A case of angiomatoid Spitz Nevus in the elderly, with clinical and dermoscopic features

Gelsomina Luongo,[1] Noè De Stefano,[1] Antonio Perasole,[2] Cesare Massone,[3] Giovanna Galdo[4]

[1]Pathology Unit, AORN S.G. Moscati, Avellino; [2]Pathology Consultant, Rete Diagnostica Italiana - Cerba HealthCare, Limena Padova; [3]Dermatology Unit and Scientific Directorate, Galliera Hospital, Genova; [4]Dermatology Unit, AORN S.G. Moscati, Avellino, Italy

Telepathology meeting

This case was presented at the on-line telepathology meeting on the ADOI platform held on October 19th 2022 by Dr Luongo.

Surgical pathologists attending the meeting: 17.

Surgical pathologists that reviewed the slides before the meeting: 11.

Clinical data

We report a case of 62-year-old woman with an atypical, pigmented skin lesion on her right back thigh; she reported its onset since about ten months with a progressive increase in size (Figure 1). The lesion was 0.8x0.4 cm in extension. Polarized contact dermoscopy showed a multicomponent pattern with asymmetry and polychromasia. Particularly, we observed many small structureless light brown areas through almost the entire lesion, a pigment network (focally atypical) mainly at the periphery, small dots and dotted vessels (Figure 2).

A complete excision of the lesion was performed.

Virtual microscope

Digital slides are available at: https://www.dropbox.com/sh/xm47a34r4stq26a/AACpPKgmYKlycFG5ZCC5gBSSa/22-4137?dl=0&subfolder_nav_tracking=1

Histopathology

Scanning magnification showed a compound, sharply circumscribed, pigmented, symmetrical lesion (Figure 3).

At the dermoepidermal junction we observed nests of spindle, or oval (epithelioid) cells evenly distributed along the junction in a lentiginous pattern over an elongated rete ridge with hyperpigmented basal keratinocytes (Figure 4).

In the papillary dermis and in the superficial reticular dermis were present sparse, epithelioid and spindle melanocytes, scattered singly or in small nests, among thickened and hyalinized collagen bundles. Nuclei of melanocytes were oval and centrally positioned, the nuclear membrane was thin and regular with indistinct cell contours and a blue-staining nucleolus was most often present (Figure 5).

Prominent vessels were noted and consisted of small thick-walled capillary vessels that spread throughout the neoplasm (Figure 5).

Melanophages in the papillary dermis were also present (Figure 6).

Mitosis, severe pleomorphism, necrosis and pagetoid spread were absent.

Because of the clinical late onset of the lesion with atypical dermoscopic features and the peculiar histopathology, a second opinion to the ADOI telelepathology meeting was requested.

Immunohistochemistry

Stainings disclosed positivity for Melan A, S-100 (in the intraepidermal and dermic component) and

HMB45, that however was negative in the deeper part of the lesion (Figure 7).

Ki-67 index was low.

Molecular biology

Not performed.

Premeeting survey

Virtual slides were reviewed by 11 surgical pathologists before the meeting. The lesion was interpreted as a common acquired nevus (3 pathologists), dermal nevus (1 pathologist), Spitz nevus (5 pathologists), superficial spreading melanoma (1 pathologist), desmoplastic melanoma (1 pathologist) (Figure 8).

Telepathology meeting real-time survey

This case was discussed by 17 surgical pathologists with real time telepathology and after the collegial discussion the unanimous diagnosis was of Angiomatoid Spitz Nevus.

The complexity of this case was defined high by 6 pathologists, average by 9 and low by 2.

The level of confidence was reported as high by 3 pathologists, average 11 and low by 3 (Figure 8).

Discussion

Angiomatoid Spitz nevus (ASN) is a variant of desmoplatic Spitz nevus described by Diaz-Cascajo in 2000 that may mimic a vascular tumor.[1] In fact, ASN shares some clinical and histopathologic features with desmoplastic SN. Clinically, both lesions present as an asymptomatic papule often located on the extremities of young adults (mainly women) and on histopathology they both show low cellular density, detection of singles melanocytes over nests, and fibrous stroma forming thick collagen bundles.[2] The prominent vascular density in the upper part of the dermis, resulted by neoangiogenesis, is typical of ASN,[3] while desmoplastic SN shows more prominent vascular proliferation in the deep dermis. In addition, in

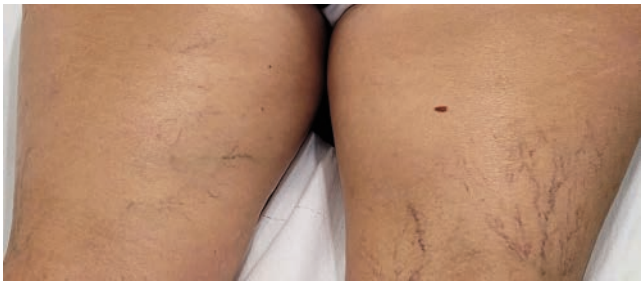

Figure 1. Pigmented skin lesion pn the back of the right thigh.

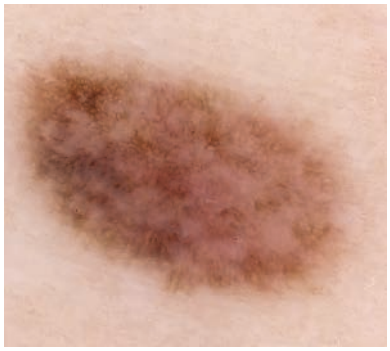

Figure 2. Dermoscopy showed a multicomponent pattern with asymmetry and polychromasia, many small structureless light brown areas through almost the entire lesion, a pigment network (focally atypical) mainly at the periphery, small dots and dotted vessels.

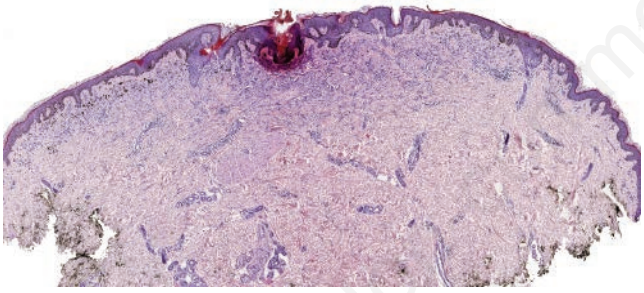

Figure 3. Scanning magnification showed a compound, sharply circumscribed, pigmented, symmetrical lesion (HE, 20x).

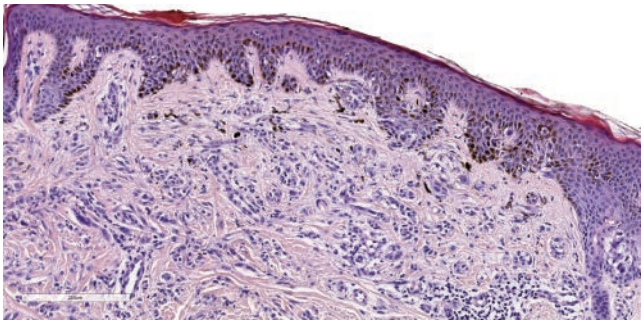

Figure 4. At the dermoepidermal junction we observed nests of spindle, or oval (epithelioid) cells evenly distributed along the junction in a lentiginous pattern over an elongated rete ridge with hyperpigmented basal keratinocytes (HE, 200x).

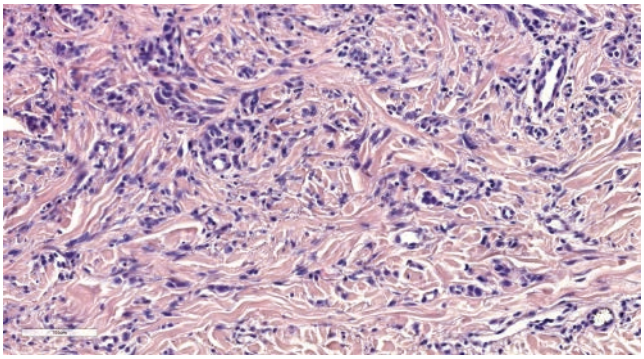

Figure 5. In the papillary dermis and in the superficial reticular dermis were present sparse, epithelioid and spindle melanocytes, scattered singly or in small nests, among thickened and hyalinized collagen bundles. Prominent vessels were noted and consisted of small thick-walled capillary vessels that spread throughout the neoplasm (HE, 400x).

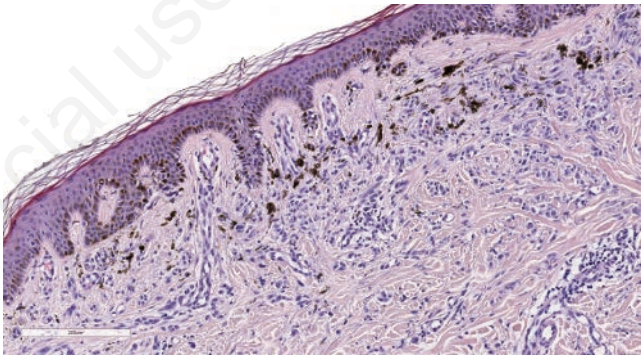

Figure 6. Melanophages in the papillary dermis were also present (HE, 200x).

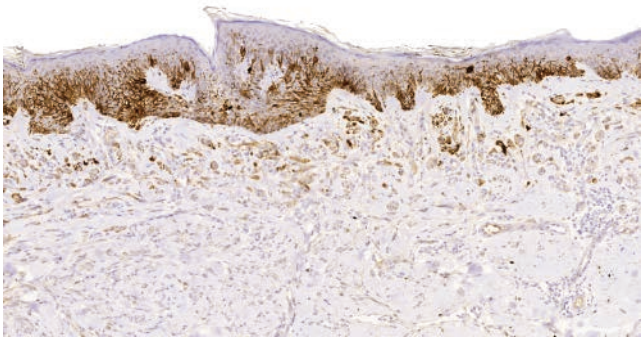

Figure 7. HMB45 staining (100x).

ASN the fibrous stroma contains numerous small and large blood vessels surrounded by plump endothelial cells. Besides vascular tumors, the other main differential diagnosis is regressed malignant melanoma. Our case presented: i) spindle and epithelioid nevus cells with spitzoid features; ii) a significant vascular component with blood vessels in the papillary dermis and in the superficial reticular dermis; iii) scar-like fibrous stroma with interspersed melanocytes, in which collagen bundles had a hyalinized appearance.

Dermoscopic features of ASN have been reported only in few cases and deviate from conventional dermoscopic features of SN. Moscarella *et al*. described a series of five cases of ASN either pigmented, hypopigmented and amelanotic characterized by different dermoscopic patterns but all showing dotted vessels.[2] Cabrera *et al.* described a case of ASN with peripheral atypical pigment network similar to our case.[6]

ASN is a rare variant of SN that usually presents in young women and only very rarely over 60, like in our patients. Dermatologists and dermatopathologists should be aware of this eventuality, in order not to overdiagnosis melanoma. A second opinion in such cases in recommended.

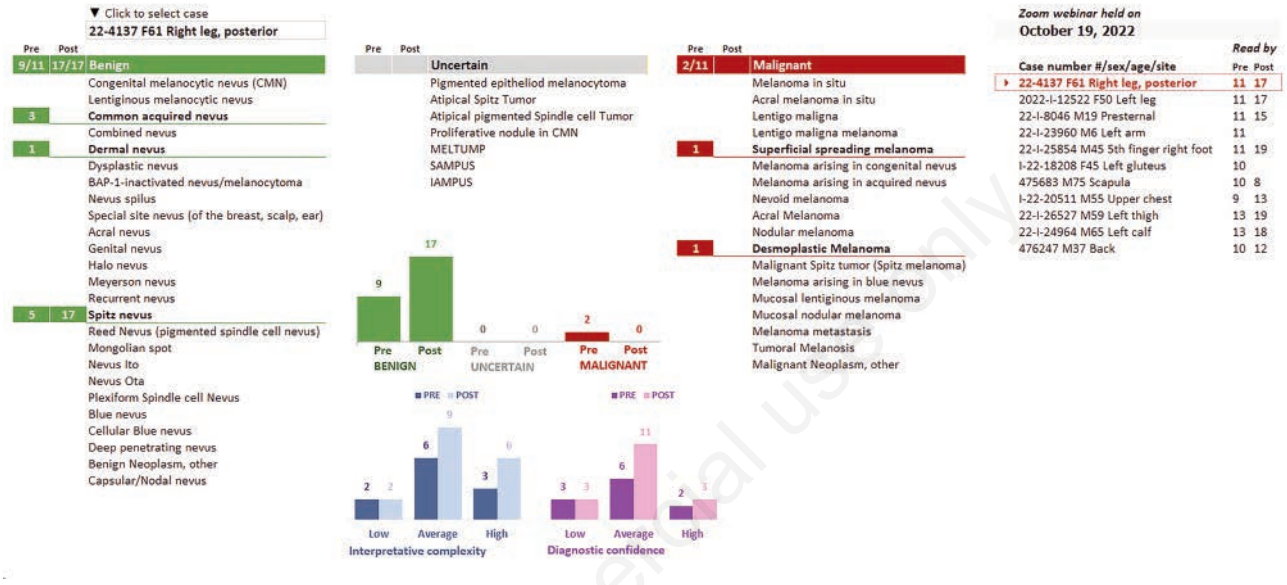

Figure 8. Results of the real time telepathology meeting on the ADOI platform.

References

1. Diaz-Cascajo C, Borghi S, Weyers W. Angiomatoid Spitz nevus: a distinct variant of desmoplastic spitz nevus with prominent vasculature. Am J Dermatopathol 2000;22:135-9.
2. Moscarella E, Al Jalbout S, Piana S, et al. The stars within the melanocytic garden: unusual variants of Spitz naevi. Case Reports Br J Dermatol 2015;172:1045-51.
3. McKee PH, Calonje E, Granter SR. Spitz nevus, atypical spitz nevus and spitzoid melanoma. In: McKee PH, ed. Pathology of the skin. 3rd ed. London: Elsevier Mosby; 2005. pp. 1268-1275.
4. Tomizawa K. Desmoplastic spitz nevus showing vascular proliferation more prominently in the deep portion. Am J Dermatopathol 2002;24:184-5.
5. Tetzlaff MT, Xu X, Elder DE, Elenitsas R. Angiomatoid Spitz nevus: a clinicopathological study of six cases and a review of the literature. J Cutan Pathol 2009;36:471-6.
6. Cabrera R, Daza F, Tom D, et al. Dermatoscopy of an angiomatoid spitz nevus. Am J Dermatopathol 2011;33:628-30.