Acral and Mucosal Dermoscopy

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F023 Dermoscopy for the Non-dermoscopist
Friday, March 3, 2017 1:00 pm-3:00 pm, AAD Meeting, Orlando, FL
Overview:
Acral and Mucosal Dermoscopy

- Acral benign and malignant patterns
- Mucosal benign and malignant patterns
- Clinical cases
Acral Melanoma

- Accounts for **2-3%** of all melanoma diagnoses
- Acral melanoma: incidence rate: **1.8 per 1,000,000 person-years**
- Mean age at diagnosis: **62.8 years**
- 78.3% found on skin of lower limb

Mucosal melanoma

- Accounts for **1.3-1.4%** of all melanoma diagnoses
- 25-50% on head and neck
- Mean age at diagnosis: **10 years later than cutaneous**
- Usually presents at a later stage, worser prognosis (5 yr survival for oral melanoma: 15%)

Acral Lesions
Challenges of Acral Lesions

• Patients may have more trouble self-monitoring: not as much clinical history to guide you

• Anatomy is different from other areas of body: different dermoscopic patterns to learn
Anatomy of Acral Skin: Furrows and Ridges

Eccrine duct openings on RIDGES: crista superficialis

FURROWS: Sulcus superficialis
The ink furrow test

Benign Acral Patterns

- Parallel furrow (24-52%)
- Lattice-like (10-27%)
- Fibrillar (6-12%)

Other

- Crista dotted
- Diffuse homogeneous

Saida et al. Arch Derm 1995
Benign Acral Patterns

• **Parallel furrow**

Parallel, pigmented lines within furrows

Benign Acral Patterns

• Lattice-like

Parallel, pigmented lines along the furrows and lines forming bridges across furrows

Benign Acral Patterns

- Fibrillar

Pigmented lines across furrows

Benign Acral Patterns

- Other

Crista dotted pattern:
Regular pigment dots around eccrine units
(congenital type nevi)

Benign Acral Patterns

- **Other**

Diffuse homogeneous

Seen in congenital nevi or nevi with prominent dermal component
Benign Acral Patterns

- Other

Hemorrhage:
Talon noir

Can have diffuse pigment, reddish-black globules

www.dermnetnz.org
Malignant Acral Pattern

- **Parallel Ridge:**
  
Pigmentation accentuated along ridges

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Malignant Acral Pattern

- Disorderly pigment

Basic Algorithm for Acral Lesions

191 (166 + 25) Acquired melanocytic lesions on acral volar skin

First step

174 (166 + 8) Nonparallel ridge pattern
17 (0 + 17) Parallel ridge pattern

Second step

101 (101 + 0) Typical PFP, LLP, or regular fibrillar pattern
73 (65 + 8) Dermoscopic features not conforming to the left box

Third step

47 (47 + 0) Diameter ≤7 mm
26 (18 + 8) Diameter >7 mm

101 (101 + 0) No follow-up
47 (47 + 0) Follow-up
43 (18 + 25) Biopsy for histopathologic evaluation

Important Take-Home Points

• If **parallel ridge or disorderly pigment**: biopsy to r/o melanoma

• If **clear benign dermoscopy pattern** (**parallel furrow, lattice, fibrillar**, follow clinically)

• If not **parallel ridge/disorderly pigment** but not clear **benign pattern**, if < 7 mm, consider close f/u but if > 7 mm, **consider biopsy**
Summary: Benign Acral Patterns

- Parallel furrow
- Lattice
- Fibrillar
- Crista dots
- Diffuse homogeneous
- Hemorrhage: red-black globules
Summary: Malignant Acral Pattern

* Parallel ridge
* Disorderly pigment

7-10 mm may be an important cutoff
Mucosal Lesions
Challenges of Mucosal Lesions

Challenges:

• High rates of benign melanosis
• Low rates of melanoma
• Awkward exam
• Soiling dermoscope with contact
• Not able to use dermoscopy in some areas (oral cavity)
  • Polarized dermoscope
  • Transparent shield after oil/ gel/ alcohol interface (plastic wrap)
  • Videodermoscope/ camera attachment

Benign mucosal lesions: 

Melanotic macules

- Most common on lower lip
- \( F>M \ (2:1) \) and young adults
- Etiology not clear: physiologic or reactive process
- **Benign: not thought to be premalignant**
- One case report of palatal melanotic macule transforming to MM but ? true melanotic macule
- **Pathology:** increased melanin within the basal cell layer, melanophages

Kahn et al. OOOM Volume 100, Issue 4, Pages 454-459 (October 2005)
Benign Mucosal Lesions: Angiomas, Venous lakes

- Red-blue lacunes
- Red-blue homogenous areas
Benign Mucosal Patterns

Pigmented lesions:
• Homogenous pattern

Benign Mucosal Patterns

- Ring-like pattern
- Fish-scale-like pattern
- Dotted-globular pattern
- Fingerprint-like pattern

Malignant Mucosal Patterns
Multicenter study by the International Dermoscopy Society (IDS)

Melanoma:
- Combination of blue, gray, or white color with structureless zones
- Multicomponent pattern

Blum A et al. Arch Dermatol 2011; 147(10):1181-7
Dermoscopy of Oral Pigmented Lesions

Reported dermoscopic patterns:

-- abrupt cut-off of pigment pattern at lesion periphery
-- blue-white veil, atypical vascular patterns

Summary: Benign Acral Patterns

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Summary: Malignant Acral Pattern

* Parallel ridge
* Disorderly pigment

7-10 mm may be an important cutoff
Summary Mucosal Dermoscopy

**Benign Patterns:**
- Homogeneous pattern

**Malignant Patterns:**
- Blue, gray, white structureless areas
- Multicomponent pattern

If in doubt, consider biopsy!
Thank you!

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