Spitz Nevus

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Sophie Spitz (1948)
Juvenile Melanoma

- Childhood lesions that histologically resembled malignant melanoma
- Behaved as benign tumors
- 12 of 13 patients initially diagnosed as having melanoma alive 13 years later
- Depth of invasion of these lesions did not correlate with prognosis
Terminologic Confusion

Benign juvenile melanoma
Epithelioid or spindle cell nevomelanocytic nevus
Spitz tumor
Pseudomelanoma
Spindle cell nevus
Epithelioid cell nevus
How Common?

- Incidence 1-10%
- First two decades of life
- Caucasians
- Head and neck
- Legs in women
Four Clinical Variants

- Light-colored and soft lesions, which are usually smooth and pink or slightly pigmented
- Light-colored and hard lesions, resembling a dermatofibroma or a keloid
- Dark-colored lesions with varying degrees of pigmentation
- Multiple or agminated lesions
<table>
<thead>
<tr>
<th>Criterion</th>
<th>Spitz nevus</th>
<th>Malignant melanoma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symmetry</td>
<td>Yes</td>
<td>No, except for early lesions and the rare nodular form of melanoma</td>
</tr>
<tr>
<td>Diameter &lt;6 mm</td>
<td>Often</td>
<td>No in most cases; early lesions may be small</td>
</tr>
<tr>
<td>Ulceration and pruritus</td>
<td>Rare</td>
<td>Common</td>
</tr>
<tr>
<td>Age predominance</td>
<td>Children and young adults</td>
<td>Generally adults</td>
</tr>
<tr>
<td>Evidence of regression</td>
<td>No</td>
<td>Present in 23%</td>
</tr>
<tr>
<td>Recurrence after incomplete excision</td>
<td>4% to 5%</td>
<td>Likely</td>
</tr>
<tr>
<td>Metastatic potential</td>
<td>None</td>
<td>High</td>
</tr>
</tbody>
</table>
Histopathology
Criteria

- Symmetry
- Borders
- Cell type
- Maturation
- Absent pagetoid spread of single cells.
- Kamino bodies
Symmetry

- No lateral extension of junctional activity beyond the limits of dermal component
- Similarity comparing one field with another
- Peripheral borders sharply circumscribed
Epithelioid and Spindle Cells

- Spindle cells more common
- Cells are arranged in fascicles with vertical orientation related to the rete ridges—”raining, streaming fish”
- Beware junctional epithelioid melanocytes in adult
Maturation

- Presence of small, normal nevus cells in the deeper part of the lesion
- No prominent nests at base
- Diminution of size of both nuclei and nucleoli
Kamino Bodies

- Coalescent, pale pink bodies
- Multiple step sections may be necessary
- PAS and trichrome positive
- NOT apoptosis
Genetic Alterations
<table>
<thead>
<tr>
<th>Lesions n=95</th>
<th>B-RAF/N-RAS</th>
<th>H-RAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spitzoid MM</td>
<td>86% (31/36)</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>86% of mets (6/7)</td>
<td></td>
</tr>
<tr>
<td>Spitzoid lesions susp. for MM</td>
<td>35% (8/23)</td>
<td>7% (1/15)</td>
</tr>
<tr>
<td>Atypical Spitz nevus</td>
<td>0% (0/22)</td>
<td>14% (3/22)</td>
</tr>
<tr>
<td>Spitz nevus</td>
<td>0% (0/14)</td>
<td>29% (4/14)</td>
</tr>
</tbody>
</table>
Spitz nevi and spitzoid
Should Spitz Nevi Be Excised?
Spitz Nevus or Not?
Spitz Nevus with Sclerosing Features
Melanoma with Spitzoid Features