Kissing atypical melanocytic nevus of genital type of the labia majora in a young Bulgarian patient. What's the best approach?

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Abstract

Melanocytic lesions, especially in delicate anatomical locations such as the vulva, penis, mons pubis *etc*, are challenging to diagnose. The patients may delay physical examinations due to anxiety or discomfort from the location of the lesion. In terms of therapy options, the surgical approach is not always the preferred one, but it is the one that could lead to a definitive solution to the problem. A limited number of studies do not exclude that atypical nevi of genital type could be considered as melanoma precursors. Single case reports have identified atypical genital nevi of the labia majora as a risk factor for genital melanoma development. Lesions that occupy a larger area than the labia majora and extend into the areas around them are particularly problematic, because the result of a single biopsy could be misleading. Therefore, careful physical examinations are mandatory. Mechanical irritation in the genital area, and in particular in the labia majora region, is an additional reason for choosing the surgical-reconstructive therapeutic option. We present a 13-year-old female with a progressive *kissing* divided nevus, located in the area of the vulva and labia majora, extending to the mucosa. A biopsy was taken in order to rule out malignancy. Immunohistochemistry was performed with specific melanocyte markers S-100, HMB-45 and SOX confirming the benign origin of the lesion. A diagnosis of atypical melanocytic nevus of genital type was made. For prevention a surgical excision was advised but later on declined by the patient's parents. Further close observation of the lesion was recommended.

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Key words: kissing nevus, divided nevus, genital area, atypical melanocytic nevus of the genital type.

Contributions: the authors contributed equally.

Conflict of interest: the authors declare no potential conflict of interest.

Funding: none.

Ethical approval and consent to participate: written informed consent was obtained from the patient.

Availability of data and material: data and materials are available by the authors.

Received for publication: 15 January 2023.
Accepted for publication: 25 February 2023.
Early view: 2 March 2023.

Licensee PAGEPress, Italy
Dermatology Reports 2023; 15:9667
doi:10.4081/dr.2023.9667

Introduction

Kissing atypical nevus is an interesting and rare type of melanocytic nevus.[1]

The nevus was first described on the eyelids.[2] Although melanocytic lesions located in the genital region are uncommon, they can sometimes develop on unusual areas such as the penis,[1,2] mons pubis and the perineum.[3] More frequent location is the vulva.[3]

These lesions can be melanocytic nevi, dysplastic nevi, atypical melanocytic nevi of the genital type (AMNGT), lentigo maligna or melanomas.[3] Therefore, it is extremely important to differentiate the benign form from the dysplastic nevus and melanoma.[3,4]

Therapeutic options include complete surgical excision of the lesion with/without skin graft, laser therapy and regular skin examinations.[5]

Case Report

A 13-year-old female patient reported to the dermatology department with primary complaints of a genital pigmented lesion. The lesion was found during a gynecological visit.

The physical examination showed a 4-5 mm (Figure 1a) distinctive pigmented lesion with irregular borders located on the vulva, on the left lower parts of the labia majora (Figure 1). A small punch biopsy was taken.

The histology (Figure 2a,b) revealed a pigmented lesion forming small oval well-defined nests and linear pigment cells located on the epidermal-dermal border. Two nests penetrate the epidermis to the granular layer. Scattered pigment cells and also small nests with formation of rough melanin pigment are visible in the dermis, becoming depleted in the subsequent sections. In the dermis fibrosis was not established. Weak inflammatory infiltration with focal lentiginous proliferation. The nevus was associated

with papillomatous epithelial proliferation.

The immunohistochemical study with specific melanocyte markers S-100 (Figure 2c), HMB-45 (Figure 3a,b) and SOX confirmed the pigmented nature of the lesion. Pigment cells at the epidermis/dermis border and in nests within the epidermis show highly proliferative activity (Ki-67). A diagnosis of AMNGT was made.

Surgical removal in terms of prevention was recommended. The patient' parents declined and further close observation in the department was advised.

Discussion

The first case of an eyelid divided nevus was described in 1908 by Van Michael Paul in which the lesion appears as one when the eyelid is closed and as separate when open.[5] Rarely the pigmented lesion can develop on unusual parts of the body – fingers and penis.[5,6]

The term kissing nevus or divided nevus was given by Fuchs in 1919.[7] The nevus is described as a congenital melanocytic nevus located in parts of the human body that are separating during the embryogenesis.[6] In the early weeks of human development the melanoblasts are migrating to the epidermis, where they start to differentiate into melanocytes.[8] After several months, the different parts of the human body start to develop completely resulting in congenital melanocytic nevus which can divide into two.[8] Authough Kono *et al*.[9] suggested the possible embryological hypothesis it is still unclear if the melanoblasts are migrating to the lesion site before or after the separation.[5,6,9]

The physical examination shows two very distinctive symmetrical pigmented lesions varying in color from brown to black.[10] Dermatoscopy can be useful in terms of lesion determination and further avoidance of an unnecessary surgical removal.[10] Typically, the lesions are reported as intradermal or compound melanocytic nevi.[10,11]

Differential diagnosis of the divided nevus should be done with blue genital nevus,[12] lentigines,[13] bowenoid papulosis,[14] dysplastic nevi,[15] and malignant melanoma.[16]

Pigmented lesions of the vulva are observed in 10-12% of all white females.[13] Often the atypical genital nevus can be located in the vulva of young women.[17] Despite the sensitive anatomical site, the formations have benign clinical features.[17] In some cases the condition can give local recurrences after incomplete surgical excision but it's very uncommon.[17,18]

Rare cases of malignant melanoma of the penis are reported.[10] It is extremely important to differentiate the benign lesion from a melanoma to preserve the delicate anatomical location.[17,18] Treatment options for kissing nevus should also consider the aesthetic outcome.[11] Surgical excision followed by skin grafting may be an option to consider if a surgical approach is required.[19]

Although the benign blue nevi in this region are rare, they are suspected for melanoma and require periodic check-ups.[20] These types of lesions remain unchanged and do not require surgical treatment.[12]

Genital lentigines and melanocytic nevi are benign pigmented lesions which can be misdiagnosed as malignant melanoma.[21]

Surgical excision of benign formations is not required nor needed when the histological picture is clear.[13] Yearly gynecological and dermatological examinations are advised in order to follow the possible progression of the lesion.[13]

Bowenoid papulosis is a very distinguished pigmented lesion in the ano-genital area that is often associated with human papilloma virus.[14] The lesion is a type of squamous cell carcinoma,[14] but due to the presented pigmentation it can often mislead the clinicians. Treatment options can be local excision, laser therapy, cryosurgery, topical imiquimod 5% cream and others.[22]

Atypical (dysplastic) nevi have been considered by some authors a precursor for malignant melanoma.[15] An estimated risk for melanoma in patients with dysplastic nevi is around 6% but in those with family history of dysplastic nevi the risk is more than 50%.[23] In case of an atypical nevus excision may be recommend-

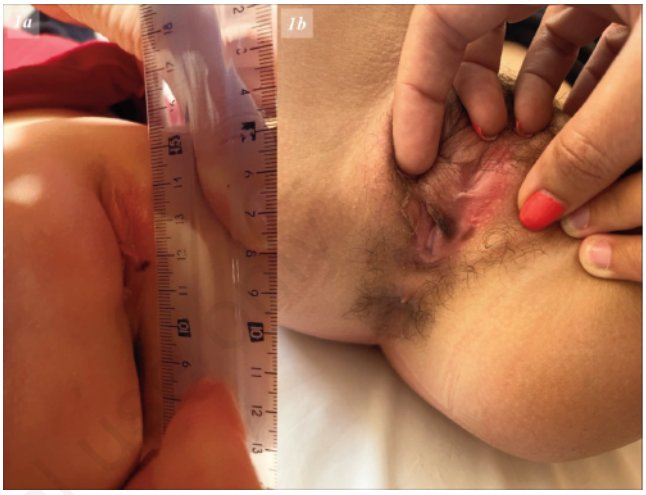

Figure 1. 4-5 mm distinctive pigmented lesion (a) with irregular borders located on the vulva, on the left lower parts of the labia majora (b).

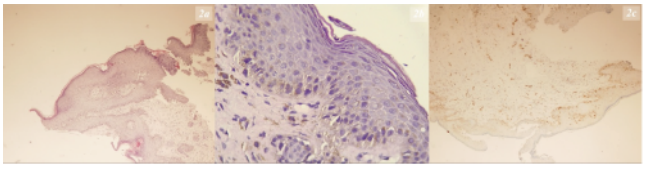

Figure 2. Histological findings, verified by HMB45 and S100 stain; a) H&E x20, orth-hyperkeratosis, regular acanthosis, lentiginous melanocytic proliferation in basal portion of the epithelium, perfectly verified by HMB45 stain (HMB45 x20) and S100 (S100 x20); b) H&E x400, lentiginous melanocytic proliferation in the basal portion of the epithelium, mild angiofibroplasia in the papillary dermis with plenty of melanophages spread interstitially; c) S100 x20 stain.

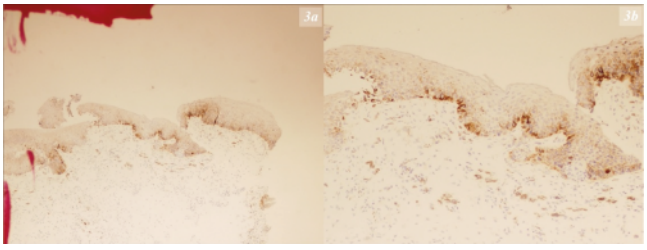

Figure 3. Histology findings stained by HMB45: a) HMB45 x20, large epithelioid melanocytes, regularly proliferated in the lower portion of the epidermis, demonstrated by HMB45 stain; b) HMB45 x100, large epithelioid melanocytes, regularly proliferated in the lower portion of the epidermis, demonstrated by HMB45 stain.

ed.[15] Routine screening and yearly full-skin examination are important for the early diagnosis and prevention.[23]

Despite being benign the divided nevus can in some rare occasions turn into melanoma.[24] A kissing nevus on the penis turned out in a short period of time (changes in the lesion occurring within 4 months) into a *kissing melanoma.*[24]

Genital melanomas are established as the second most commonly reported cancer of the female external genitalia.[16,25]

A study of 16 cases of malignant melanomas of the vulva showed that 10 of the cases were acral lentiginous melanomas, 3 nodular melanomas and 3 superficial spreading melanomas.[26] The type is important in terms of prognosis and treatment options.[26] Vulvar superficial spreading melanoma was found to have a better prognosis.[27,28] Lymph node examination should be done in all patients with vulvar and vaginal melanoma. Patients with positive lymph nodes can undergo an additional adjuvant therapy.[28]

Conclusions

We report a 13-year-old female patient with a kissing nevus of the external female genitalia. A biopsy was taken in order to rule out malignancy and unnecessary surgical excision. The histological findings documented a benign pigmented lesion and yearly clinical examinations were recommended.

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