AXILLARY NEVUS WITH SITE RELATED ATYPIAS – CASE REPORT

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Abstract: *Melanocytic nevi are benign tumors of major importance in relation with malignant melanoma. Recently was recognized a group of melanocytic nevi that may simulate dysplastic nevi as well as melanoma (nevi of special sites). Some of these special sites include the flexural locations such axilla, that are characterized by nested pattern with great variability of the size of the junctional nests, as well as origin of the nests at the tips of the rete ridges and from the inter-rete ridges regions. The cytologic atypia and stromal alterations seem to be absent from the flexural nevi. We present the case of an axillary nevus surgically removed from a 27 years old female, measuring 0,6cm in greatest dimension that on first examination was considered to be an atypical melanocytic proliferation but after further analysis the final diagnosis was of compound melanocytic nevus of site related atypias.*

Cuvinte cheie: *nev, axilă, atipie, displazic, melanom*

Rezumat: *Nevii melanocitari sunt tumori benigne de importanță majoră în relație cu melanomul. Recent a fost recunoscut un grup de nevi melanocitari care pot simula atât un nev displazic, cât și un melanom (nevi cu localizări speciale). Unele dintre aceste localizări includ zonele flexurale, precum axila, care sunt caracterizați de un pattern în cuiburi, cu variații mari ale dimensiunilor cuiburilor nevice joncționale, cât și de originea acestor cuiburi în vârful crestelor papilare sau a spațiului interpapilar. Atipiile citologice și alterările stromale sunt de obicei absente la nevii cu localizare flexurală. În acest articol prezentăm cazul unui nev axilar îndepărtat chirurgical de la o femeie în vârstă de 27 de ani, cu dimensiunea maximă de 0,6 cm și care, la examinarea inițială a fost considerat drept o proliferare melanocitară atipică, dar în urma analizelor ulterioare, diagnosticul final a fost de nev melanocitar compus cu atipii legate de localizare.*

INTRODUCTION

Recently, there was recognized a growing group of nevi that may simulate dysplastic nevi as well as melanoma. The atypical features of these nevi are related to their location and are predominantly found on the acral sites, genital area, breast, flexural sites (axilla, inguinal, etc), and ear or scalp.(1) Those architectural features overlap with malignant melanoma or dysplastic nevus leading often to overdiagnose. In the opinion of DE Elder (Modern Pathology, 2006) "it is just as important to recognize truly dysplastic nevi as such, as it is to avoid overdiagnosis of nevi of special sites as dysplastic nevi or as melanoma."(1) Some of these anatomic special sites offer several physical explanations for the atypical for the atypical features of the nevi located here, such as the thick stratum corneum and dermatoglyphs of palms and soles.(2) The axilla is part of the flexural sites as described by most authors, along with umbilical area, inguinal, antecubital and popliteal fossae, pubis, scrota, perineum and perianal location and depending on the shape of the body, the folds of the neck and abdomen. Some authors suggest the possibility of an embryologic origin or hormonal influences for the nevi with atypical features in these sites.(2,3)

The histological pattern most often observed in these locations is papillomatosis, characterized by melanocytic nests of variable sizes, along the rete ridges. Some cases associate mild cytologic atypias that is always restricted to the junctional and papillary dermis component. Another pattern, less frequent is very similar to the pattern of the breast nevi, with irregularities of the melanocytic nests along the dermo-epidermal junction and with uniform cytologic atypias.(4,5) These lesions may present atypias in the dermis, thus necessitating more care in excluding melanoma. Rongioletti et al. performed a study on flexural nevi (40 lesions, 13 from the axilla) and they identified 22 lesions (55.5%) with cytological atypias and was suggested a possible mechanical etiology.(6)

CASE STUDY

We present the case of a 27 years old female that with an elevated 0,6cm lesion with dark brown color and irregular margins, situated in the right axilla. This lesion was surgically removed and sent to the Pathology Department of Clinical Emergency County Hospital of Constanta for further investigation. In the Pathology Department the specimen was first examined on frozen section and afterwards the tissue was processed in paraffin and examined with usual histology stains such as hematoxylin-eosin and van-Gieson. No immunohstochemical stains were necessary for establishing the diagnosis.

The frozen section examination reveals an atypical melanocytary proliferation in the dermo-epidermal junction and superficial dermis. The cytologic atypias are difficult to assess, thus for the final and certain diagnosis the paraffin sections are awaited. The paraffin sections examination showed a papilaomatous lesion, relatively simetrical,

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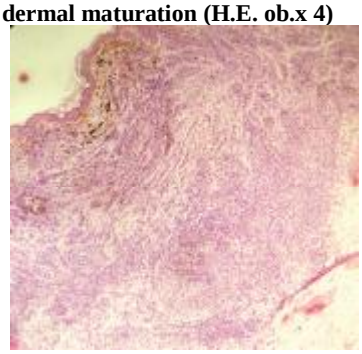
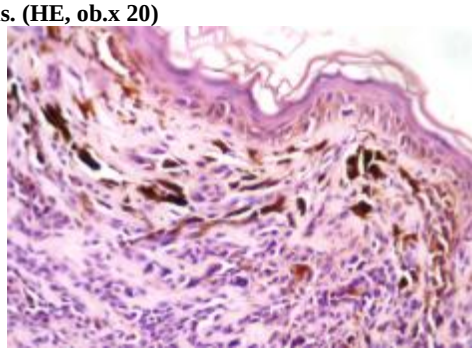
composed of melanocytic nests of various sizes and a tendency to confluate. Those nests are present in the dermo-epidermal junction and in the dermis (figure no. 1).

Figure no. 1. Axillary compound nevus with nested pattern. The melanocytic nests tend to confluate and also there is present the dermal maturation (H.E. ob.x 4)



Some melanocytes have mild, uniform atypias in the junctional component, with slight nuclear enlargement but normal nucleo/cytoplasmic ratio (figure no. 2). No mitotic activity was encountered. There can also be observed a mild lymphocytic response. The van Gieson stains could reveal the absence of the fibroplasias of the papillary dermis. The final diagnosis was thus of melanocytic nevus with site related atypias.

Figure no. 2. Axillary melanocytic nevi with mild cytologic atypias. (HE, ob.x 20)



When confronting with a diagnosis of "special site nevus", we should consider however that those lesions could be real dysplastic nevi or even melanoma, thus they should be given special attention.(1,7) Some authors consider that in certain cases it is impossible to be interpreted for sure and then there can be given a descriptive diagnosis. There can be used the diagnosis of "superficial atypical melanocytic proliferation of uncertain significance" for lesions with epidermal proliferation and/or few cells in the superficial dermis, and the diagnosis of "melanocytic tumor of uncertain malignant potential", for lesions with an important dermal component.(7,8,9)

In 2004, Rongioletii et all. performed an interinstitutional study on 101 breast nevi, assessing for every lesion 10 histological parameters (asymmetry, absence of lateral demarcation of melanocytes, lentiginous proliferation, nested and dishesive pattern, intraepidermal melanocytes above the basal layer, involvement of the hair follicle, absence of maturation of dermal melanocytes, melanocytic atypia, fibroplasias of the papillary dermis and lymphocytic dermal infiltrate) and noted each parameter with 2 if present and 1 if absent or impossible to evaluate.(5)

According to this method of evaluation the lesion we studied gathered a score of 13, because of the presence of nested and dishesive pattern, the mild cytological atypias and the lymphocytic infiltrate. The presence only of three of the ten histological parameters is in favor of a nevus with site related atypia and not of a dysplastic nevus.

In 2010 David E Elder published e review (Dysplastic nevi: an update, *Histopathology 2010, 56, 112-120*), presenting a number of histological features that may be helpful in distinguishing melanoma, dysplastic nevi and common nevi. These features include: size (that should remain under 0,4cm for no concerns); symmetry (good in common and even dysplastic nevi and poor in melanoma); the reaction of the epidermis (normal in common nevus and uniformly elongated rete ridges in dysplastic nevus); the lesional cells are mixed (epithelioid and nevoid) in dysplastic nevus and nevoid in common nevus; the nesting pattern is predominant in common nevi and dysplastic nevus but variable in melanoma; the nests are discrete in common nevus but in dysplastic nevus they form bridges between adjacent rete ridges, and are coalescent in melanoma; the lentiginous pattern is discontinuous in both common and dysplastic nevus and continuous in melanoma; the pagetoid pattern is minimal in common nevus and focal in dysplastic ones; the nuclear atypias are mild and minimal in common nevus and random and mild-moderate in dysplastic nevi; mitoses are absent in common nevi and rare or usually absent in dysplastic nevi, in contrast to melanoma that has mitoses in 1/3 of cases; the dermal cells mature as well in common nevi and dysplastic nevi; the dermal fibroplasia is minimal in common nevi, concentric in dysplastic nevi and diffuse in melanoma; the lymphocytes are very few in common acquired nevi and patchy, perivascular in dysplastic nevi or band-like, lichenoid in melanoma; regression is absent in common nevi and usually rare in dysplastic ones.

In order to consider a melanocytic lesion common dysplatic or melanoma, it must bring together most or all of the histology features presented above.(7,8,9) In the present case the examined lesion was relatively simetrical, the size of 0,6cm being in favor of a dysplastic nevus. The epidermis of our lesion is normal therefore no host reaction from the epidermis. The lesional cells are nevoid, and have a predominantly nesting patter, with small and evenly sized nests. The lentiginous pattern is discontinuous and the pagetoid pattern is absent. Those last criteria are all in favor of a common nevus. The nuclear atypias are mild and the mitoses are absent. The dermal nevus cell mature, the dermal fibroplasias is absent and there was present a minimal lymphocytic infiltrate. Also there was no regression phenomen. Even though this melanocytic lesion has some characters that may indicate a dysplastic nevus, most of his histological features are that of a common nevus, therefore we decided over the diagnosis of melanocytic nevus with site related atypias.

CONCLUSIONS

The importance of a carefull examination of nevi with site related atypias derives from the danger of overdiagnosing as well as underdiagnosing of a malignant melanoma. If not interpreted as melanoma, they may be considered dysplastic nevi, even though they have a completely benign behavior with no prognostic significance. They tend to be isolated phenomena, not associated with melanoma risk. At the same time, in these special sites there can be present dysplastic nevi as well as melanoma.

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