Recognizing Melanocytic Lesions

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No conflicts of interest to report

Pigmented Skin Lesions

- Pigmented keratinocyte neoplasias
  - Solar lentigo
  - Seborrheic keratosis
  - Pigmented actinic keratosis (uncommon)
- Melanocytic hyperactivity
  - Ephelides (freckles)
  - Café-au-lait macules
- Melanocytic neoplasia
  - Simple lentigo (lentigo simplex)
  - Benign nevocellular nevi
  - Dermal melanocytoses
  - Atypical (dysplastic) nevus
  - Malignant melanocytic lesions
Solar Lentigo
(Lentigo Senilis, Lentigo Solaris, Liver Spot, Age Spot)

- Proliferation of keratinocytes with ↑ melanin
  - Variable hyperplasia in number of melanocytes
- Pathogenesis- ultraviolet light damage

Solar Lentigo

- Older patients
- Light skin type
- Photodistributed
- Benign course
- Problem- distinguishing form lentigo maligna
Seborrheic Keratosis
“Barnacles of Aging”

• Epithelial proliferation
• Common- 89% of geriatric population
• Pathogenesis unknown
  – Follicular tumor (best evidence)
  – FGFR3 mutations in a subset

Seborrheic Keratosis
Clinical Features

• Distribution- trunk>head and neck>extremities
• Primary lesion
  – Exophytic papule with velvety to verrucous surface- “stuck on appearance”
  – Color- white, gray, tan, brown, black
• Complications- inflammation, pruritus, and simulation of cutaneous malignancy
• Malignancy potential- none to low (BCC?)
Seborrheic Keratosis

Seborrheic Keratosis-skin tag-like variant
Café-au-Lait Spots

- Subtle increase in number of melanocytes with increased melanin production
- Congenital or early childhood
- Distribution - trunk and proximal extremities
- Typically solitary
- Multiple lesions associated with NF
  - Prepubertal child - 6 or more > 5 mm
  - Crowe’s sign

Café-au-Lait Spots in Patient with Neurofibromatosis

+ Crowe sign = axillary freckling
Simple Lentigo (Lentigo Simplex)

- Lentiginous hyperplasia + melanocytic hyperplasia
  - Closely related to junctional nevus
  - May evolve into junctional nevus

Simple Lentigo (Lentigo Simplex) Clinical Features

- May occur at any age
- May be single or multiple
- Distribution- skin or mucous membranes
- Primary lesion- tan to brown to black macule usually measuring 5 mm or less
- Multiple lentigines
  - Peutz-Jeghers -syndrome
  - Carney’s syndrome
  - LEOPARD syndrome
  - Centrofacial lentiginosis
- Malignancy potential- no statistics
Solitary Simple Lentigo
Carney’s Complex

Lentigines
Atrial myxoma
Endocrinopathies

Labial melanotic macule

Genital lentigo
Nevocellular Nevi
(Moles, Melanocytic Nevi)

- Growth patterns
  - Junctional nevus
  - Intradermal nevus
  - Compound nevus
- Number of nevi (Caucasians)
  - 20 years of age = 20 nevi
  - Australian study- number peaks in 2\textsuperscript{nd} & 3\textsuperscript{rd} decade
    - Men = 43 nevi
    - Women = 27 nevi

Nevocellular Nevi
Clinical Features

- Age of onset- infancy to adulthood
- Distribution- any skin surface including mucous membranes
  - Number of nevi increased on sun-exposed skin
Junctional Nevus
Clinical Features

- Location anywhere- especially common on plantar and palmar surfaces
- Size- variable, 1-5 mm
- Primary lesion
  - Macule or subtle papule
  - Surface- typically smooth
  - Color- tan to brown to black
Intradermal Nevus
Clinical Features

• Location - head and neck most common
• Size - variable, most less than 6 mm
• Primary lesion
  – Papule or nodule
  – Dome-shaped, papillated, pedunculated, cerebriform
  – Color - skin-colored to tan to light brown
Intradermal Nevus

Clinical Features

- Trunk and proximal extremities- most common
- Size- variable, most less than 6 mm
- Primary lesion
  - Papule or nodule
  - Dome-shaped, papillated or pedunculated
  - Color- tan to brown to black

Compound Nevus

Clinical Features

- Trunk and proximal extremities- most common
- Size- variable, most less than 6 mm
- Primary lesion
  - Papule or nodule
  - Dome-shaped, papillated or pedunculated
  - Color- tan to brown to black
Compound Nevus

Melanocytic Nevi
Clinical and Histological Variants

- Halo nevus
- Meyerson’s nevus
- Spitz nevus
- Pigmented spindle cell nevus
- Desmoplastic nevus
- Nevus spilus
Spitz Nevus

Multiple Spitz Nevus

Histologically difficult to differentiate from melanoma
Nevus Spilus

SHE CALLED IT A BEAUTY MARK. EVERYONE ELSE CALLED IT A MOLE.
Multiple Benign Nevi

If you were going to take one off, which one would you choose (A, B, C, D, E)?

Nevocellular Nevi
Treatment Options

• Standard of care
  – Tangential (shave) biopsy
  – Punch biopsy
  – Excision biopsy

• Outside of the standard of care
  – Electrodesiccation
  – Cryotherapy
  – Dermabrasion (exception- congenital nevus?)
  – Laser
Recurrent Nevus

Recurrent nevi are often asymmetric, show multiple colors, dark colors and irregular borders.

Recurrent Nevus after Electrodessication
Congenital Nevi

- Congenital pigmented lesions - 2.5% of newborns
- Congenital nevi - 1% of newborns
- Congenital nevi > 10 cm - 1 in 20,000
Congenital Nevi

- May be solitary or multiple
- May affect any cutaneous surface
- Primary lesion is 1 mm to huge
  - Presence of dark hairs- no clinical significance
- Complications
  - Head, neck, posterior midline- cranial and/or leptomeningeal melanocytosis
  - Melanoma
- Associations- neurofibromatosis

Small (< 1.5 cm) Congenital Nevus
Medium (1.5-19.9 cm) and Multiple Small (< 1.5 cm) Congenital Nevi

Giant (≥ 20 cm) Congenital Nevus with satellite lesions
Melanoma arising in Medium Congenital Nevus

Blue Nevus

- Definition: dermal proliferation of melanocytes that produce abundant melanin
- Blue color: optical effect where longer wavelengths are absorbed and shorter wavelengths are reflect back
- Other dermal melanocytoses
  - Mongolian spot
  - Nevus of Ota
  - Nevus of Ito
Blue Nevus
Clinical Features

- Congenital (1:3000) or acquired (4% of adults)
- Most common in Asians and whites, uncommon in blacks
- Primary lesion- blue to blue-gray to blue-white papule or nodule
- Size- 1 mm to 2 cm
Blue Nevus
Variants

- Common blue nevus
- Cellular blue nevus
- Combined nevus
- Malignant blue nevus (very rare)

Multiple Common Blue Nevi
Cellular Blue Nevus

Mongolian Spot
Nevus of Ota

Dysplastic Nevus
(Atypical Nevus, Clark’s Nevus, Nevus With Cytologic Atypia and Architectural Disorder)

• Acquired melanocytic proliferation
  – Epidermal and/or dermal proliferation of cytologically atypical nevomelanocytes
  – Abnormal growth pattern (architectural disorder)

• Sporadic or familial

• Clinical importance
  – Ten studies- 6.6%-70.3% of melanomas are contiguous with dysplastic nevi
  – Familial dysplastic nevus syndrome- risk of melanoma approaches 100%
Dysplastic Nevi
Clinical Features

- Males = Females
- Age of onset- usually apparent by 20 years
- Location- any cutaneous site especially trunk
- Number of lesions- solitary to hundreds
- Primary lesion
  - Round to oval to irregular
  - Variegation in color- tans, brown, black, reds
  - Margins- often indistinct (fuzzy), pigment bleeds into surrounding skin, irregular margins
  - Size- no limit

Atypical Nevus
Atypical (dysplastic) Nevus

What is wrong with this nevus?
• Larger than other nevi
• More than one color
• Asymmetric

Severely Atypical Nevus

• Large
• More than one color
• Asymmetric
• Irregular margins
Multiple Atypical (Dysplastic) Nevi

Which one is the “ugly duckling?”

Familial Atypical Nevi (FAMMM syndrome)

- Numerous atypical nevi
- History of melanoma and MM-situ
Familial Atypical Nevi (FAMMM syndrome)

Oldest daughter (16 yo)
20 nevi upper chest
>100 total

Youngest daughter
44 nevi on back and posterior arms
Grim Reaper and Atypical Nevi

Malignant Melanoma
Clinical Variants

- Superficial spreading- 65%
- Nodular- 20%
- Lentigo maligna melanoma- 10%
- Acral lentiginous- 4%
- Desmoplastic- 1%
Early Melanoma in-situ (Lentigo Maligna)
Melanoma in-situ (Lentigo Maligna)
Melanoma in-situ (Lentigo Maligna)
Superficial Spreading Melanoma

Breslow level = 0.35 mm
Clark’s level II

Superficial Spreading Melanoma
Superficial Spreading Melanoma

Breslow = 0.61 mm
Clark’s level III
Superficial Spreading Melanoma with Nodule

Ulcerated Nodular Melanoma
Acral Lentiginous Melanoma

Acral Lentiginous MM
Visual Diagnosis of Melanoma

“Room for Improvement”

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Desmoplastic Melanoma
Malignant Melanoma
ABCDE Guidelines

• A = Asymmetry
• B = Border irregularity (notches, pseudopods)
• C = Color variegation (black blue, brown, tan, white, gray, red)
• D = Diameter greater than 6 mm
• E = Evolution (change, bleeding)

The “Ugly Duckling”
The End