A scary nipple

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Pathological meeting

This case was presented at the on-line meeting on the ADOI platform held on Dicem ber 15th 2021 by Dr Boggio.

Surgical pathologists attending the meeting: 62
Eleven surgical pathologists reviewed the slides before the meeting: 20 during the meeting.

Clinical data

A 36-year-old woman complained of the recent onset of an atypical, pigmented lesion on the left nipple. The patient, breast-feeding at the time of the biopsy, reported the sudden appearance of an irregular pigmentation soon after the application of silver nursing cups (Figure 1).

The lesion was 7 mm in extension. Dermoscopy showed an asymmetric and polychromatic lesion composed by a homogeneous black structureless area, focally a blue grey area, small irregularly black to brown pigmented areas and few dots. (Figure 2).

A preliminary incisional biopsy was performed to confirm the melanocytic nature and to exclude silver salt skin deposits. Subsequently complete excision of the lesion was performed.

Histopathology

Virtual slides were reviewed by 11 surgical pathologists before the meeting (Table 1). The lesion was interpreted as a special site nevus (9), lentiginous melanocytic nevus (1), recurrent nevus (1).

Meeting real-time survey was performed by 20 surgical pathologists and the diagnoses were lentiginous melanocytic nevus (1), common acquired nevus (5), combined nevus (1) and special site nevus (13).

Discussion

Areolar melanosis represents a benign lesion similar to the same condition described in the genital and mucosal areas.
This particularly rare lesion is frequently observed among pregnant women as a pregnancy-induced phenomenon, albeit reported in only a handful of reports. Histologically, areolar melanosis is characterized by acanthosis, hyperpigmentation of basal layer with occasional melanocytes with evident dendritic processes and numerous melanophages in papillary dermis.

In this particular case, the above-mentioned microscopic features were also associated with a small symmetrical compound nevus.

The intraepidermal component was mainly made up of lentiginous melanocytes devoid of pagetoid upward spread.

The occasional cytological atypia and moderate fibroplasia in papillary dermis were coherent with site-specific modifications occurring in areolar nevi.

In this particular anatomical setting these features are frequently described together with occasional intraepidermal melanocytes above the basal layer. All these features may be related to estrogenic stimulation, and should not lead to an overdiagnosis of melanoma.

The histological diameter of this melanocytic lesion was 2 mm and contrasted with its clinical appearance which was of a broader and irregular macule 7 mm wide.

The final diagnosis was of a small melanocytic nevus arising in the context of areolar melanosis.

Clinical and dermoscopic features of this condition are frequently worrisome and pose a diagnostic challenge on their own. Areolar melanosis broadens the spectrum of atypical, pigmented lesions occurring in genital and extragenital sites and pose a challenge both to the clinician and to the pathologist. Due to its atypical clinical and dermoscopic presentation, a histological confirmation is always required in order to rule out malignant melanoma.
Challenging Melanocytic Lesions

Figure 1. Clinical presentation.

Figure 2. Dermoscopic features showing atypical pigment network.

Figure 3. Acanthosis and pigmentation of basal layer without significant increment of melanocytes.

Figure 4. A) Compound nevus with junctional elements in a lentiginous fashion and small nests. B) HMB45 immunostaining.
Table 1. Results of the online discussion on the lesion.

| Diagnosis | Pre | Post |
|-----------|-----|------|
| Benign    | 11/11 | 20/20 |
| Uncertain | 1/1    | 1/1   |
| Malignant | 1     | 1/3   |

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