Dermoscopy in Pediatrics: Finding the Scope
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Maine AAP Spring Conference
Innovations in Pediatric Healthcare
April 30, 2022

• What is dermoscopy?
• Why is it helpful?
• Utilization in adults vs kids, same vs different?
• eConsult and teledermoscopy
• What’s next?

I have no financial conflicts of interest
What is dermoscopy?

A non-invasive handheld device with up to 10x magnification

- Reduces # of biopsies to detect melanomas (100 → 5)
- Aids in triage and improves early detection of skin cancer
- Requires training
Dermoscopy → Reduction of # of biopsies in pediatric setting

- 30% of pediatric dermatology referrals are due to concerns regarding nevi
- Improve diagnostic accuracy – lower NNB --- 8x rate 100→20→5→3... (TBP, SDDI, confocal)
- Avoid general anesthesia or challenging biopsies in young children

Conclusions: 594 lesions were excised to find one melanoma. This value is 20 times higher than the rates found in adult patients.
Dermoscopy Workshops

- 2-hour dermoscopy workshops using TADA live & interactive or virtual
- 15 workshops, 250+ PCPs trained
- Power of partnership -- given with an FP & NP
- Establish PCP dermoscopy champion at each site
- Expanded curriculum to pediatrics – 78 pediatricians trained
- Obtained dermatoscopes for all sites

A practical review of dermoscopy for pediatric dermatology
part I: Melanocytic growths

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Abstract

The value of dermoscopy in the detection of skin cancer is well established. Less is published on the utility of dermoscopy in the evaluation of pediatric skin disease. Our review is the first to attempt to serve as an update on pediatric dermoscopy and to provide readers with a practical application for the use of dermoscopy in pediatric dermatology clinics. In part I, we present a dermoscopy algorithm for pediatric skin diseases and melanocytic growths, and in part II, we address vascular growths, common skin infections, and inflammatory conditions for which dermoscopy is valuable.

A practical review of dermoscopy for pediatric dermatology
part II: Vascular tumors, infections, and inflammatory dermatoses

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5 month old with enlarging plaque
Infantile Hemangioma

*Lacunae separated by septae*

Colors:
- Red
- Maroon
- Blue

‘White hemangioma’ harbinger of impending ulceration

Vascular vs Melanocytic

Seven-year-old boy with many nevi

Posterior neck nevus present since birth
New scalp nevus. Many uniform brown globules under dermoscopy

But it's new, enlarging and has irregular border?!?

Nevogenesis and Nevus Evolution are Dynamic Processes in Kids

New Classification of Melanocytic Nevus Based on Dermoscopy
Patterns of Benign Nevi

With this knowledge we begin to recognize the many patterns of benign nevi and that most of these (especially in children) do not need to be removed.

eConsult with dermoscopy

Dermatology e Consult:

- Clinical consultation between PCP & specialist conveyed electronically via a secure messaging interface and store & forward imaging
- Form of telementoring—transfer knowledge not patients
- Create partnerships and learning loops to deliver care
- Helpful in rural areas with limited access to dermatology (there are no pediatric dermatologists in Maine)

*right care, right place, right time*
Pediatric eConsult sub-analysis

- FM 45%
- IM 24%
- Peds 29%
- Onc 2%

FM (45%):
- Treatment initiated via e-Consult: N=10
- EUS Dermatology prior to initiating treatment: N=4

IM (24%):
- Treatment initiated via e-Consult: N=17
- No show: N=1

Peds (29%):
- Treatment initiated via e-Consult: N=18
- No show: N=1

Onc (2%):
- Treatment initiated via e-Consult: N=1

Infants [0-12 months] N=17
- Non-MI infections, inflammatory skin diseases, café au lait macule, capillary malformation, nevus, etc.
- N=15

Infants with Infantile Hemangioma (IH) N=18
- 1-18 years: N=1

An opportunity to prevent ulceration and surgery...

E-Consult Order

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the request for E-Consult due to a growth or rash?</td>
<td>Growth</td>
<td></td>
</tr>
<tr>
<td>How long has the growth been present?</td>
<td>1-6 months</td>
<td></td>
</tr>
<tr>
<td>Choose all that apply:</td>
<td>Enlarging or changing color</td>
<td></td>
</tr>
<tr>
<td>Prior biopsy?</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Prior Treatment?</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Organ or bone marrow transplantation, or other form of immunosuppression?</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Past medical history of skin cancer?</td>
<td>No past medical history</td>
<td></td>
</tr>
<tr>
<td>Personal or family history of melanoma?</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Social history of tanning bed use?</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>1) Far away anatomical image:</td>
<td>DOCUMENT</td>
<td></td>
</tr>
<tr>
<td>2) Up close image:</td>
<td>DOCUMENT</td>
<td></td>
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<tr>
<td>3) Dermoscopic polarized image:</td>
<td>DOCUMENT</td>
<td></td>
</tr>
<tr>
<td>4) Dermoscopic non-polarized image:</td>
<td>DOCUMENT</td>
<td></td>
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</tbody>
</table>
How do we use this information to transform care?

- Increase dermoscopy use in pediatrics and develop a pediatric dermoscopy training curriculum
- Dedicated pediatric eConsult platform
- Pediatric dermatologists in Maine

Questions?