentia pigmenti
8. Malaria rubra
9. Other exogenous injury[bites , including scabies,chemicals thermal insults, irradiation]

c. SUPRA BASALAR

1. Pemphigus vulgaris and vegetans
2. Keratosis follicularis
3. Transient acantholytic dermatosis

d. BASALAR

1. Epidermolysis bullosa simplex
2. Erythema multiforme
3. Toxic epidermal necrolysis bullosa
4. Lupus erythematosus
5. Lichen planus

II. *JUNCTIONAL / INTRA LAMINA LUCIDA*

1. Junctional epidermolysis bullosa
2. Pemphigoid [BP and CP]
3. Dermatitis herpetiformis
4. Pemphigoid gestationis
5. Mechanical stimulation blister

III. *BENIGN DERMAL EPIDERMAL JUNCTION*

1. Dystrophic epidermolysis bullosa
2. Epidermolysis bullosa acquisita
3. Erythema multiforme dermal type

IV. *DESMO EPIDERMAL JUNCTION, OTHERS[ultra structural site unknown]*

1. Lichen sclerosis atrophicus
2. Bullous pemphigoid
3. Porphyria cutanea tarda

REACTIVE LEASIONS OF ORAL REGION

- I. **ULCERATIVE CONDITIONS**
 1. Trauma
 2. Chemicals
 3. Heart burn
 4. Therapeutic radiations

- II. **WHITE LESIONS**
 1. Focal frictional hyperplasia
 2. White lesions associated with smokeless tobacco
 3. Nicotine stomatitis
 4. Solar chelitis

- III. **RED - BLUE LESIONS**
 1. Pyogenic granuloma
 2. Peripheral giant cell granuloma
 3. Median rhomboid glossitis

- IV. **VERRUCAL - PAPPILARY LESIONS**
 1. Papillary hyperplasia
 2. Condyloma latum
 3. Squamous papilloma
 4. Condyloma accuminatum
 5. Focal epithelial hyperplasia

- V. **FIBROUS HYPERPLASIA**
 1. Pyogenic granuloma
 2. Peripheral giant cell granuloma
 3. Peripheral fibroma with ossifications
 4. Generalized gingival hyperplasia
 5. Traumatic fibroma
 6. Denture induced fibrous hyperplasia

- VI. **VASCULAR LESIONS**
 1. Venous varix

- VII. **NEURAL LESIONS**
 1. Traumatic neuroma

VIII. LESIONS OF MUSCLES

1. Myositis ossificans

IX. SALIVARY GLAND DISEASES

1. Mucous extravasation
2. Mucous retention
3. Ranula
4. Mucocele
5. Maxillary sinus retention cyst with pseudo cysts
6. Necrotizing sialometaplasia
7. Adenomatoid hyperplasia

X. LYMPHOID LESIONS

1. Lymphoid hyperplasia
2. Angio lymphoid hyperplasia with eosinophilia

AUTO IMMUNE DISEASES AND DISORDERS

Jada 1999 by- Slavkin

I. *CONNECTIVE TISSUE*

- i. Ankylosing spondylosis
- ii. Psoriasis
- iii. Rheumatic arthritis
- iv. Systemic lupus erythematosus
- v. Sjogren's syndrome

II. *ENDOCRINE SYSTEM*

- i. Autoimmune Addison's disease
- ii. Grave's disease
- iii. Hashimoto's thyroiditis
- iv. Immune mediated infertility
- v. Insulin dependent type I diabetes

III. *HEMATOLOGICAL SYSTEM*

- i. Auto immune haemolytic anemia
- ii. Auto immune neutropenia

IV. *INTEGUMENTARY SYSTEM*

- i. Auto immune alopecia
- ii. Bullous Pemphigoid
- iii. Pemphigus vulgaris

V. *NEUROMUSCULAR SYSTEM*

- i. Multiple sclerosis
- ii. Myasthenia gravis

BLEEDING DISORDERS

I. PLATELET ABNORMALITIES

i. QUANTITATIVE

1. THROMBOCYTOPENIA
 - a. Fanconi's anaemia
 - b. Purpura
 - i. Idiopathic
 - ii. Acquired
 - iii. Thrombotic
 - c. Onyala

2. THROMBOCYTOSIS

ii. QUALITATIVE

1. DEFECTIVE PLATLET AGGREGATION
 - a. Thromboesthesia
 - b. Thrombocytopathia
2. DEFECTIVE PLATLET ADHESION
 - a. Bernard soullier syndrome
3. DEFECTIVE PLATLET RELEASE BY REACTION
 - a. Storage pool disease

II. VASCULAR ABNORMALITIES

i. STRUCTURAL MALFORMATIONS

1. HERIDITARY HEMORHAGIC TELANGECTASIA [defect in the adventitial layers of venules]
2. HERIDITARY DISORDER OF CONNECTIVE TISSUE
 - a. Ehler's danlos syndrome
 - b. Osteogenesis imperfecta
 - c. Pseudo xanthoma elasticum [hound dog appearance]
3. ACQUIRED CONNECTIVE TISSUE DISORDER
 - a. Scruery
 - b. Corticosteroid purpura
 - c. Cushing's disease
 - d. Senile purpura
 - e. Cachesic purpura

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ii. INFECTIONS

1. BACTERIAL
 - a. Tuberculosis
 - b. Typhoid
 - c. Diphtheria
 - d. Scarlet fever
2. VIRAL
 - a. Small pox
 - b. Measles
 - c. Influenza
3. RICKETTSIAL
 - a. Typhus
4. PROTOZOAL
 - a. Malaria
 - b. Toxoplasmosis

iii. AUTOIMMUNE

1. Allergic purpura
2. Drug induced vascular purpura
3. Purpura fulminaris

iv. MISCELLANEOUS

1. PARA PROTEINEMIAS
 - a. Hyperglobulenemic purpura
 - b. Cryoglobulenemic purpura
 - c. Woldenstrome macroglobulinemia
2. PUPPURA ASSOCIATED WITH SKIN DISORDER
 - a. Annular telangectatic purpura
 - b. Pigmented purpuric lichenoid dermatitis
3. OTHERS
 - a. Kaposi sarcoma
 - b. Hemochromatosis
 - c. Amyloidosis

CERVICOFAIAL LYMPHADINOPATHY

- I. *INFECTIONS*
 - a. BACTERIAL
 - 1. Odontogenic infections
 - 2. Tuberculosis
 - 3. Syphilis
 - 4. Leprosy
 - 5. Cat scratch disease
 - b. FUNGAL
 - 1. Histoplasmosis
 - 2. Cryptococosis
 - 3. Coccidioidomycosis
 - 4. Rhinosporidosis
 - c. VIRAL
 - 1. Herpes simplex virus
 - 2. Varicella zoster virue
 - 3. Ebstine barr virus
 - 4. Hepatitis b viruys
 - 5. Rubella
 - d. PROTOZOAL
 - 1. Malaria
 - 2. Toxoplasmosis
- II. *FAMILIAL*
 - a. Cherubism
- III. *IMMUNUE CONDITION*
 - a. Rhematoid arthritis
 - b. Systemic lupus erythematosis
- IV. *METABOLIC*
 - a. Lipid storage disorder
- V. *DRUGS*
 - a. Phenentoid sodium
 - b. Carbamazepine

VI. NEOPLASMS

a. HEMATOLOGICAL

1. Acute leukemia
2. Lymphoma
3. Chronic lymphocytic leukemia
4. histocytosis

b. NON- HEMATOLOGICAL

1. Squamous cell carcinoma
2. malignant melanoma

VII. MISCELLANEOUS

- a. Sjorgen's syndrome
- b. Sarcoidosis
- c. Meculicz disease

CHRONIC DESQUAMATIVE GINGIVITIS

(Based on the etiology)

I. DERMATOSES

- i. Mucous membrane pemphigus
- ii. Pemphigus vulgaris
- iii. Lichen planus

II. HORMONAL INFLUENCE

- i. Hysterectomy and oophorectomy
- ii. Menopause

III. ABNORMAL RESPONSE OF IRRITATION

- i. Modification of chronic marginal gingivitis

IV. IDIOPATHIC

V. CHRONIC INFECTIONS

- i. Tuberculosis
- ii. Chronic candidiasis
- iii. Histoplasmosis

GRANULOMAS

I. BACTERIAL

1. Periapical granuloma
2. Tuberculosis
3. Leprosy
4. Syphilis
5. Donovanosis
6. Cat scratch diseases
7. Actinomycosis

II. FUNGAL

1. Blastomycosis
2. Cryptococcosis
3. Coccioidiomycosis

III. PARASITIC

1. Schistosomiasis

IV. IMMUNOLOGICAL

1. Sarcoidosis
2. Chron's diseases
3. Wegener's granulomatosis
4. Midline lethal granuloma

V. IN-ORGANIC SUBSTANCES

1. Silicon
2. Berylliosis

VI. FOREIGN BODY SUBSTANCES

1. Suture
2. Talc
3. Oil
4. Wood, etc

VII. REACTIVE GRANULOMAS

1. P.G.C.G.
2. C.G.C.G.
3. Chelitis granulomatosis
4. Pyogenic granuloma

VIII. PSEUDO GRANULOMAS

1. P.G.C.G.
2. C.G.C.G.

CHRONIC GRANULOMATOUS INFLAMMATION

I. DEPENDING UP ON THE AETIOLOGY

a. INFECTIVE GRANULOMAS

1. Tuberculosis
2. Leprosy
3. Syphilis
4. Actinomycosis
5. Cat scratch disease
6. Cryptococcosis
7. Schistosomiasis

b. FOREIGN BODY GRANULOMAS

1. Suture
2. Talc
3. Silicosis
4. Beriliyosis

c. UNKNOWN AETIOLOGY

1. Sarcoidosis

II. CASEATING GRANULOMA

1. Tuberculosis
2. syphilis

III. NON CASEATING GRANULOMAS

1. Tuberculoid leprosy
2. Sarcoidosis

IV. SUPPURATIVE ; Granuloma containing neutrophils in the center

1. Lymphogranuloma venereum
2. Cat scratch disease
3. Actinomycosis
4. Fungal granulomas

V. TURN OVER OF MACROPHAGES

a. HIGH TURN OVER

1. Tuberculosis

b. LOW TURN OVER

1. Suture
2. Silicosis

CONDITIONS ASSOCIATED WITH TOBACO USE

NON- MALIGNANT LESIONS

1. DENTAL CONDITIONS

- A. Discolorations
- B. Abrasions

2. GINGIVAL CONDITIONS

- A. Acute necrotizing ulcerative gingivitis.
- B. Smoker's melanosis

3. MUCOSAL CONDITIONS

- A. Burns and keratotic changes
- B. Black hairy tongue
- C. Nicotinic stomatitis
- D. Palatal erosion
- E. Leukoplakia
- F. Snuff dipper's lesion.

DISORDERS OF LIPID METABOLISMS

[macarthy and shklar 1980]

I. HYPER LIPOPROTENEMIA

a. INCREASED BETA LIPO-PROTEINS

1. Normal density [hyper cholesterolemia]
2. Low density

b. INCREASED GLYCERIDE RICH PARTICLES

1. Chylomicrons [exogenous hyperlipemia]
2. Pre- beta lipoproteins [endogenous hyper lipemia]
3. Mixture of 1. and 2.

c. MISCELLANEOUS PATTERNS

1. Obstructive liver diseases
2. Dysglobulinemia

II. TISSUE LIPIDOSES

- a. Gaucher's disease
- b. Neumann-pick disease

III. HISTOCYTOSIS- X

- a. Litter-seiw disease
- b. Hand-schuller Christian disease
- c. Eosinophilic granuloma of bone

IV. LIPOID PROTENOSIS

- a. Hyalinosis cutis at mucosae

DISORDERS OF TMJ

- I. DEVELOPMENTAL**
 - a. Condylar hyperplasia, hypoplasia and agenesis
- II. DEGENERATIVE**
 - a. Degenerative joint disease, Ex. Osteoarthritis
- III. DRUG INDUCED**
 - a. Steroids
- IV. INFLAMMATORY**
 - a. Rheumatoid arthritis
 - b. Other collagen disorders
- V. INFECTIONS**
 - a. Sepsic arthritis due to gonorrhoea, iatrogenic and trauma
 - b. Tuberculosis
 - c. Gonorrhoea
 - d. Syphilis
- VI. METABOLIC**
 - a. Gout
- VII. NEOPLASTIC**
 - a. **BENIGN**
 - 1. Chondroma
 - 2. Osteoma
 - b. **MALIGNANT**
 - 1. Chondrosarcoma
 - 2. Osteosarcoma
 - 3. Synovial sarcoma
- VIII. TRAUMATIC**
 - a. Fracture of condyle
 - b. Ankylosis
 - c. Dislocation
 - d. Disc displacement
 - e. Contusion of TMJ

NOTE; except the condylar hyperplasia, in all other TMJ disorders causes jaw deviation to the same side of the pathology.

LEUKOPLAKIA

MEHTA et.al.1971

1. Homogeneous
2. ulcerated
3. Nodular/ speckled

PRABHU et.al. quoting the classification of BONOCZY 1982

1. Leukoplakia simplex
2. leukoplakia Verrukosa
3. Leukoplakia Errosiva

AXELL T.1984

I. BASED ON AETIOLOGICAL DISCRIPTION

1. Idiopathic / Cryptogenic leukoplakia
2. Tobacco associated
3. White patches/plaques deu to causes other than tobacco

II. BASED ON CLINICAL DESCRIPTION

1. Homogenous
2. Non- homogenous
 - a. Erythroplakia
 - b. Nodular
 - c. Verucous

III. BASED ON TOPOGRAPHICAL DESCRIPTION[SITE]

Describe according to the site involved

IV. BASED ON HISTOLOGICAL DESCRIPTION

i. DYSPLASTIC

- a. Mild
- b. Moderate
- c. Sever

ii. NON-DYSPLASTIC CHANGES

AXELL.T. et.al. 1996

1. Homogenous
2. Non homogenous
3. Erythroplakia

LIP ENLARGEMENTS

1. *NORMAL*
 - i. Racial variations

2. *DEVELOPMENTAL*
 - i. Naso labial cysts [upper lip]

3. *ODONTOGENIC*
 - i. Cellulitis

4. *TRAUMA*

5. *GRANULOMATOUS DISORDERS*
 - i. Chron's disease
 - ii. Tuberculosis
 - iii. Syphilis
 - iv. Actinomycosis
 - v. Chilitis granulomatosis

6. *ALLERGY*
 - i. Angioneurotic Edema

7. *SYNDROMES WITH CHELOSIS*
 - i. Chelitis granulomatosis
 - ii. Melkerson-rosenthal syndrome

8. *NEOPLASMS*
 - i. Fibroma, lipoma
 - ii. Squamous cell carcinoma, minor salivary gland tumours.

9. *OTHER SALIVRY GLAND DISORDERS*
 - i. Sialadenitis
 - ii. Mucocele

ORAL CANDIDIASIS
[AXELL T., SAMARANAYAKE AND OLSEN]

I. PRIMARY ORAL CANDIDIASIS

a. ACUTE FORMS

1. Pseudomembraneous
2. Erythemaosis

b. CHRONIC FORMS

1. Hyperplastic
2. Nodular
3. Plaque like
4. Erythematous
5. Pseudomembraneous

c. CANDIDA ASSOCIATED LESIONS

1. Denture Stomatitis
2. Angular cheilitis
3. Median rhomboid glossitis

d. KERATINIZED PRIMARY LESIONS SUPER INFECTED WITH CANDIDA

1. Leukoplakia
2. Lichen planus
3. Lupus erythematosus

II. SECONDARY ORAL CHANGES

ORAL HARMARTOMAS

[Shastri and kamath 1994]

I. ODONTOGENIC HARMARTOMAS

i. THOSE INVOLVING TEETH

- a. Dens invaginatus
- b. Dense evaginatus
- c. Talon's cusp
- d. Enameloma

ii. THOSE NOT INVOLVING TEETH

- a. Odontoma [complex and compound]
- b. Gigantiform cementoma
- c. Dental lamina cysts of new born

II. NON-ODONTOGENIC HAMARTOMAS

i. OF EPITHELIAL ORIGIN

- a. Epstein's pearls and Bohn's nodules
- b. Oral labial Melanotic Macule
- c. Pigmented cellular nevus

ii. OF VASCULAR ORIGIN

- a. Hemangioma
- b. Lymphangioma
- c. Glomus tumour

iii. OF OSSEOUS ORIGIN

- a. Torus palatinus
- b. Torus mandibularis

iv. OF ADIPOSE TISSUE

- a. Lipoblastoma

v. OF NEURAL TISSUE

- a. Neurofibromatosis

III. UNKNOWN/DOUBT FULL ORIGIN

- i. Granular cell myoblastoma
- ii. Congenital epulis of the new born
- iii. Melanotic neuroectodermal tumour of infancy
- iv. Fibromatosis gingivae