




**Topic: CLINICAL FEATURES-OF DIFFERENT GINGIVAL CONDITONS/DISEASES**

Further reading: Text book of periodontology- Carranza

Color atlas Periodontology

SL. NO	CLINICAL FEATURES	NORMAL	CHANGES-underlying tissue change alters the color	DISEASE/CONDITION
1	<b>COLOUR-determined by-</b> <ul style="list-style-type: none"> <li>• Vascularity</li> <li>• Thickness of epithelium</li> <li>• Degree of keratinization</li> <li>• Presence/absence of pigmentation (MELANIN)</li> </ul>	<ul style="list-style-type: none"> <li>• PINK/CORAL PINK-</li> <li>• WITH MELANIN PIGMENTATION</li> </ul> 	<ul style="list-style-type: none"> <li>• <b>CHANGES CAN BE MARGINAL, PAPILLARY, DIFFUSE, PATCHY</b></li> <li>• <b>Changes vary with intensity of inflammation differ in both nature &amp; distribution,</b> changes start in IDP</li> <li>• <b>Red/REDDISH BLUE-&gt;</b> vascular proliferation &amp; reduction of keratinization</li> <li>• <b>BLUE-venous stasis</b></li> <li>• <b>PALE-&lt;</b> VASCULARIZATION/EPI</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Associated with systemic diseases-abnormal pigmentation are non specific</b></li> <li>• Should stimulate further diagnostic efforts or referral to the appropriate specialist</li> <li>• <b>ENDOGENOUS ORAL PIGMENTATIONS-</b> caused by melanin, melanin, bilirubin, iron</li> <li>• Melanin oral pigmentations &amp; are often found found in highly pigmented ethnic groups</li> <li>• &gt;&gt; melanin pigmentation-             <ol style="list-style-type: none"> <li>1. Addison's disease-</li> </ol> </li> </ul>



THELIAL  
 KERATINIZATION>

- **Red** color gradually changes become dull, whitish gray-acute inflammation, gray color-produced by tissue necrosis & is demarcated from adjacent gingival by a thin, sharply defined erythematous zone

- **Metallic pigmentation**-heavy metals such as arsenic, bismuth, mercury, lead; silver absorbed systemically from therapeutic use/occupational/household environments may discolor the gingival & other areas of the oral mucosa. These changes are rare but still be ruled out in suspected cases

adrenal dysfunction & produce isolated patches of discoloration varying bluish black to brown

2. Peutz-Jehger's syndrome-produces intestinal polyposis & melanin pigmentation in the oral mucosa & lips
- 3 Albright's syndrome(polyostotic fibrous dysplasia & Von Recklinghausen's disease-neurofibromatosis)-produce melanin pigmentation
  - **Jaundice**-yellowish discoloration-oral mucosa
  - **Iron-hemochromatosis** may produce blue-gray pigmentation of oral mucosa
  - Pale gingival-anemia
  - **Reddish**-polycythemia vera, leukemia
  - Coal & metal dust, coloring agents- in food or lozenges
  - **Tobacco**-hyperkeratosis of gingival, causes significant > in melanin pigmentation of oral mucosa
  - **Localized bluish black** areas

				<p>of pigment-caused by amalgam implanted in mucosa</p> <ul style="list-style-type: none"> <li>• <b>Gingival enlargements:</b> <ul style="list-style-type: none"> <li>• Inflammatory enlargements-red-pinkish (chronic)</li> <li>• Mouth breathers-reddish IDP</li> <li>• Gingival, pericoronal, periodontal abscesses-red</li> </ul> </li> </ul> <p>2. <b>Drug induced gingival enlargements</b>-pale pink</p> <ul style="list-style-type: none"> <li>• Anticonvulsants, immune suppressants, calcium channel blockers</li> <li>• Enlargements associated with systemic diseases-</li> </ul> <p>3. <b>enlargements associated with systemic diseases-</b></p> <ul style="list-style-type: none"> <li>• Pregnancy gingivitis-marginal-bright red/magenta</li> <li>• Pregnancy-tumor-like enlargements-dusky red/magenta</li> <li>• Puberty enlargements-appears inflamed</li> <li>• Vitamin C deficiency-bluish red</li> </ul>
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				<ul style="list-style-type: none"> <li>• Plasma cell gingivitis-red (Solitary plasma cell gingivitis-pink)</li> <li>• Non specific conditioned enlargement (granuloma pyogenicum)- -similar to pregnancy gingival enlargement</li> </ul> <p><b>4. Systemic diseases that cause gingival enlargement-</b></p> <ul style="list-style-type: none"> <li>• Granulomatous diseases-</li> <li>• Wegner’s granulomatosis- reddish purple papillary enlargement</li> <li>• Sarcoidosis-red</li> </ul> <p><b>5. neoplastic enlargements-</b></p> <p>a. Benign -</p> <ul style="list-style-type: none"> <li>• Fibroma-pinkish-reddish (ulcerated)</li> <li>• Peripheral giant cell granuloma-pink-deep red-purplish blue</li> <li>• Central giant cell granuloma-</li> <li>• leukoplakia-whitish patch/plaque, does not rub off</li> <li>• Gingival cyst-pink</li> <li>• Hemangioma-reddish</li> </ul>
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				<p>b. Malignant-</p> <ul style="list-style-type: none"> <li>• Squamous cell carcinoma-reddish</li> <li>• Malignant melanoma-darkly pigmented-</li> </ul> <p>c. False enlargements-pinkish</p> <p>ULCERS-HIV/NON HIV infected-depressed gray center surrounded by elevated red border</p> <ul style="list-style-type: none"> <li>• PRIMARY HERPETIC GINGIVOSTOMATITIS-RED, ELEVATED VESICLES HALO LIKE MARGINS-greyish vesicles, depressed, yellowish or grayish white central portion; shiny discoloration &amp; edematous enlargement of gingivae</li> <li>• Necrotising ulcerative gingivitis (NUG)-red, shiny, hemorrhagic, covered with grayish pseudo membranous slough</li> <li>• Necrotising ulcerative periodontitis (NUP)- red, shiny, hemorrhagic, covered with grayish pseudo membranous slough</li> </ul>
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				<p><b>Chronic desquamative gingivitis-</b></p> <ul style="list-style-type: none"><li>• Lichen planus-reticular, patch, atrophic, erosive, bullous consisting of interlacing white lines</li><li>• Erosive lichen planus-atrophic erythematous, often ulcerated areas, fine radiating striations bordering atrophic lesions &amp; ulcerated zones</li><li>• Keratotic lesions-raised white lesions, as groups of papules, linear reticular lesions, plaque-like configuration</li><li>• Vesicular/bullous lesions-raised fluid-filled lesions</li><li>• Atrophic lesions-erythema confined to gingiva</li></ul> <p><b>Pemphigoid-</b></p> <ul style="list-style-type: none"><li>• Bullous pemphigoid-erosive, desquamative gingivitis</li><li>• Cicatricial pemphigoid-desquamative gingivitis, erythema, vesiculation of the attached gingival</li><li>• Pemphigus vulgaris-erythema of gingival, less often</li><li>• Chronic ulcerative stomatitis-erythema; solitary small</li></ul>
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				<p>blisters, erosions</p> <ul style="list-style-type: none"><li>• Linear immunoglobulin A disease (linear immunoglobulin A dermatosis)-erosive gingivitis, ulcerations</li><li>• Dermatitis herpetiformis-clusters of vesicles, papules</li><li>• Systemic lupus erythematosus-oral ulcerations</li><li>• Chronic cutaneous lupus erythematosus-desquamative lesions</li><li>• Erythema multiforme-multiple, large, shallow painful ulcers with an erythematous border-in oral mucosa, including gingival</li><li>• Drug eruptions-deep ulcerations with purpuric lesions with gingival often affected</li></ul> <p>Periodontal pocket-</p> <ul style="list-style-type: none"><li>• Red, bluish red vertical zone extending margin to the alveolar mucosa</li></ul>
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	<p><b>CONTOUR</b>-depends on shape of teeth &amp; their alignment in arc, the location &amp; size of the facial &amp; lingual embrasures</p>	<ul style="list-style-type: none"> <li>• <b>MG</b> Envelopes the tooth in a collar like fashion &amp; follows a scalloped outline on facial &amp; lingual surfaces</li> <li>• Forms a straight line along teeth with relatively flat surfaces</li> <li>• Teeth with pronounced mesio-distal convexity, normal contour is attenuated, &amp; the gingival is located farther apically</li> <li>• Lingual version- gingiva is horizontal &amp; thickened</li> </ul>	<ul style="list-style-type: none"> <li>• Above mentioned diseases would have loss of contouring</li> <li>• Mc Call festoon-life-preservator shaped enlargement of the gingival</li> <li>• Stillman's cleft-apostrophe shaped, narrow, triangular gingival recession indentation of the gingiva</li> <li>• Loss of tooth- "saddle-shaped" gingival, loss of contour</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
3	<p><b>CONSISTENCY-</b></p> <ul style="list-style-type: none"> <li>• collagenous nature of lamina propria &amp; its contiguity with mucoperiosteum of alveolar bone determine the firmness of attached gingiva</li> </ul>	<ul style="list-style-type: none"> <li>• firm &amp; resilient with exception of MG, tightly bound to underlying periosteum of alveolar bone</li> </ul>	<ul style="list-style-type: none"> <li>• DESTRUCTIVE(EDEMATOUS)</li> <li>• FIBROTIC CHANGES</li> </ul> <p><b>BOTH CHANGES COEXIST</b></p> <ul style="list-style-type: none"> <li>• <b>CALCIFIED CHANGES- ROOT REMNANTS, CALCULUS DEPOSITS REMOVED</b> forcefully gingival during scaling, root remnants,</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>



	<ul style="list-style-type: none"> <li>gingival fibers contribute to the firmness of the gingival margin</li> </ul>		<p>cementum fragments, or cementicles</p> <ul style="list-style-type: none"> <li>Chronic inflammation &amp; fibrosis, occasionally foreign body, giant cell activity, occur in relation to these masses</li> <li>Enclosed in an osteoid-like matrix</li> <li>Crystalline foreign bodies</li> <li>Tooth brushing promotes keratinization of the oral epithelium, enhancing capillary gingival circulation, thickeneing alveolar bone</li> <li>Mechanical stimulation by tooth brushing was found to increase proliferative activity of the junctional basal cells in dog gingival by 2.5 times compared with using a scaler</li> <li>chronic inflammation-smooth, shiny or firm &amp; nodular-depending on whether dominant</li> </ul>	
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			<p>changes are exudative or fibrotic</p> <ul style="list-style-type: none"> <li>• Smooth surface texture is provided by epithelial atrophy in atrophic gingivitis, peeling of the surface occurs in chronic desquamative gingivitis</li> <li>• Hyperkeratinization-leathery consistency</li> <li>• Drug-induced gingival overgrowth produces a nodular surface</li> </ul>	
4	<p><b>SURFACE TEXTURE-</b>          Stippling is a form of adaptive specialization or keratinization/reinforcement for function          Low magnification rippled appearance          Higher magnification-cell micropits are seen</p> <ul style="list-style-type: none"> <li>• produced by alternate protuberance &amp; depressions in the gingival surface</li> <li>• papillary layer of the connective tissue projects into the</li> </ul>	<ul style="list-style-type: none"> <li>• textured surface similar to an orange peel appearance-<b>“stippled”</b></li> <li>• <b>sign of healthy gingiva</b></li> <li>• viewed by drying gingiva</li> <li>• attached gingival is stippled, marginal gingival is not</li> <li>• central portion of IDP is usually stippled, but the MGs are smooth</li> <li>• pattern of stippling</li> </ul>	<ul style="list-style-type: none"> <li>• Smooth, shiny/firm &amp; nodular</li> <li>• Smooth surface texture produced by “ peeling of the surface occurs”</li> <li>• Hyperkeratosis-“leathery texture”</li> <li>• Drug induced gingival overgrowth- produces nodular surface</li> <li>• Edematous-destructive</li> <li>• Fibrotic-reparative</li> </ul>	

	<p>elevations &amp; the elevated &amp; depressed areas are covered by stratified squamous epithelium</p> <ul style="list-style-type: none"> <li>• degree of keratinization &amp; prominence of stippling appear to be related</li> </ul>	<p>might vary among individuals &amp; different areas of the same mouth</p> <ul style="list-style-type: none"> <li>• less prominent on lingual than facial surfaces &amp; may be absent in some persons</li> <li>• stippling varies with age</li> <li>• absent in infancy-</li> </ul>  <p>Stippled appearance</p> <ul style="list-style-type: none"> <li>• &gt; stippling gingiva is stimulated with tooth brushing</li> </ul>		
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5	<b>SIZE</b>			
6	<p><b>POSITION-</b>          Refers to the level at which the gingival margin is attached to tooth</p> <ul style="list-style-type: none"> <li>• Susceptibility is influenced by position of teeth in arch</li> <li>• Root-bone angle</li> <li>• M-D curvature of tooth surface</li> <li>• Rotated, tilted, or facially displaced teeth, bony plate is thinned out</li> </ul>	<ul style="list-style-type: none"> <li>• The distance b/w apical end of junctional epithelium &amp; crest of alveolus remains constant throughout continuous tooth eruption (1.07mm)</li> <li>•</li> </ul>	<p>Apical migration of gingival is called recession</p> <ul style="list-style-type: none"> <li>• physiologic recession- due to aging-not accepted @ present</li> <li>• pathologic recession- excessive exposure</li> </ul> <ol style="list-style-type: none"> <li>1. traumatic lesions- chemical, thermal, physical-most common lesions</li> <li>2. chemical injuries- aspirin, hydrogen peroxide, silver nitrate, phenol, endodontic materials</li> <li>3. in acute cases- appearance of slough, erosion, or ulceration, &amp; accompanying erythema are common features</li> </ol>	<p><b>Gingival recession due to-</b></p> <ul style="list-style-type: none"> <li>• tooth malposition</li> <li>• friction from soft tissue-soft tissue ablation</li> <li>• faulty tooth brushing- gingival abrasion</li> <li>• abnormal frenum attachment</li> <li>• TFO</li> <li>• In spite of minimal plaque</li> </ul>

7	<b>BLEEDING ON PROBING</b>	-----		
8	<b>EXUDATION</b>	-----		
9	<b>ABSCESS-localised collection of pus</b> <ul style="list-style-type: none"> <li>• Gingival abscess-impingement of foreign particle (tooth brush bristle, fish bone, etc) in the gingiva; no involvement of supporting structures other than gingiva</li> <li>• Periodontal abscess-involvement of supporting structures</li> <li>• Periapical abscess-associated with a decayed tooth</li> </ul>	-----		

**Topic: CLINICAL FEATURES OF DIFFERENT GINGIVAL CONDITIONS/DISEASES**



**Wegner's granulomatosis**



**Plasma cell gingivitis**



**Gingivitis**



**ANUG**



**copper ingestion-**



**heavy metal pigmentation**