ORAL AND PERIORAL PIGMENTATION

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INTRODUCTION

- Word pigment means ---- color or coloring agent.
- Normal color of oral mucosa varies from--- pale pink to deep bluish purple to sometimes even blackish.
- The normal range of color depends upon:-
  1) Melanogenesis & distribution of melanin pigment.
  2) Keratinization
  3) Depth of epitheliazation
  4) Vascularity
Oral and perioral pigmentation can be:

1) physiologic
2) pathologic
The manifestation of oral pigmentation is quite variable, ranging from a focal macule to broad, diffuse tumifactions.
CLASSIFICATION

- ENDOGENOUS PIGMENTATION
- EXOGENOUS PIGMENTATION
ENDOGENOUS PIGMENTATION

- **ENDOGENOUS MEANS**—originating from within the body.

- Pigments originating endogenously are:
  1. **MELANIN**
  2. **BLOOD**
  3. **IRON**
  4. **BILE PIGMENTS**
MELANIN

- Derived from Greek word melas—meaning black.
- It is a brown-black pigment.
- Melanin is synthesized by melanocytes, which reside in the basal layer of epithelium.
- Melanocytes are derived from neural crest.
- The release of melanosomes and subsequent melanin granules into epithelium results in the variable amount of pigmentation.
ENDOGENOUS PIGMENTATION

- MELANIN
  A) FOCAL MELANOCYTIC PIGMENTATION
    1) Freckle/ephelis
    2) Oral/labial melanotic macule
    3) Oral melanoacanthoma
    4) Melanocytic nevus
    5) Malignant melanoma
  B) DIFFUSE PIGMENTATION
    1) Physiologic pigmentation
    2) Drug induced melanosis
    3) Smoker’s melanosis
    4) Postinflammatory hyperpigmentation
    5) melasma
C) Melanosis Associated with Systemic or Genetic Disease

1) Addison’s disease
2) Cushing syndrome
3) Grave’s disease
4) Vitamin B12 deficiency
5) Peutz jegher’s syndrome
6) Café’ au lait pigmentation
7) HIV associated melanosis
8) Laugier hunziker pimentation
• HEME ASSOCIATED PIGMENTATION
  A) HEMOSIDERIN ASSOCIATED BROWN LESIONS
     1) Ecchymosis
     2) Petechia
  B) HEMOGLOBIN ASSOCIATED BLUE/PURPLE PIGMENTATION
     1) Hemangioma
     2) Varix
     3) Angiosarcoma
     4) Kaposi’s sarcoma
     5) Hereditary hemorrhagic telangiectasia
• IRON ASSOCIATED PIGMENTATION
  *hemochromatosis*

CAROTENE ASSOCIATED PIGMENTATION
  *carotenemia*

BILIRUBIN ASSOCIATED PIGMENTATION
  *Jaundice*
EXOGENOUS PIGMENTATION

A) SYSTEMICALLY INTRODUCED METALLIC SUBSTANCES
   1) MERCURY
   2) BISMUTH
   3) LEAD
   4) SILVER
   5) GOLD
   6) ARSENIC
   7) PHOSPHOROUS

B) LOCALLY INTRODUCED PIGMENT
   1) AMALGAM TATOO
   2) GRAPHITE

C) PIGMENTATION DUE TO DRUGS
D) MISCELLANEOUS
   1) Hairy tongue
MANAGEMENT

- Lasers
- Cryotherapy
- Bleaching creams
- Combination therapy: _
  4% hydroquinone + 0.05% retinoic acid + 0.01% fluocinolone acetomide
HEME ASSOCIATED LESIONS
HEME ASSOCIATED BROWN LESIONS
HEME ASSOCIATED BLUE/PURPLE VASCULAR LESIONS
IRON ASSOCIATED PIGMENTATION
CAROTENE ASSOCIATED PIGMENTATION
BILIRUBIN ASSOCIATED PIGMENTATION
EXOGENOUS PIGMENTATION
SYSTEMATICALLY INTRODUCED METALLIC SUBSTANCES
MERCURIALISM

- Also called ptyalism.
- Also called as pink disease or swift’s disease.
- As a result of occupational hazards, suicide attempts.
- Acrodynia develops in children.
- In oral cavity, it causes increased flow and thick ropy saliva, metallic taste and a faint diffuse grayish pigmentation.
- Tongue and salivary gland become enlarged.
- Lips appear dry and crackled.
- Bone can become necrosed.
ARGYRIA

• The use of silver containing medicines, results in permanent discoloration of skin and oral mucosa.
• Skin is violet or cyanotic with metallic lustre.
• In oral mucosa, pigmentation is diffuse.
BISMUTHISM

- Bismuth is used for medicinal purpose.
- Its toxic effects are few.
- Orally “bismuth lines” blue black in color are noticed in marginal gingiva especially around erupting third molars and lingual gingiva of lingual anteriors.
- Gingivostomatitis is seen.
- Tongue becomes sore and enlarged.
PLUMBISM

- Lead poisoning.
- In oral tissues affects by direct contact during ingestion or through salivary secretion.
- Most imp oral symptom is metallic taste.
- Burtonian line is seen (gray black in color along gingival margin).
- Other signs include sunken face, pallor of tongue and poor muscle tone.
ARSENIC

- Due to chronic exposure from industries or poisoning.
- Diffuse grayish oral pigmentation is seen.
OTHERS

- COPPER---- causes bluish green discoloration on gingiva and teeth. These lines are called as **CLAPTON LINE**.
- GOLD--- auric stomatitis which has faint blue or purple discoloration.
- ZINC– causes congestion and suppuration in gingival tissues. Bluish gray line is seen.
LOCALLY INTRODUCED PIGMENTATION
AMALGAM TATOO

- Due to deposition of amalgam restorative material into the submucosal tissues.
- Lesions are small, macular, bluish gray or black in appearance.
- Most common sites include- gingiva, alveolar mucosa, buccal mucosa and floor of the mouth.
- Lesions are seen in vicinity of teeth with large amalgam restorations.
GRAPHITE TATOOS

- Most commonly seen on palate and represents traumatic implantation of graphite particles from a pencil.
- Presents as gray or black macule.
DRUG INDUCED PIGMENTATION
• Minocycline, a tetracycline derivative is most common cause.
• Palatal and alveolar mucosae appear diffusely discolorated.
• Methacycline can also produce such discolorations.
MISCELLANEOUS
HAIRY TONGUE

- Middle and posterior 1/3 of dorsal tongue effected.
- Papillae become hyperplastic which become pigmented by colonization of chromogenic bacteria, which imparts variety of colors like white, green, brown or black.
- Smoking and various food items also contribute to diffuse discoloration.