Geriatric Dermatology: Common Skin Complaints in Older Adults

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9/14/2022
Changes in Aging Skin

Common Skin Dx

Pruritus

Bruising

Nail Disorders
1. Changes in Aging Skin
Intrinsic vs. Extrinsic Changes

**INTRINSIC**
- Due to skin’s natural metabolic aging process
- Causes chronologic skin aging

**EXTRINSIC**
- Due to external factors (e.g., exposure to UV light, smoking, pollutants)
- Cause photoaging
<table>
<thead>
<tr>
<th>Physiological Changes</th>
<th>Cutaneous Effects</th>
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</thead>
<tbody>
<tr>
<td>Decrease in skin lipids &amp; barrier fxn</td>
<td>Dryness</td>
</tr>
<tr>
<td>Decreased cell replacements</td>
<td>Roughness, delayed healing, uneven pigmentation</td>
</tr>
<tr>
<td>Decreased DNA repair</td>
<td>Increased malignancies</td>
</tr>
<tr>
<td>Fragmentation of collagen &amp; elastic fibers</td>
<td>Wrinkles, lax skin, increased risk of pressure ulcers</td>
</tr>
<tr>
<td>Reduced support of blood vessels</td>
<td>Purpuric lesions</td>
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<tr>
<td>Decreased sensory perceptions</td>
<td>Increased tendencies to injuries</td>
</tr>
<tr>
<td>Reduced hair growth &amp; effects of androgen</td>
<td>Male / female patterns of alopecia, bushier eyebrows, growth of hair in external auditory meatus in males</td>
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<td>Reduced function of sweat glands</td>
<td>Risk of overheating and heat strokes</td>
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<tr>
<td>Reduced nail growth</td>
<td>Decreased linear growth, onychogryphosis, longitudinal striations, dull and brittle nails</td>
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<tr>
<td>Decrease in melanocytes</td>
<td>Gray hair, increased susceptibility to solar radiation</td>
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</tbody>
</table>
2. Common Skin Diagnoses
Common Skin Diagnoses

1. Xerosis*
2. Pruritus*
3. Benign lesions & tumors
4. Actinic keratoses
5. Malignant tumors
6. Purpura*
7. Alopecia
8. Nail disease*
9. Eczema
10. Rosacea
3. Pruritus
Pruritus

- Most common skin complaint in the elderly
  - Prevalence estimated to be 29%
- Chronic if > 6 weeks
- Can worsen quality of life due to irritation and sleep impairment
Aging and Itching

- 3 age-related biological processes contribute to itching

1. Loss of barrier function
2. Immunosenescence
3. Neuropathy
Ddx of Chronic Pruritus

**DERMATOLOGIC**
- Xerosis*
- Seborrheic dermatitis
- Contact dermatitis
- Urticaria
- Psoriasis
- Nummular eczema
- Scabies

**NON-DERMATOLOGIC**
- **Systemic**
  - CKD
  - Cholestatic liver disease
  - Hematologic
  - Malignancy
  - Meds
- **Neuropathic**
  - Brachioradial pruritus
  - Notalgia paresthetica
  - DM
- **Psychogenic**
  - OCD
  - Depression
  - Schizophrenia
Xerosis

- Most common dermatologic cause of pruritus in the elderly
- Characterized by dry, scaly skin (usually in lower extremities)
Xerosis Management

- Keep showers short (< 10 mins)
- Use warm (not hot) water
- Gently towel dry the skin
- Moisturize immediately after bathing
- Use cream or ointments (not lotions)
- Use fragrance-free products
Evaluation of Non-Dermatologic Causes

- HPI – unifocal vs. generalized / multifocal itch
- Review medication list
  - ACEi/ARBs
  - TCAs
  - Amiodarone
  - Statins
  - AEDs
  - Opioids
Evaluation of Non-Dermatologic Causes

- Pruritus screening labs
  - CBC with diff
  - CMP
  - TSH/T4
  - Can also consider: HIV, hepatitis panel, serum IgE, drug screen, CXR

- Routine cancer screening
  - Mammogram
  - Colonoscopy
Management of Non-Dermatologic Causes

- Initial:
  - Antihistamines (Zyrtec 10 mg BID)
  - Vanicream line for skin care
  - OTC Sarna lotion several times a day

- When identified underlying cause, tx accordingly:
  - Cholestatic liver dz → opioid antagonists
  - Neuropathic → capsaicin, gabapentin
4. Bruising
Aging and Bruising

- Decreased subcutaneous fat → reduced protection from trauma
- Decreased elastic content in dermis and vasculature → easy bruising
Ddx of Bruising in the Elderly Patient

- Senile purpura*
- Elder abuse*
- Drug-related
- Liver disease
- Thrombocytopenia

- Vitamin K or C deficiency
- Acquired bleeding disorder
- Malignancy
Evaluation of Bruising: History

- Associated trauma
- Location and severity
- Bleeding history
- Nutrition
- Family hx
- Medications
Medications and other substances that may increase the risk of bleeding or bruising

<table>
<thead>
<tr>
<th>Drug class or substance</th>
<th>Mechanism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticoagulants</td>
<td>Interfere with clot formation (secondary hemostasis)</td>
</tr>
<tr>
<td>Antiplatelet agents, including NSAIDs</td>
<td>Interfere with platelet function (primary hemostasis)</td>
</tr>
<tr>
<td>Glucocorticoids</td>
<td>Interfere with vascular integrity</td>
</tr>
<tr>
<td>Antibiotics</td>
<td>Cause vitamin K deficiency, especially with longer use</td>
</tr>
<tr>
<td></td>
<td>Some interfere with platelet function</td>
</tr>
<tr>
<td>SSRIs</td>
<td>Interfere with platelet function (primary hemostasis)</td>
</tr>
<tr>
<td>Alcohol</td>
<td>Complications of liver disease may affect clot formation and may cause</td>
</tr>
<tr>
<td></td>
<td>thrombocytopenia</td>
</tr>
<tr>
<td></td>
<td>May cause thrombocytopenia due to direct marrow toxicity</td>
</tr>
<tr>
<td>Vitamin E</td>
<td>Interferes with vitamin K metabolism in some individuals</td>
</tr>
<tr>
<td>Garlic</td>
<td>Interferes with platelet function in some individuals</td>
</tr>
<tr>
<td>Gingko biloba</td>
<td>Unknown</td>
</tr>
</tbody>
</table>
Evaluation of Bruising: Labs

- CBC, PT, and aPTT if:
  - Distribution of bruising not mainly along distal extremities
  - Other evidence of bleeding (e.g., recurrent epistaxis, gingival bleeding, hemarthrosis)
  - Personal or family hx of significant unexpected bleeding
- Consider testing for renal, hepatic, endocrine, or immune dysfunction only if other indicating s/s
Senile Purpura

- Benign, easy bruising after minor trauma
- Most common cause of bruising in the elderly
- Irregularly-shaped macules that are dark purple with well-defined margins
- Surrounding skin thin, inelastic, and pigmented in association with other signs of photoaging
- Resolve over 1-3 weeks and may produce residual brown pigmentation of skin
Senile Purpura
### Senile Purpura vs. Elder Abuse

<table>
<thead>
<tr>
<th></th>
<th><strong>Senile Purpura</strong></th>
<th><strong>Elder Abuse</strong></th>
</tr>
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<tbody>
<tr>
<td><strong>Size (diameter)</strong></td>
<td>1-4 cm</td>
<td>≥ 5 cm</td>
</tr>
<tr>
<td><strong>Location</strong></td>
<td>Extremities (extensor surface of forearms + dorsal aspect of hands)</td>
<td>Face, volar surface of arm and forearm, posterior torso</td>
</tr>
<tr>
<td><strong>Color changes</strong></td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td>Less than ¼ of older adults remembered how they got them</td>
<td>90% could say how they got their bruises; this includes older adults w/ memory problems and dementia</td>
</tr>
</tbody>
</table>
Anterior Comparison

Part I: Accidental

Part II: Physical Abuse
Posterior Comparison

Part I: Accidental

Part II: Physical Abuse

- Unknown
- Accidental
- Inflicted
5. Nail Diseases
Normal Age-Related Nail Changes

- Thickness: thicker or thinner
- Contour: ↓ longitudinal curvature, ↑ transverse convexity
- Texture: more friable
- Color: yellow - gray
Common Nail Disorders in Older Adults

- Brittle nails*
- Onychauxis
- Onychocryptosis
- Onychomycosis*

- Onychoclavus
- Subungal Hematoma
- Splinter hemorrhages
- Malignancies
Brittle Nail Syndrome

- Increased fragility of nail plate
- Prevalence: ~20%, with ↑ incidence in F and elderly
- Characteristics:
  - Onychoschizia - horizontal splitting
  - Onychorrhexis - longitudinal splitting and ridging
Brittle Nail Syndrome – Underlying Causes

- **External factors:** repetitive cycles of wetting and drying, trauma
- **Cosmetics:** nail polish, nail polish removers, application of acrylic gels
- **Systemic disorders:** peripheral arterial disease, iron deficiency anemia, endocrine disorders, biotin deficiency
- **Associated dermatoses:** eczema, lichen planus, alopecia areata
Brittle Nail Syndrome - Treatment

- Tx the underlying condition:
  - Avoiding contact with external irritants and trauma (e.g., using gloves for wet work and chores)
  - Avoiding aggressive manicures with excessive buffing and filing
  - Moisturizing the nails with emollients
- ?Biotin supplementation - 2.5 mg daily x6 months
Onychomycosis

- Fungal infection of the nails
- Prevalence increases with age, reaching ~20% in the elderly
- Subtypes:
  - Distal lateral subungual
  - White superficial
  - Proximal subungual
Distal Lateral Subungual Onychomycosis

- Most common subtype
- Discoloration starts at distal corner and then spreads
- Subungual hyperkeratosis
White Superficial Onychomycosis

- White patchy discoloration
- Yields a chalky scale when scraped with a curette or blade
Proximal Subungual Onychomycosis

- Relatively uncommon
- Whitish discoloration originating under the surface of the proximal nail plate
- Commonly occurs in immunocompromised pts or pts with HIV
Onychomycosis - Systemic Treatment

- First-line: **Terbinafine**
  - Dose: 250 mg qday x6 weeks for fingernails, x12 weeks for toenails
  - Adverse effects: altered taste/smell, GI distress, liver enzyme abnormalities, hepatotoxicity, and altered drug metabolism
  - Check baseline LFTs first
  - ~70% effective
Onychomycosis – Systemic Treatment

- **Second-line:** *itraconazole*
  - Dose: 200 mg qday x 6 weeks for fingernails, x 12 weeks for toenails
  - Adverse effects: GI distress, liver function abnormalities, severe hepatotoxicity, and altered drug metabolism
  - Check LFTs before and q 6 weeks
  - Contraindicated in pts with CHF
  - ~60% effective
Onychomycosis – Topical Treatment

- **Ciclopirox**
  - Dose: 8% nail lacquer qday x48 weeks
  - Wipe nail clean with alcohol once weekly
  - Adverse effects: temporary nail changes, local skin irritation
  - < 20% effective
Onychomycosis – Topical Treatment

- **Efinaconazole**
  - Dose: 10% solution qday x48 weeks
  - Apply one drop to each nail
  - Adverse effects: ingrown toenails, local skin irritation
  - < 20% effective
References


Thank you! ☺️