Likelihood of finding melanoma when removing a Spitzoid-looking lesion in patients aged 12 years or older

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Background: Dermoscopy improves the recognition of melanoma and Spitz nevus but occasionally melanoma may exhibit a symmetric pattern mimicking Spitz nevus.

Objective: We sought to investigate the likelihood of finding melanoma when excising a symmetric Spitzoid-looking lesion in patients aged 12 years or older.

Methods: This study included patients aged 12 years or older with symmetric, Spitzoid-looking lesions that were diagnosed histopathologically as Spitz nevus or melanoma. Demographic, clinical, and dermoscopic variables were included in the analysis. We used χ^2 for nonparametric comparisons. Crude odds ratios and 95% confidence intervals were calculated by univariate logistic regression.

Results: Of 384 included lesions, 333 (86.7%) were histopathologically diagnosed as Spitz nevus and 51 (13.3%) as melanoma. The risk of melanoma significantly increased with increasing age, being 50% or higher after the age of 50 years.

Limitations: Limitations are retrospective design, exclusion of patients younger than 12 years, lack of detailed histopathologic data, and limited sample size.

Conclusion: Our results confirm the observation that melanoma may be dermoscopically indistinguishable from Spitz nevi, strongly suggesting that the only safe strategy not to miss melanoma is to excise all Spitzoid-looking lesions in patients aged 12 years or older. (J Am Acad Dermatol 2015;72:47-53.)

Key words: dermoscopy; diagnosis; management; melanoma; Reed nevus; Spitz nevus.

After the initial description of Spitz nevus, the clarification of its biologic nature has been a source of controversy among clinicians and pathologists for several decades.[1,2] Today, Spitzoid tumors are considered a heterogeneous family of lesions that share similar clinical and histopathologic features, but differ significantly concerning their biologic behavior.[3-5] On the 2 opposite edges, Spitz nevi (or spindled and epithelioid cell nevi) are associated with a completely benign physical course after sequential phases of fast growth, stabilization, and involution, whereas Spitzoid melanoma carries a prognosis not different from melanoma lacking Spitzoid features.[6-9]

Dermoscopy significantly improved the recognition of Spitz nevi, because they have been shown to exhibit a characteristic pattern of morphologic structures.[10-12] In detail, pigmented Spitz nevus

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(Reed nevus) is dermoscopically typified by a starburst pattern, which consists of a central area of homogenous blue to black pigmentation and peripheral, radially, and symmetrically distributed dark-brown to black streaks or pseudopods. Globular, homogenous, reticular, and multicomponent patterns can also be found in pigmented Spitz nevi, but they are less common and less specific.[12,13] Dermoscopy of nonpigmented Spitz nevus usually reveals symmetrically distributed dotted vessels combined with the so-called "inverse network" or "reticular depigmentation."[14-16] The latter criterion has been assessed as highly specific for the diagnosis of pigmented and nonpigmented Spitzoid lesions and corresponds, in the analytic terminology, to white crossing lines in between the vascular structures or the pigmented globules.[16]

From a morphologic point of view, a Spitzoid pattern by definition presupposes a symmetric arrangement of colors and structures. In contrast, asymmetrically distributed peripheral streaks, pseudopods, or globules are considered melanoma criteria, which are usually combined to each other forming the so-called "multicomponent pattern."[17-19] However, the rule of symmetry has its limitations. Previous studies have shown that about 20% of Spitz nevi may exhibit an asymmetric and/or multicomponent pattern and, on the opposite, a certain proportion of melanomas may exhibit a symmetric Spitzoid pattern.[11,12] The aim of this study was to investigate the likelihood of finding melanoma when excising a symmetric Spitzoid-looking lesion in patients aged 12 years or older.

CAPSULE SUMMARY

- Dermoscopy improves the recognition of melanoma and Spitz nevus but occasionally melanoma may exhibit a symmetric pattern mimicking Spitz nevus.
- The likelihood of finding melanoma when excising a symmetric Spitzoid-looking tumor in patients aged 12 years or older is 13.3%. The probability increases to 50% or higher after the age of 50 years.
- Our results highlight that the only safe strategy not to miss melanoma is to excise all Spitzoid-looking lesions in patients aged 12 years or older.

METHODS

This was a retrospective study conducted at 2 specialized units for skin cancer diagnosis and management in Modena and Reggio Emilia, Italy. The databases of our centers were screened for eligible patients with excised Spitzoid-looking lesions. Because the management of Spitzoid-looking lesions varies significantly among different centers, a clarification of our standard procedure is required: routinely in our units, typical Spitzoid-looking lesions in patients younger than 12 years of age enter regular follow-up until stabilization. Instead, the recognition of a Spitzoid-looking lesion in patients aged 12 years or older warrants excision, even if the dermoscopic morphology of the lesion is completely symmetric.

This study included only lesions fulfilling all of the 3 following criteria: (1) a clinical-dermoscopic diagnosis of Spitz nevus, (ie, typified either by a completely symmetric starburst or globular pattern, or by symmetrically distributed dotted vessels, combined or not with an inverse network); (2) patients aged 12 years or older—as mentioned above, Spitzoid-looking lesions in patients of this age group are routinely excised in our centers; and (3) a histopathologic diagnosis of Spitz nevus or melanoma. Based on the aforementioned inclusion criteria, Spitzoid lesions dermoscopically exhibiting an asymmetric distribution of colors or structures and lesions histopathologically diagnosed as atypical Spitz tumor were not included in the current study.

Patients' age and sex, along with the anatomic site of the tumor were recorded and 2 independent investigators evaluated the clinical and dermoscopic images of the included lesions. A third investigator was involved in case of disagreement. The clinical images were used to classify the tumors as flat/slightly elevated or nodular, and the dermoscopic ones to assess the presence of pigmentation. Lesions dermoscopically displaying pigmentation on less than 10% of their surface were classified as nonpigmented.

Statistical analysis

Outcome dichotomous variable was set to definite histopathologic diagnosis of melanoma or Spitz nevus. Demographic, clinical, and dermoscopic variables were included in the analysis. Colinearity was assessed via a correlation matrix, using Spearman Rho correlation coefficient. Nonparametric Mann-Whitney U test was used to compare means. Pearson χ^2 was used for nonparametric cross-tabulation comparisons. Relative risks were calculated for dichotomous variables. Crude odds ratios and corresponding 95% confidence intervals were calculated by univariate logistic regression.