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Case reports

RAPIDLY GROWING CUTANEOUS LEIOMYOMA AFTER INTRALESIONAL STEROID APPLICATION IN A CHILD

BRZORASTUĆI LEIOMIOM NA KOŽI DETETA NAKON DAVANJA STEROIDA U LEZIJU

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Ključne reči
kožni leiomiom, dete, davanje steroida, α-aktin glatkih mišićnih ćelija

Abstract

Cutaneous leiomyomas are relatively rare benign tumors that are more likely to occur in adults than in children. We report a case of a 12-year-old girl who presented with a solitary, flesh-colored mass on the face distal to the vermilion border of the lower lip. After intralesional corticosteroid injection the lesion started growing rapidly and was removed surgically. Histologic examination of the specimen demonstrated spindle cells with an eosinophilic cytoplasm. Immunohistochemical studies were performed and the cells stained strongly positive for α-smooth muscle actin. Although cutaneous leiomyomas are relatively rare in childhood it should be considered in the differential diagnosis of any cutaneous or mucosal mass in children. We found only one record on the interaction between leiomyomas and intralesionally applied corticosteroids.

INTRODUCTION

Leiomyomas are benign smooth muscle tumors, with the majority being located in the uterus, skin, tracheobronchial tree, lungs, kidneys, urinary bladder, and gastrointestinal tract. Cutaneous leiomyomas arise in the dermis and occur more frequently in adults than in children [(1)]. They arise from the arrector pili muscle, vascular smooth muscle and dartoic, areolar or vulvar smooth muscle and are classified as pilar leiomyomas, angioleiomyomas and genital leiomyomas respectively. Pilar leiomyomas are the most common type and range from 2 to 20 mm in diameter [(2)]. They are usually tender or painful, often described as burning, pinching, or stabbing pain [(1,3)]. We report a case of initially asymptomatic solitary pilar leiomyoma in a child. After local injection of betamethasone dipropionate the lesion augments its growth and became painful.

Case Report

A 12-year-old girl who presented to our team with an eight-month history of a lesion in the perioral area. The parents stated that the lesion had appeared as a hardly visible tiny papule. Six months later, because of the persistence and their own concern the child was referred to a dermatologist elsewhere. The lesion was interpreted as an epidermal cyst 0.2 cm in diameter and was treated with an intralesional application of betamethasone dipropionate, according to the records in the personal file of the patient. During the next two months the mass significantly increased in size and became sensitive and painful when exposed to cold. Considering the atypical clinical evolution and specific location of the tumor, the child was referred by the above mentioned dermatologist to the plastic surgeon from our team for possible surgical treatment. On physical examination, we found a solitary, firm, flesh-colored mass 0.8 cm in diameter with a prominent vessel on its surface located just distal to the vermilion border of the lower lip and fixed to the surrounding tissues (Fig. 1). Thorough clinical examination did not reveal any evidence of tumors located elsewhere or any relevant past clinical history. No family history of significant or hereditary diseases was reported.

Surgical excision was performed by the senior author. Intraoperatively, the lesion was found to be non-capsulated with dermal origin, slightly elliptical shape and iceberg-type

spreading cranially beneath the vermilion lip border. Histologic examination of the specimen demonstrated spindle cells with an eosinophilic cytoplasm (Fig. 2A). Immunohistochemical studies were performed and the cells stained strongly positive for α-smooth muscle actin (Fig. 2B). As a result, the patient was diagnosed with pilar leiomyoma.

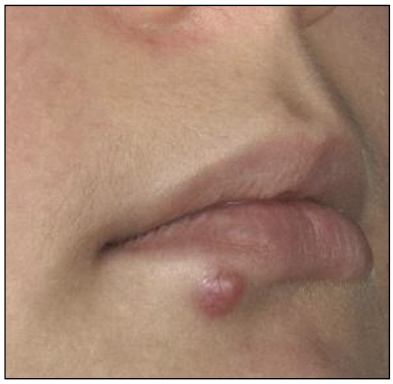

Figure 1: *Cutaneous leiomyoma. Preoperative evaluation*

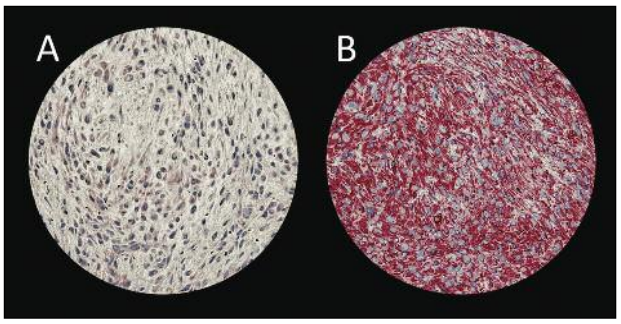

Figure 2: *Histopathological evaluation of the excised lesion: A. Hematoxiline-Eosine staining (x 400); B. Immunostaining for α-Smooth Muscle Actin (x 400).*

DISCUSSION

Cutaneous leiomyomas are relatively rare benign neoplasms of skin, which are frequently unrecognized by clinicians. Treatment of cutaneous leiomyomas depends on the number of lesions and the presence or absence of symptoms [1,4,5]. If a solitary lesion is present, surgical excision is indicated. We detected a pilar leiomyoma in a child with atypical clinical behavior after intralesional application of glucocorticosteroid because of erroneous initial diagnosis and treatment. Fast tumor growth and onset of symptoms after the injection led us to make an extensive revision of the scientific literature in search of some relation. We found only one case report in literature regarding the interaction between glucocorticosteroids and cutaneous leiomyomas [6]. In this article the lesions improved at 1-year follow-up with regard to pain as well as size after local injection of Triamcinolone Acetonide with no side effects of the treatment. These findings of the authors contradict our observation regarding the clinical evolution and onset of side effects (i.e. telangiectasias). It is our thought that possible reason for the evolution we observed could be the trauma of the intralesional injection. The mechanical irritation may be of importance in the development of tumors of various genesis as stated in some other studies [7,8]. In our case it is difficult to say whether it was the effect of trauma or the steroid per se which led to the change in the lesion. We found no records on the interaction between mechanical trauma and cutaneous leiomyomas. Nevertheless, it is our assumption that dependence between betamethasone dipropionate injection and clinical evolution of the leiomyoma could exist. However, such relation still has to be proved. Beside our scientific thoughts, although not so common in childhood, we would suggest leiomyomas to be taken into account in the differential diagnosis of any cutaneous mass in children in daily practice.

Sažetak:

Kožni leiomiomi su relativno retki dobroćudni tumori koji se češće javljaju kod odraslih nego kod dece. U ovom radu iznosimo slučaj 12-godišnje devojčice koja je imala jednu promenu boje mesa na licu, distalno od ugla usne, u nivou donje usne. Nakon ubrizgavanja steroida u tu promenu, ona je počela brzo da raste, pa smo je uklonili hirurški. Histološkim pregledom isečka uočene su vretenaste ćelije sa eozinofilnom citoplazmom. Imunohistohemijskom analizom dobijeno je intenzivno pozitivno bojenje na □-aktin glatkih mišićnih ćelija. Iako se kožni leiomiom relativno retko javlja kod dece, treba ga imati u vidu kod diferencijalne dijagnoze bilo koje promene na koži ili sluzokoži deteta. U literaturi smo pronašli samo jedan slučaj interakcije između leiomioma i kortikosteroida ubrizganih unutar lezije.

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