OLGU SUNUMU CASE REPORT

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Dermatofibroma Mimicking Melanoma in an 11-Year-Old Girl

On Bir Yaşındaki Kızda Melanomu Taklit Eden Dermatofibrom

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ABSTRACT Dermatofibromas (DF) are common benign skin lesions that commonly affect female adults. They can be easily diagnosed in most cases. However, in some cases, their clinical and dermoscopical appearance can resemble other lesions, such as dysplastic nevi, melanomas, and other skin tumors. Here, we report a case of pigmented DF mimicking melanoma on the right arm of an 11-year-old girl. DFs are common lesions in daily dermatology practice, however in this case the young age of the patient, the atypical melanoma-like dermoscopic features, and the rapid growth of the lesion brought on the suspicion of malignant melanoma. The case was presented to emphasize that pigmented DFs must be considered in the differential diagnoses of pigmented lesions in children; which will prevent unnecessary surgical procedures.

Keywords: Dermatofibroma; dermoscopy; pigmentation

ÖZET Dermatofibromlar (DF) genellikle erişkin kadınlarda görülen sık izlenen benign deri lezyonlarıdır. Çoğu olguda kolaylıkla tanınabilirler. Bununla beraber bazı olgularda klinik ve dermoskopik görünümleri, displastik nevüs, melanom ve diğer deri tümörleri gibi lezyonlarla benzerlik gösterebilirler. Burada, 11 yaşında kızın sağ kolunda melanoma taklit eden bir pigmente DF olgusu sunuldu. DF'ler günlük dermatoloji pratiğinde sık görülen lezyonlardır ancak bu olguda hastanın genç yaşı, melanom benzeri, atipik dermoskopik özellikleri ve lezyonun hızlı büyümesi malign melanom şüphesini beraberinde getirmiştir. Bu olgu, çocuklarda pigmente lezyonların ayırıcı tanısında pigmente DF'lerin düşünülmesi gerektiğini böylece gereksiz cerrahi işlemlerin önlenmesinin sağlanabileceğini vurgulamak amacıyla sunuldu.

Anahtar Kelimeler: Dermatofibrom; dermoskopi; pigmentasyon

Dermatofibroma (DF) is a common benign tumor of the skin that commonly affects young adults and less often presents in children.[1,2] Here, a case of DF mimicking melanoma on the right arm of an 11-year-old girl is presented.

CASE REPORT

A 11-year-old girl administered to our clinic with a firm, pigmented lesion with a history of 1 year on her arm. The patient reported a gradual increase in the size of the lesion over the previous months. The patient reported no associated symptoms, and her medical history was unremarkable. A 1x1.5 cm, well-demarcated, red-brown nodule with peripheral erythema and central pigmentation was noted on the lateral aspect of her right arm. The lesion was lined by a reddish halo (Figure 1a). Dermoscopic examination revealed a central scar-like area, reddish and brown coloration with prominent irregular pigmentation, and multiple rosette-like structures. Multiple colors, irregular borders, structureless areas, streak-like structures, and focal areas of thick pigmented network were also noted (MoleMax HD digital dermoscopy; Derma Medical Systems, Wien, Austria; Figure 1b). Histopathological examination of excisional biopsy revealed acanthosis in the epidermis, coalescence of rete ridges, pigmentation in the basal layer, and the proliferation of spindle cells in a storiform arrangement in the dermis (Figure 2).

With these clinical and histopathological findings, a diagnosis of pigmented DF was made.

Written consent was obtained from the patient's mother for the publication of this case report and for any accompanying images.

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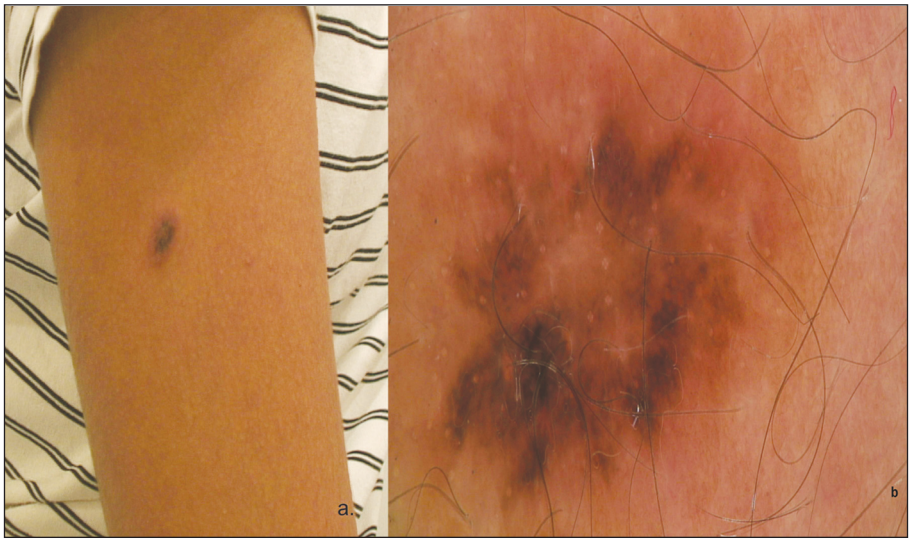

FIGURE 1: a) 1x1.5 cm well-demarcated red-brown nodule with peripheral erythema and central pigmentation on the lateral aspect of the right arm. **b)** Dermoscopic examination of the lesion: a central scar-like area, reddish and brown coloration with prominent irregular pigmentation, and multiple rosette-like structures. Please note the multiple colors, irregular borders, structureless areas, streak-like structures, and the thick pigmented network ((MoleMax HD digital dermoscopy; Derma Medical Systems, Wien, Austria).

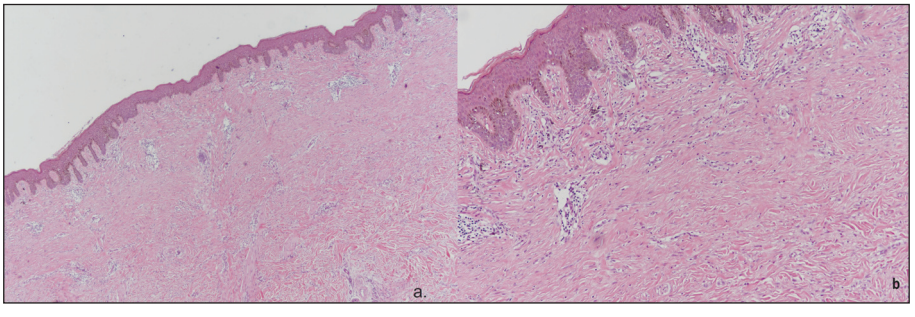

FIGURE 2: Acanthosis in the epidermis, the coalescence of rete ridges, pigmentation in the basal layer, and the proliferation of spindle cells in a storiform arrangement in the dermis (H&E, **a:** x40, **b:** x100).

DISCUSSION

DF, typically presents as a solitary, 0.5-1 cm red-brown papule, nodule, or plaque with a predilection to lower extremities.[1] It commonly affects young adults (with a slight female dominance) and is less often seen in children.[1,2] Although DFs are easily recognized by clinical and dermoscopic features, in some cases, distinguishing DFs from other lesions, such as atypical nevus or malignant melanoma, can be difficult.[3]

Dermatoscopy is commonly used in the diagnosis of DFs and many skin lesions and considered as a reliable and non-invasive diagnostic tool. The typical and most common dermoscopic features of DF are defined as peripheral pigment network and a central structureless white area. A total of 11 dermoscopic patterns of DFs have been defined.[4] Among these patterns delicate pigment network at the periphery, homogeneous pigmentation centrally, throughout the lesion or peripherally, atypical pigment network and atypical homogeneous pigmentation are the ones that are related with pigmentation.[4] The dermoscopic examination of our patient showed a central scar-like area and a reddish brown coloration, which are consistent with DF. However, other findings, such as prominent irregular pigmentations, multiple rosette-like structures, multiple col-

ors, irregular borders, structureless areas, streak-like structures, and a thick pigmented reticular network, drew our attention because these features; particularly asymmetry in color and borders, structureless areas, and atypical pigment networks; are characteristics of melanomas.[5]

Although the reason is unclear, the presence of DFs in childhood is uncommon. In a recent review evaluating the characteristics of DFs during childhood, the age of the patients varied between years with a slight female dominance. Most lesions were described as nontender, firm subcutaneous nodules. The trunk was defined as the most common localization site, followed by the upper limb and limb girdle and head and neck in contrast to extremities in adults. In this review none of the DFs were hyperpigmented among 75 lesions.[6] To date there is only one case of childhood DF mimicking melanoma. A 12-year old boy presenting with a dark brown-black nodule on the knee mimicking nodular melanoma, histopathologically confirmed as hemosiderotic DF, has been reported.[7]

Epidermal hyperplasia, elongated rete ridges, proliferation of spindle cells forming short intersecting fascicles and histiocyte-like cells, multinucleated giant cells, inflammatory cells in the dermis and focal strotiform pattern areas, proliferation of collagen, peripheral collagen bundles surrounded by lesional cells are the histopathologic findings expected in a classical DF.[8] Our patient's lesion showed characteristic histopathologic features as well basal pigmentation consistent with hyperpigmneted appearence. No atypia, mitosis, or necrosis were present. HMB 45 and Melan A stainings were negative which provided the exclusion of melanoma. The lesion was CD34 positive; and immünohistochemical staining for S-100, SMA, cytokeratin AEI/AEI3, and FXIIIa were negative confirming the diagnosis of DF and ruling out other mesenchymal neoplasms.

Although DFs are common lesions in daily dermatology practice, the young age of the patient, the atypical melanoma-like dermoscopic features, and the rapid growth of the lesion brought on the suspicion of malignant melanoma. Our case suggests that pigmented DFs should be kept in mind in the differential diagnoses of pigmented lesions in children; thus, false diagnoses of malignant lesions resulting in unnecessary procedures may be prevented.

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Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: *Ezgi Aktaş, Yavuz Semiz, Hülya Bilgi, Özben Yalçın;* ***Design:*** *Ezgi Aktaş, Yavuz Semiz, Hülya Bilgi, Özben Yalçın;* ***Control/Supervision:*** *Ezgi Aktaş;* ***Data Collection and/or Processing:*** *Ezgi Aktaş, Yavuz Semiz, Hülya Bilgi, Özben Yalçın;* ***Analysis and/or Interpretation:*** *Ezgi Aktaş, Yavuz Semiz, Hülya Bilgi, Özben Yalçın;* ***Literature Review:*** *Ezgi Aktaş, Yavuz Semiz;* ***Writing the Article:*** *Ezgi Aktaş;* ***Critical Review:*** *Ezgi Aktaş, Yavuz Semiz, Hülya Bilgi, Özben Yalçın;* ***References and Fundings:*** *Ezgi Aktaş, Yavuz Semiz;* ***Materials:*** *Ezgi Aktaş.*

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