Correspondence

Morpheaform facial basal cell carcinoma – a 16-year experience in an Asian center

Dear Sir,

Basal cell carcinoma (BCC) is the most common skin cancer in Singapore – an equatorial region with a multi-ethnic Asian population. Morpheaform/sclerosing BCC (mBCC) is the most aggressive subtype that often has a subtle presentation, occurring as an inconspicuous “scar-like” lesion. This poses challenges in surgical excision and clearance. Although often regarded as a subset of infiltrative BCC, the morphoeic subtype is distinguished by the presence of stromal fibrosis, a distinction that remains part of the minimum dataset for histopathological reporting of skin cancers.1 mBCCs are particularly rare in colored skin, with a lack of studies in Asian populations.

We retrospectively reviewed our experience with surgical excision of facial mBCC from 1993 to 2009. There were 1573 histological diagnoses of BCC made over this 16-year period. Thirty-seven patients had a diagnosis of aggressive BCC (infiltrative, morpheaform and micronodular subtypes), of which seven were morpheaform (Table 1). mBCC subtypes included: pure morpheaform (five) and mixed morpheaform (two). Patient demographics were determined: mean age = 58.4 years; male:female ratio = 4:3. Five of the seven patients identified were Chinese, the remaining two were Caucasian, and none was from the Malay/Indian racial groups. All cases were found on the face, the most common anatomical location was the pinna of the ear (three), followed by the cheek (two), scalp (one) and periorbital (one). Four patients had a known diagnosis of BCC: infiltrative (two), morpheaform (one), and nodular (one). All presented with single tumors, tumor size 5–60 mm. Clinical presentation: ulceration (three), surface changes of existing scar (three), and enlarging nodule (one). The mean duration to presentation was 2.1 years. Three patients had locally invasive tumors. All patients were treated with wide excision. One patient had positive margins. Method of defect closure included: flap coverage (four), split skin graft (two), and secondary closure (one) (Table 2). Four of seven patients diagnosed with mBCC at our center presented with a local recurrence at a site of previous BCC excision, of which three were formerly diagnosed as the non-morpheaform subtype (based on archived histopathological and patient records at our center). There was one case of recurrent mBCC diagnosed.

Table 1 Patient and tumor characteristics

<table>
<thead>
<tr>
<th>Patient</th>
<th>Age</th>
<th>Race</th>
<th>Sex</th>
<th>Smoking</th>
<th>Personal History</th>
<th>Family History</th>
<th>Histological Subtype</th>
<th>Duration of lesion*</th>
<th>Local Invasion</th>
<th>Metastases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>65</td>
<td>M</td>
<td>Chinese</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Ulcer</td>
<td>50 mm</td>
<td>No</td>
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<tr>
<td>2</td>
<td>72</td>
<td>M</td>
<td>Chinese</td>
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<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Ulcer</td>
<td>10 mm</td>
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<tr>
<td>3</td>
<td>65</td>
<td>F</td>
<td>Chinese</td>
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<td>No</td>
<td>No</td>
<td>No</td>
<td>Ulcer</td>
<td>60 mm</td>
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</tr>
<tr>
<td>4</td>
<td>36</td>
<td>F</td>
<td>Chinese</td>
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<td>Yes</td>
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<td>Ulcer</td>
<td>10 mm</td>
<td>No</td>
</tr>
<tr>
<td>5</td>
<td>65</td>
<td>M</td>
<td>Chinese</td>
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<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Ulcer</td>
<td>20 mm</td>
<td>No</td>
</tr>
<tr>
<td>6</td>
<td>40</td>
<td>F</td>
<td>Chinese</td>
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<td>No</td>
<td>No</td>
<td>Ulcer</td>
<td>5 mm</td>
<td>No</td>
</tr>
<tr>
<td>7</td>
<td>60</td>
<td>M</td>
<td>Caucasian</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Mixed morpheaform (nodular, morpheaform)</td>
<td>25 mm</td>
<td>2 months</td>
</tr>
</tbody>
</table>

*Reference to time point after the first diagnosis of morpheaform basal cell carcinoma.
This study highlights the rarity of mBCC in Asians, forming 0.004% of all histological diagnoses of BCC in Singapore, and 0.19% of the aggressive subtypes, compared with Caucasian data – mBCCs account for 6.8–21.8% of all BCCs.2,3 The mean age of 58.4 years represents a possible younger age of onset.4 Albeit a small case series, a possibly less aggressive course of this unique subtype in colored skin is suggested. Interestingly, 42% (3/7) of mBCC arose from previous sites of excised non-morphoeic BCC, corroborating a previous postulation that the morphoeic growth pattern likely supervenes on non-morphoeic BCC as a consequence of host response over time or with increasing age.5

Its unique demographic, histopathological and molecular features (alpha versus beta 6-dependent transforming growth factor-beta1 activation has been postulated to induce the infiltrative growth pattern and fibrotic stroma characteristic of mBCC)5 warrant further study of the morphoeic subtype as a distinct subtype with a possible different pathophysiology.

Wan-Lin Teo, MD
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References