Dermoscopy in synchronous melanomas: a case series

Dear editor,

About 5% of the patients diagnosed with melanoma will have a second primary melanoma, and it is estimated that 26% to 40% of them are synchronous.\(^1\) Synchronous tumors are defined as those diagnosed at the same time or within a three-month interval.\(^2\)

Melanomas can exhibit a broad spectrum of dermoscopic presentations and the pattern in synchronous cases has been evaluated in only a few studies. It has been suggested that if endogenous and exogenous factors for an individual remain the same, the clinical and dermoscopic features of the lesions should be similar.\(^3\) Most of the data come from two publications by Moscarella et al., who evaluated the dermoscopy of multiple melanomas and included 32 patients with synchronous neoplasms in one study and 18 cases in the other.\(^1,2\) The first study showed that synchronous lesions were more likely to exhibit similar dermoscopy when compared with metachronous melanomas.\(^1\) In the other study, dermoscopic similarity was correlated with advanced age and photodamage, not being related to synchronicity.\(^3\) In addition to these studies, four reports of patients with synchronous melanomas were identified in studies that compared the dermoscopy of the lesions.\(^4,5\)

A retrospective study of patients with synchronous primary cutaneous melanomas attended between July 2016 and December 2019, is presented here, comparing the lesions regarding the histopathological, clinical, and dermoscopic aspects. This is the first study carried out in a South American population.

Eight patients with synchronous melanomas were identified (five had two melanomas each, two had three melanomas and one had four), totaling 20 melanomas. The age ranged between 53 and 73 years, in five men and three women. Regarding the histopathological type, there were 14 superficial spreading, four lentigo maligna, one nodular, and one melanoma with mixed characteristics. Fifteen were classified as *in situ* melanomas and five as invasive. Nine lesions (45%) were not considered suspicious after anamnesis and physical examination, but all were classified as at-risk lesions after dermoscopy (Table 1). Table 2 describes the dermoscopic findings.

All lesions showed asymmetry in the two axes on dermoscopy and most of them exhibited three colors or more (75%). The most prevalent characteristics were structureless areas, pigment networks, dots and/or globules, and white structureless areas. Angulated lines, seen in 40% of melanomas, have not been described in other publications on synchronous melanomas, and comprise structures that have been associated with lentigo maligna.\(^6\) Three lesions with angulated lines in the same patient showed this subtype, but the other five, identified in three patients, were superficial spreading melanomas. In seven patients, all melanomas were located in areas with signs of chronic severe sun exposure, an environmental factor that may influence dermoscopic features.\(^7\) Only patient 5 had one of the melanomas (lesion B) in a region without signs of photodamage.

The interpretation of dermoscopic similarity presents subjective and objective variables and faces limitations due to the lack of standardization in the literature and the great interobserver variability. The authors considered there was partial similarity between the two lesions of patient 4 and between the three lesions of patient 8. In patients 1, 5 and 6, the authors considered that, despite sharing some criteria, there was no similarity in the same patient. Complete

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\(^5\) Study conducted at the Centro de Dermatologia Dona Libânia, Fortaleza, CE, Brazil.

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Table 1 Clinical and histological aspects of melanomas per patient.

<table>
<thead>
<tr>
<th>Patients</th>
<th>Sex</th>
<th>Age</th>
<th>Location</th>
<th>Clinically suspicious lesion</th>
<th>Histopathological type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>F</td>
<td>65</td>
<td>A. Right shoulder - lateral aspect</td>
<td>A: Yes</td>
<td>A. Lentigo maligna Superficial spreading</td>
</tr>
<tr>
<td>2</td>
<td>M</td>
<td>53</td>
<td>A. Right forearm</td>
<td>B: No</td>
<td>A. Nodular Superficial spreading</td>
</tr>
<tr>
<td>3</td>
<td>M</td>
<td>63</td>
<td>A. Right arm</td>
<td>A: Yes</td>
<td>A. Superficial spreading</td>
</tr>
<tr>
<td>4</td>
<td>F</td>
<td>69</td>
<td>A. Right scapular region</td>
<td>A: Yes</td>
<td>A. Superficial spreading</td>
</tr>
<tr>
<td>5</td>
<td>F</td>
<td>59</td>
<td>A. Left arm</td>
<td>B: Yes</td>
<td>A. Superficial spreading</td>
</tr>
<tr>
<td>6</td>
<td>M</td>
<td>71</td>
<td>A. Left scapular region</td>
<td>A: Yes</td>
<td>A. Superficial spreading</td>
</tr>
<tr>
<td>7</td>
<td>M</td>
<td>67</td>
<td>A. Right arm</td>
<td>B: No</td>
<td>A. Superficial spreading</td>
</tr>
<tr>
<td>8</td>
<td>M</td>
<td>73</td>
<td>A. Right shoulder</td>
<td>A: No</td>
<td>A. Superficial spreading</td>
</tr>
</tbody>
</table>

Note: The table continues with similar entries for other patients.
Table 1 (Continued)

<table>
<thead>
<tr>
<th>Breslow</th>
<th>Ulceration</th>
<th>Staging</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. In situ B. In situ A. Absent</td>
<td>A. Absent B. Absent B. Absent</td>
<td>A. IA A. IB A. 0</td>
</tr>
</tbody>
</table>
In patient 1, angulated lines were the most remarkable dermoscopic structure of lesion A, whereas they were discretely present in lesion B, absent in lesion C and present in lesion D (Fig. 1A–D). The similarity was due to staging, histopathological type, and anatomical location.

Two lesions with different colors and dermoscopic structures were observed in patient 2. Clinically, lesion A was considered suspicious, whereas lesion B seemed benign. The divergence on dermoscopy was observed in patients 2, 3 and 7.

In patient 4, brown, structureless areas; shine white structures; hairpin vessels and irregular linear vessels (atypical vascular pattern); structureless dark brown area were present in lesion A and irregular dots and globules; atypical pigment network; ulceration were present in lesion B.

Patient 5 had lesion A with brown, structureless areas; white, structureless areas; irregular dots and globules; atypical pigment network; ulceration. Lesion B had irregular dots and globules; atypical pigment network; ulceration, whereas lesion C had irregular dots and globules; atypical pigment network; ulceration.

Patient 6 had lesion A with brown, structureless areas; irreguar dots and globules; atypical pigment network; ulceration. Lesion B had irregular dots and globules; atypical pigment network; ulceration, whereas lesion C had irregular dots and globules; atypical pigment network; ulceration.

Patient 7 had lesion A with brown, structureless areas; structureless brown area; pigment network; irregular globules; structureless brown area. Lesion B had irregular dots and globules; atypical pigment network; ulceration, whereas lesion C had irregular dots and globules; atypical pigment network; ulceration.

Patient 8 had lesion A with brown, structureless areas; structureless brown area; pigment network; irregular globules; structureless brown area. Lesion B had irregular dots and globules; atypical pigment network; ulceration, whereas lesion C had irregular dots and globules; atypical pigment network; ulceration.
Figure 1  Dermoscopy. (A-D), The four lesions of patient 1. (A), Right shoulder, lateral aspect. (B), Right shoulder, medial aspect. (C), Upper left scapular region. (D), Lower left scapular region. (E and F), The two lesions of patient 2. (E), Right forearm. (F), Left arm.

Figure 2  Dermoscopy. (A-B), The two lesions of patient 3. (A), Right arm. (B), Left zygomatic region. (C-D), The two lesions of patient 4. (C), Right scapular region. (D), Dorsum, left side. (E-F), The two lesions of patient 7. (E), Right arm. (F), Left trapezius.

Similar dermoscopic appearance, with common structures, such as angulated lines. However, there were differences, such as the presence of gray veil only in lesion A and the vascular pattern only in lesion B (Fig. 2C–D). Patient 5 showed similarity regarding the histopathological type, but divergence concerning the staging. Lesion A of patient 5 was the only one in the study that did not have the dermoscopy image available for review by the authors and so, the medical record description was used, which limited the value of the comparison.

Patient 6 had the same histopathological type and staging for the three lesions. An atypical pigment network and irregular striations were identified only in lesion A. A very evident blue-gray veil was evident in lesion A, more discreet in lesion C and absent in lesion B. Angulated lines were absent in lesion A and present in lesions B and C.

Patient 7 had two clinically different lesions. The histopathological type was the same, but with different staging. The dermoscopic criteria were completely different in the two lesions. Rosettes, seen in lesion A, are rarely
described in melanomas (Fig. 2E–F). Patient 8 had three melanomas with the same histopathological type and all of them were in situ. Similarities were observed on dermoscopy of the three lesions, such as regression structures.

The sensitivity of clinical examination for melanoma diagnosis has been estimated at 70% in some studies. In the present series, only 55% of the lesions were clinically suspicious. The limited sample size prevents the authors from drawing conclusions but raises the hypothesis, to be investigated, that patients with synchronous melanomas might have a greater chance of having lesions that are difficult to be diagnosed.

In the present study, a perfect dermoscopic similarity was not observed between synchronous melanomas in the same patient. Common characteristics were found in some cases. A similar aspect in the same patient could be a complicating factor in lesions considered to be of intermediate risk, as it could lead to misinterpreting the pattern as the patient nevus identity.

Although the present study describes one of the largest series of patients with synchronous melanomas, the sample size is still small, which does not allow the authors to extrapolate the data to other cases.

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Authors’ contributions

Daniel Coelho de Sá: Statistical analysis; approval of the final version of the manuscript; design and planning of the study; drafting and editing of the manuscript; collection, analysis, and interpretation of data; effective participation in research orientation; intellectual participation in the propaedeutic and/or therapeutic conduct of the studied cases; critical review of the literature; critical review of the manuscript.

Juliana Abreu Pinheiro: Statistical analysis; approval of the final version of the manuscript; design and planning of the study; drafting and editing of the manuscript; collection, analysis, and interpretation of data; critical review of the literature; critical review of the manuscript.

Emmanuel Pereira Benevides Magalhães: approval of the final version of the manuscript; collection, analysis, and interpretation of data; intellectual participation in the propaedeutic and/or therapeutic conduct of the studied cases; critical review of the manuscript.

Maria Araci de Andrade Pontes: Approval of the final version of the manuscript; design and planning of the study; effective participation in research orientation; critical review of the manuscript.

Conflicts of interest

None declared.

References


