



Plaque-like dermatofibroma: A case report and review of the literature

Plak benzeri dermatofibrom: Bir olgu sunumu ve literatürün gözden geçirilmesi

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Abstract

Dermatofibromas are common skin tumors although there are some different clinical forms, which are seen rarely. Giant dermatofibromas are benign, pedunculated lesions that are larger than 5 cm with typical dermatofibroma histopathologic features. Typically, plaque-like dermatofibromas are considered a subtype of giant dermatofibromas without a pedicle. Here, we aimed to report a case of plaque-like dermatofibroma seen in a 5-year-old girl due to its rarity and to review this clinical picture together with all the cases in the literature.

Keywords: Dermatofibroma, plaque-like dermatofibroma, giant dermatofibroma

Öz

Dermatofibromlar nadir görülen bazı farklı klinik formları olmakla birlikte sık görülen deri tümörleridir. Dev dermatofibromlar, tipik dermatofibrom histopatolojik özellikleri olan, 5 cm'den büyük, iyi huylu, saplı lezyonlardır. Plak benzeri dermatofibromlar tipik olarak pedikülsüz dev dermatofibromların bir alt tipi olarak kabul edilir. Burada 5 yaşında bir kız çocukta görülen plak benzeri dermatofibrom olgusunu nadir görülmesi nedeniyle sunmayı ve bu klinik tabloyu literatürdeki tüm olgularla birlikte gözden geçirmeyi amaçladık.

Anahtar Kelimeler: Dermatofibrom, plak benzeri dermatofibrom, dev dermatofibroma

Introduction

Dermatofibromas are common skin tumors although there are some different clinical forms, which are seen rarely. One of them is giant dermatofibromas, which are benign, pedunculated lesions larger than 5 cm with typical dermatofibroma histopathologic features. Plaque-like dermatofibromas are also regarded as a subtype of giant dermatofibromas without a pedicle. Here, we aimed to report a case of plaque-like dermatofibroma seen in a 5-year-old girl due to its rarity and to review this clinical picture together with all the cases in the literature.

Case Report

A 5-year-old girl presented with a raised plaque different from skin color on her back on the left side of her interscapular region, which has been present for the last 12 months. The lesion started with a small swelling and expanded over time without causing any symptoms. She was otherwise healthy. On dermatologic examination, a 5x4 cm light brown plaque was seen on the scapula on the left side of the patient's back (Figure 1). In dermoscopy, reticular pigmentation was observed in the periphery of the lesion, while only a homogeneous light brown area was found in the center. A punch biopsy from the center of the lesion

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was performed. Histopathologic features of lesional skin biopsy were consistent with dermatofibroma with deep acanthosis in the epidermis and fibroblastic cell proliferation in the dermis (Figure 2). Staining with CD34 was seen only in the vessel walls and no staining in spindle cells; thus, dermatofibrosarcoma protuberans was excluded (Figure 3). The patient and parents were informed regarding the nature of the lesion and was referred to plastic surgery for total excision of the lesion due to her parents' request. Informed consent was obtained.

Discussion

Dermatofibromas are skin tumors seen in the form of papules or nodules between 5 and 20 mm in size, usually on the legs¹. Giant dermatofibroma is a rare clinical type of dermatofibromas, and nearly all cases in the literature have pedunculation. Plaque-like dermatofibromas, in contrast, are regarded to be a different variant



Figure 1. A 5x4 cm yellow-orange-brown plaque was seen on the scapula, on the left side of the patient's back. The central ulceration is site of biopsy

of giant dermatofibromas and have been infrequently described in the literature since their first definition 18 years ago¹. Until now, eight cases have been reported under the title of plaque-like dermatofibroma in the literature¹⁻⁵. In addition, 15 cases have been reported under the title of multiple clustered dermatofibroma and three cases under the title of plaque-like myofibroblastic tumors⁵. Lesions reported under these two diagnoses also show similar histopathological and clinical features to dermatofibroma. Therefore, plaque-like dermatofibroma, multi-clustered dermatofibroma, and plaque-like myofibroblastic tumors may not be seen as different diseases but within the same disease spectrum⁵.

Plaque-like dermatofibromas are large, hardened plaques that usually appear on the trunk or legs. It can develop spontaneously or as a result of trauma. The plaques may not change in size for years or may enlarge with the development of satellite lesions around the main plaque¹. Dermatofibromas typically do not cause any symptoms, but there may be tenderness, itching, and ulceration. Plaque-like dermatofibromas are benign and do not require excision. Surgical excision can be made to provide cosmetic appearance. No recurrence has been reported so far after total excision¹.

The current case is the youngest case reported in the literature. Our patient was a 5-year-old girl, although other cases were seen between the ages of 20 and 63 years (Table 1). The most important reason for this may be early diagnosis. In the two cases reported by Leow et al.⁴, one of the patients was 40 years old with a 30-year history of lesion, while the other patient was 48 years old with the lesion present for 38 years. A 20-year-old female patient reported by Avila et al.¹ has also had complaints for 10 years. These examples show that the onset of plaque-like dermatofibroma may actually occur at a young age. In addition, in our case, SMA and desmin staining were negative, and in this respect, it differs from plaque-like myofibroblastic tumor seen in childhood.

This case report demonstrates the important features of plaque-like dermatofibroma. Although being benign, the size and atypical clinical

Table 1. Reported cases under the title of plaque-like dermatofibroma

Reference	Age	Gender	Distribution
Findeis et al. ⁸ , 2017	39	Male	A brown plaque (8x7.5 cm) with satellite lesions on the right lateral thigh
Avila et al. ¹	20	Female	9x5 cm irregular, atrophic, pink-purple plaque with ill-defined borders and multiple satellite lesions on her right lower back
Panicker et al. ²	63	Female	A huge, nodulo-ulcerative plaque on the left side of the back of approximately 15x20 cm size, extending to the nape of the neck superiorly, acromial process laterally and medially crossing the midline up to medial border of the right scapula
Micantonio et al. ³	29	Female	Dark brown papules and nodules overlying a light brown plaque, measuring 4.7x5.4 cm, which was located on the right lumbar region
Leow et al. ⁴	40	Male	A 5x3 cm reddish-brown plaque on the medial left thigh with satellite lesions
Leow et al. ⁴	48	Male	A 7x4 cm reddish plaque on the posterior right leg with satellite lesions
Lozano et al.* 2016	-	-	-
Moradi et al. ⁵ , 2021	43	Female	An irregularly pigmented plaque of irregular outlines measuring 11x5 cm on mid back

⁸: Due to the limitation for reference numbers, kindly find further information; Findeis S, Lynch MC, Sceppa J, Helm KF: Plaque-like dermatofibroma with satellitosis. *Dermatol Surg* 2017;43:139-42.

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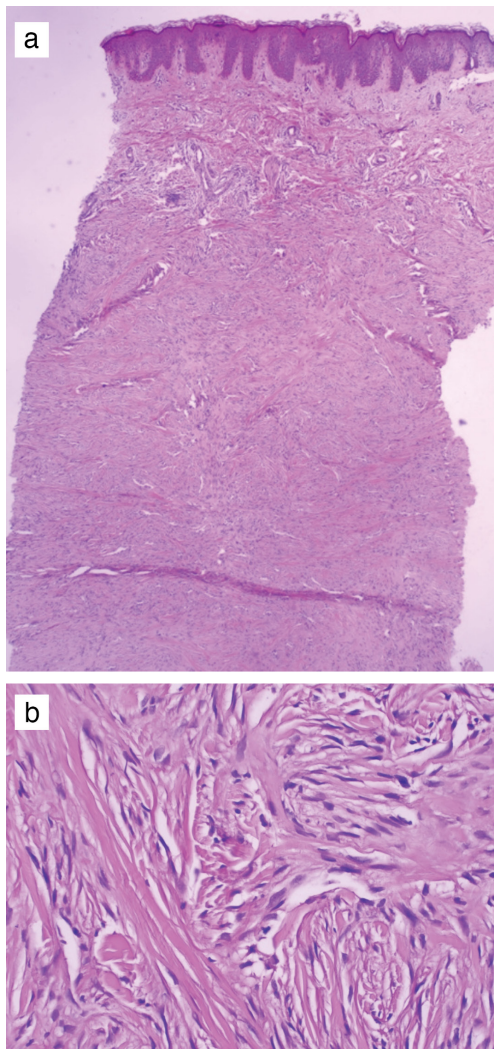


Figure 2. (a) H&E, x40, biopsy shows deep acanthoses in the epidermis and fibroblastic cell proliferation in the dermis. **(b)** H&E, x400, Higher magnification

H&E: Hematoxylin and eosin

appearance of these lesions can raise doubt of malignancy. Surgical excision for cosmetic appearance can be performed without a big risk of recurrence. This clinic should be kept in mind in patients presenting with similar findings.

Ethics

Informed Consent: It was obtained.

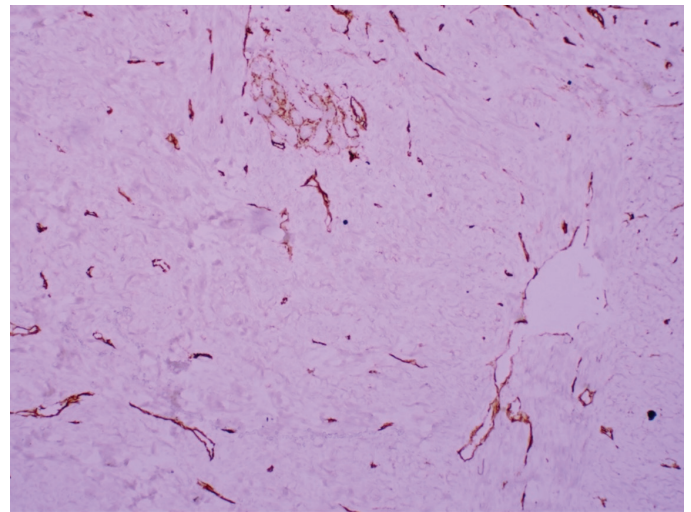


Figure 3. Staining with CD34 was seen only in the vessel walls and no staining in spindle cells

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Authorship Contributions

Surgical and Medical Practices: S.N., A.B., C.İ.B., E.A., Concept: S.N., A.B., E.A., Design: S.N., A.B., Data Collection or Processing: S.N., A.B., Analysis or Interpretation: S.N., A.B., C.İ.B., E.A., Literature Search: S.N., A.B., Writing: S.N., A.B., C.İ.B., E.A.

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