

In The Name of God

Drug Induced Hyperpigmentation

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Pathogenesis

granules in dermal macrophages

Increased melanocytes

Increased melanin synthesis

pigment granules within the dermis

Hyperpigmentation Due To Topical Agents

Hydroquinone :

Hyperpigmentation in areas of application due to irritant contact dermatitis (i.e. postinflammatory) or exogenous ochronosis; the latter may also result in small “caviar-like” papules

Face , sclera

Hyperpigmentation Due To Topical Agents



Hyperpigmentation Due to Hydroquinone

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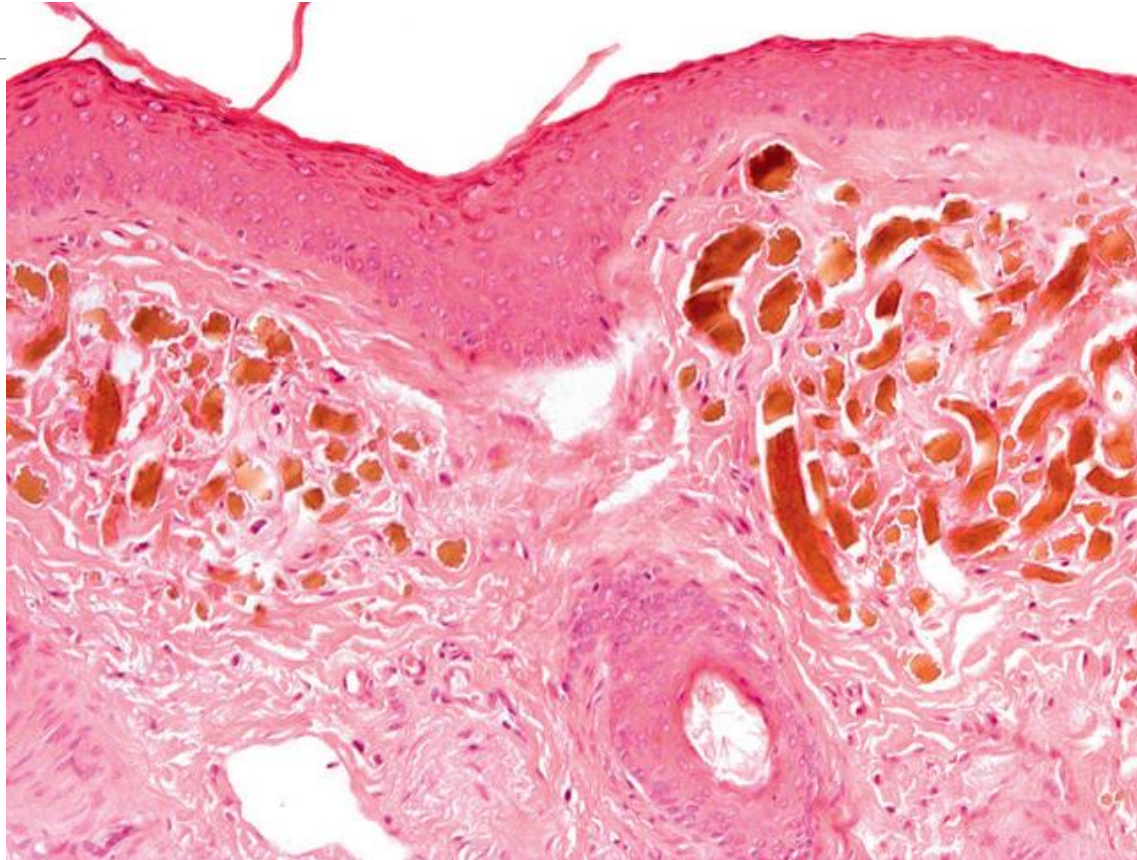
Hyperpigmentation Due To Topical Agents



Hyperpigmentation Due to Hydroquinone

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Hyperpigmentation Due To Topical Agents



Hyperpigmentation Due to Hydroquinone

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Hyperpigmentation Due To Topical Agents

Iron: Monsel solution

Tar melanosis

Tar handlers , psoriasis

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Metallic discoloration

1. **Argyria:**

- ❑ eye drops , silver sulfadiazine creams , silver earrings , jewelers
- ❑ Diffuse slate-gray discoloration, increased in sun-exposed areas

Metallic discoloration



argyria

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Metallic discoloration



argyria

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Metallic discoloration

2. Gold:

- ❑ Parenteral administration of gold salts

Permanent blue–gray discoloration in sun-exposed areas, particularly around the eyes

3. Iron :

Permanent brown pigment at injection sites

Metallic discoloration

4. Bismuth :

Generalized blue–gray discoloration of the face, neck and dorsal hands

Oral mucosa and gingivae may be involved

Hormones

❖ **Oral contraceptives**

melasma: increased pigmentation of nipples and nevi

Increased melanocytes and increased melanin synthesis

❖ **ACTH/MSH**

Diffuse brown or bronze hyperpigmentation, accentuated in sun- exposed sites

Increased melanin synthesis

Drugs

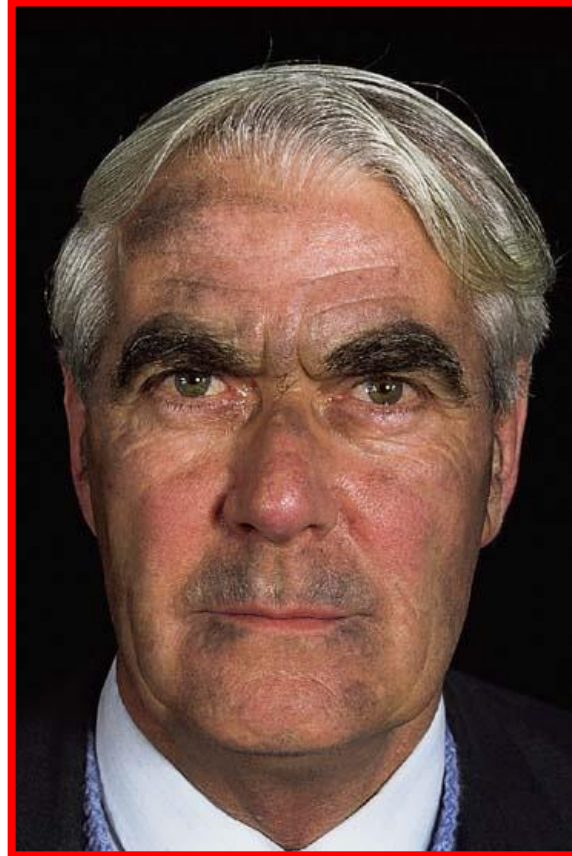
Amiodarone:

Slate-gray to violaceous discoloration of sun-exposed skin, especially the face

Fair-skinned patients after long-term intake

Drugs

Pigmentation due to amiodarone



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Drugs

Clofazimine

Diffuse red to red–brown discoloration of skin, conjunctivae

Violet–brown to blue–gray discoloration, especially of lesional skin

Pigmentation due to clofazimine



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Drugs

Antimalarials

- Discoloration affects up to 25% of patients

Gray to blue–black pigment, usually pretibial, with (hydroxy)chloroquine; face

hard palate, sclerae, and subungual areas may be involved

Drugs

Minocycline :

- ☐ Extremities , normal skin
- ☐ cicatrice , inflammed lesions
- ☐ Generalized
- ☐ Blue–black discoloration may also involve nails, sclerae, oral mucosa, bones, thyroid, and teeth



Minocycline induced hyperpigmentation

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Drugs

Minocycline induced hyperpigmentation

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Drugs

Psoralens

Diffuse hyperpigmentation after exposure to UVA light following oral administration (PUVA)

Drugs

Dioxins

Hyperpigmentation may occur in sun-exposed areas

Drugs

Diltiazem (rarely **amlodipine**)

- Slate-gray to gray–brown discoloration of sun-exposed skin in patients with skin phototype IV
perifollicular accentuation and a reticular pattern may be observed

Drugs

Zidovudine

Mucocutaneous hyperpigmentation (e.g. widespread diffuse, acral, oral macules)

most common in patients with darkly pigmented skin, and may be accentuated in areas of friction or sun exposure

Longitudinal > transverse and diffuse melanonychia (up to 10% of patients); blue lunulae

Drugs

Spionolactone

Melasma-like pigmentation

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Drugs

Psychotropic drugs

Slate-gray to brown (with amitriptyline) discoloration in sun-exposed areas

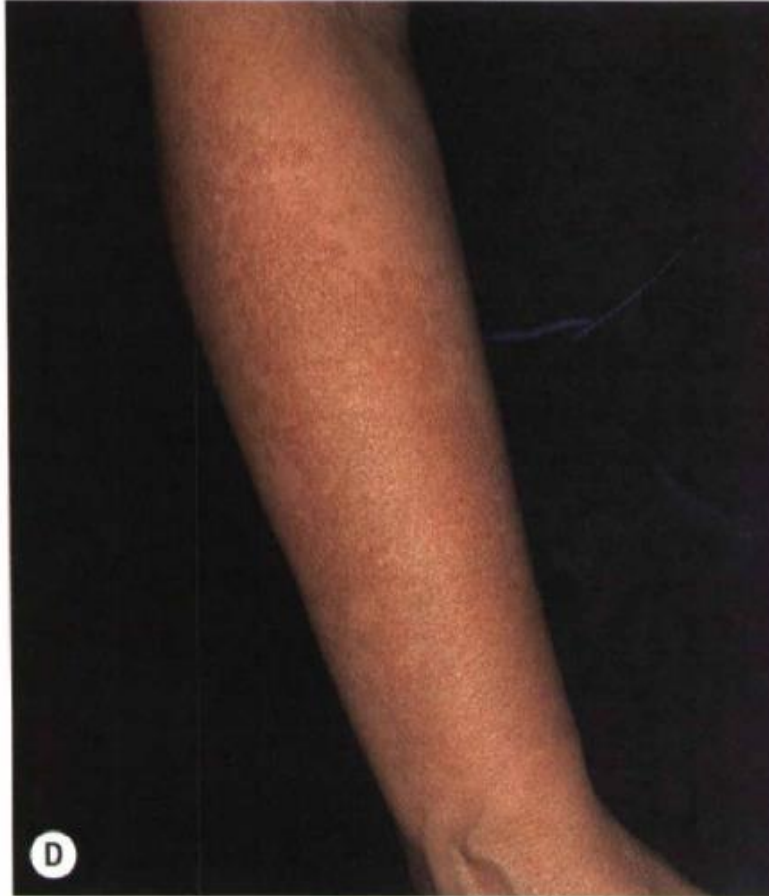
Chemotherapeutic Agents

1. Alkylating chemotherapeutic agents (busulfan , cyclophosphamide)
2. chemotherapeutic antibiotics : bleomycin , daunorubicin , doxorubicin

5-FU

- ☐ Diffuse hyperpigmentation
- ☐ hyperpigmentation in areas of trauma , nails , mucosa

Chemotherapeutic Agents



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**Fig. 67.14 Flagellate
pigmentation.** This
young man had received
bleomycin as a treatment
for his lymphoma. Note
the linear excoriations.

*Courtesy, David E Cohen, MD
MPH.*

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oral melanosis:

- ☐ hydroxychloroquine
- ☐ OCP
- ☐ phenothiazines
- ☐ zidovudine
- ☐ bismuth
- ☐ Chemotherapeutic Agents

HYPERPIGMENTATION of the NAILS

Antimalarials

Zidovudine

Chemotherapeutic Agents

psoralens

HYPERPIGMENTATION of the NAILS Due to Chemotherapeutic Agents

- ✓ Doxorubicin (adriamycin)
- ✓ Cyclophosphamide
- ✓ 5-FU
- ✓ Busulfan
- ✓ Vincristin

HYPERPIGMENTATION of the NAILS Due to Chemotherapeutic Agents



(b)



(a)

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Prognosis of Drug-induced Hyperpigmentation

Usually fades completely over months to years after discontinuation of drug, but sometimes persists.

Thank You !

