Pediatric Dermatology
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Update on Pediatric Vascular Tumors

Dr. James Treat
Dr. Deepti Gupta
EKG prior to propranolol?

- **MacArthur et al**: 180 patients
  - 43% with abnormal EKG
- **Castelo-Soccio et al**: 202 patients
  - 49 had abnormal EKG
- **Breuer et al**: 109 patients
  - 6.5% with abnormal EKG
- **ALL** were allowed to be treated with Propranolol.

Routine ECG may not be necessary in majority of patients treated with propranolol for IHs.
Variability of delivery of timolol

- There is no standard dosing and parents are often advised to apply one to two drops of TM once, twice, or three times daily.

- Variability in the amount of timolol dispensed with gel-forming solution and solution.

- Drops Gel Forming Solution are closer to the correct dose although more variably.

- Lack of pharmacokinetic data.
Safety and efficacy of topical timolol

- 26 patients (5-24 weeks of age).
- 4 months of treatment.
- 38% had detectable blood levels.
- Blood levels found in 44% of scalp IH, but 0% of face IH.
- Patients with higher doses had higher levels but no difference in response rate.

- No clinically significant side effects.
Utility and tolerability of the long-pulsed 1064-nm neodymium: yttrium-aluminum-garnet (LP Nd:YAG) laser for treatment of symptomatic or disfiguring vascular malformations in children and adolescents

Aditi S. Murthy, MD, Annelise Dawson, MD, Deepti Gupta, MD, Shanna Spring, MD, and Kelly M. Cordoro, MD
San Francisco, California

None port-wine stain vascular malformations.
Solitary or localized VVMs may respond better than extensive lesions.

• Good to excellent results in 66.7% of patients treated.
Diagnostic evaluation for suspected KHE/TA

- Complete blood count.
- Coagulation studies: PT, PPT, fibrinogen, d-Dimer.
- MRI of lesion with and without contrast.
- Tissue biopsy (if diagnosis uncertain)
KHE and TA

• Risk of KMP:
  • < age (infants)
  • Lesions > 8 cm
  • Anatomic location has not been demonstrated
### Treatment considerations

<table>
<thead>
<tr>
<th>Archetype</th>
<th>Therapy</th>
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<tbody>
<tr>
<td>Fulminant KHE with KMP (neonate/young infant)</td>
<td>Multi-agent therapy</td>
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<tr>
<td>KHE/TA with KMP*</td>
<td>Vincristine + prednisolone</td>
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<tr>
<td>Or</td>
<td>Methylprednisolone</td>
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<tr>
<td>KHE without KMP</td>
<td>Stable: Observation</td>
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<td></td>
<td>Growth or symptoms: prednisolone +/- aspirin</td>
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<tr>
<td>Symptomatic TA</td>
<td>Aspirin +/- ticlopidine</td>
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</table>

*Avoid platelet transfusion unless significant bleeding or intervention required.

KHE: Kaposiform hemangioendothelioma, KMP: Kasabach-Merritt phenomenon, TA: tufted angioma.
Pain-free Dermatology

Dr. Peter Lio
Dr. Alisa McQueen
Pearl

- Cryotherapy pain has both immediate and delayed component.

- Applying a topical anesthetic (e.g., 4% lidocaine cream) right after freezing can render the lesion painless within 30 seconds.

- Theory: ice crystals during freezing damage epidermal barrier, thus increasing penetration.

Cutaneous scarring in neonatal lupus

• A retrospective cohort study. (1980-2017)
• 106 patients.

• 34% of patients had cutaneous sequelae.
  • 17% dyspigmentation
  • 13% residual telangiectasia
  • 9% atrophic scarring

• Atrophic scarring was significantly associated with maternal anti-Ro antibodies and topical treatment of cutaneous lesions.

Briggs et al. The Hospital for Sick Children- Toronto.