SPITZOID MELANOMA

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Spitzoid melanoma is one of the most difficult to diagnose lesions in dermatopathology because it shares many histopathologic features with Spitz nevus. Experience has shown that there is a spectrum of Spitzoid melanocytic proliferations that includes typical Spitz nevus, dysplastic Spitz nevus, Spitz nevus with atypia, melanoma evolving in a Spitz nevus and de novo Spitzoid melanoma. Spitzoid melanomas occur in children and also in adults. Clinically, Spitzoid melanomas present as changing papular or nodular lesions, pigmented or amelanotic and measuring more than 1 cm in diameter.

Histopathologically de novo spitzoid melanomas are characterized by asymmetry and poor circumscription, with melanocytes above the basal layer and in the adnexa, lack of maturation, irregular confluent nests, proliferation of large epithelioid and spindle shaped melanocytes with large, pleomorphic, hyperchromatic nuclei and prominent basophilic to eosinophilic nucleoli, presence of mitoses in the dermis (>3 mitoses/HPF), including the base of the lesion, atypical mitoses, the presence of regression, ulceration, vascular invasion and neural infiltration and a band-like inflammatory infiltrate.

Spitzoid melanoma can evolved in a pre-existing Spitz nevus, which can have dysplastic changes. The areas of Spitz nevus show melanocytes with more uniform nuclei with basophilic nucleoli, orderly nests, areas of dermal maturation, presence of eosinophilic globules at the suprapapillary plates, fewer melanocytes above the basal layer and confined to the lower spinous layer, fewer mitoses in the epidermis and in the papillary dermis, and no atypical mitoses.

The prognosis of Spitzoid melanoma in adults is the same as that of other melanoma variants with equal thickness. Although Spitzoid melanomas are rare in children, a review of the reported cases reveals that the prognosis varies with the age of the patient. For example, prepubescent patients with Spitzoid melanomas fare better than adults, even when they have local metastases. Pol-Rodríguez et al., in a retrospective
review of the literature from 1949 to 2006, found that only 82 cases of Spitzoid melanomas with regional and/or widespread metastases occurred in children 17 years of age and younger. The 5-year survival rate for patients between 0 and 10 years of age was 88%; on the other hand, it was 49% for those between 11 and 17.

It is not always possible to diagnose a case as Spitz nevus or as Spitzoid melanoma with absolute certainty. This is especially true in young patients. Therefore, several studies support the use of sentinel lymph node biopsy in controversial or difficult atypical melanocytic proliferations, including atypical Spitz nevi, in which malignant melanoma cannot be ruled out. These atypical melanocytic proliferations usually measure 1 mm. or more in thickness.

Because of the overlap of clinical and histologic features between Spitz nevus and Spitzoid melanoma, there have been many attempts to differentiate between these two entities using immunohistochemical and molecular diagnostic studies, including comparative genomic hybridization. Palmedo reported mutations of the BRAF gene in 2 out of 6 Spitzoid melanomas. Initially, no mutations of the BRAF gene were detected in Spitz nevus. More recently, Fullen et al. reported BRAF mutation in 21% of Spitz nevi and in 13% of Spitzoid melanomas.

REFERENCES