A rare adult presentation of a congenital tumor discovered incidentally after trauma

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INTRODUCTION

Rhabdomyomatous mesenchymal hamartoma (RMH), also known as midline hamartoma and striated muscle hamartoma, is a rare congenital malformation typically developing in the head and neck regions along the midline.[1] Such tumors appear grossly as dome-shaped subcutaneous nodules with histologic findings of multiple polypoidal bundles of mature striated muscle surrounded by fibrous adnexal tissue, adipose, and telangiectatic vessels in the dermis and subcutaneous layers of the skin.[1] Generally, RMH lesions are surgically removed early in detection, and thus, little information has been revealed about the course of growth of such a tumor if left untreated.[2] Herein, we present a case of an adult patient with a slow-growing RMH at the exact site of blunt trauma located on the forehead.[3,4]

Abbreviation used:

RMH: rhabdomyomatous mesenchymal hamartoma

CASE REPORT

A 39-year-old man with Fitzpatrick skin type II presented to the dermatology clinic with a history of minor blunt trauma to the right side of his forehead 3 years prior and no pertinent or prior medical history. The patient reported a "soft lump" slowly growing at the exact location of an area where he sustained a mild injury after being hit by a baseball on the forehead. He reported more rapid growth in the last 12 months, which was the impetus for his presentation to our clinic. He denied associated symptoms or sensations in the area and was otherwise healthy without medical conditions. Physical examination revealed an approximately 2.0-cm rubbery, nontransilluminate, slightly mobile nodule without overlying epidermal changes on the right side of the forehead. No frontalis muscle motor deficit or loss of sensation to touch was found in the area.

Further examination included a targeted ultrasound imaging of the mass showing a subdermal hypoechoic area measuring 1.7 × 1.4 × 0.3 cm and appearing immediately anterior to the outer table of the calvarium with a prominent superficial artery coursing over the examined area.

An excisional biopsy was conducted and histopathologic examination revealed mature fibroadipose tissue with admixed, haphazard skeletal muscle and nerve bundles (Figs 1 and 2). RMH was diagnosed on the basis of the histologic data. The patient returned approximately 4 months later with no evidence of recurrence.

DISCUSSION

RMH is a rare, congenital, benign tumor historically seen on the midline of the face and neck, and complete removal of the tumor has been the course of action among the 80 documented cases.[1,5,6] It can appear as a subcutaneous growth or plaque grossly, and it is a histopathologically determined mixture of haphazard skeletal muscle, adnexal elements, vessels, and nerve bundle collections.[7] Among the few documented cases, there is 1 known case of congenital RMH to have regressed after the decision was made to monitor.[2] Given that most cases result in removal shortly after diagnosis, the course of RMH

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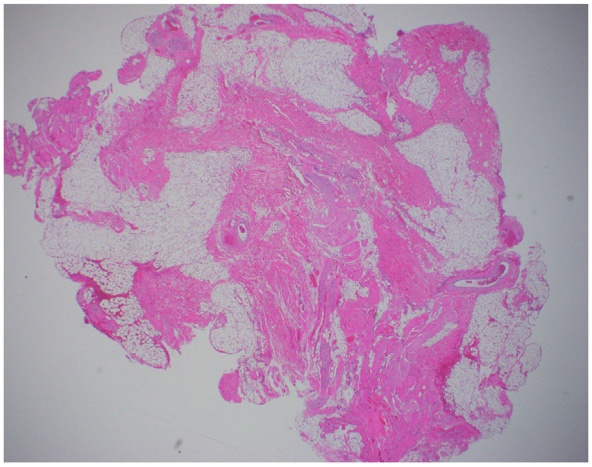

Fig 1. Histology of excisional biopsy sample showing rhabdomyomatous mesenchymal hamartoma. (Hematoxylin-eosin stain; original magnification: ×20.)

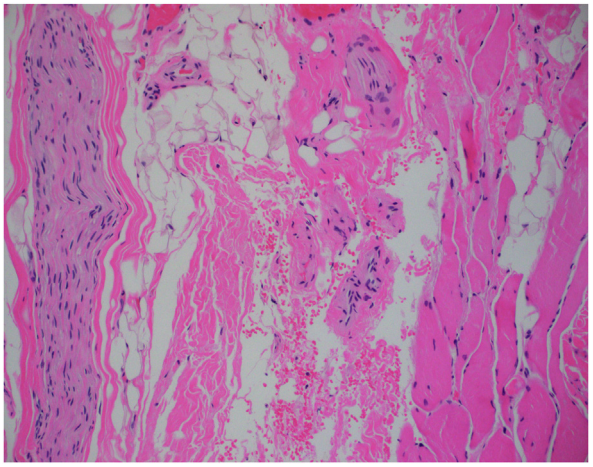

Fig 2. Histology of rhabdomyomatous mesenchymal hamartoma showing striated muscle at the periphery and center with interplay of adipose, fibrotic adnexal tissue, and vascular deposition. (Hematoxylin-eosin stain; original magnification: ×200.)

growth and behavior is still underdeveloped in the documentation.[2] Our patient presents with an informative case of RMH in an adult; however, the development of such a lesion at the exact site of previous trauma has been considered as a potential coincidence or an overlook by the patient. The patient was very adamant that this was not present before the trauma, raising suspicion of an adult-onset case.

Given the common etiology of blunt trauma and subsequent lipoma presentation, we mainly considered different variants of lipomas in our differential diagnosis.[8] However, the diagnosis of lipoma would be unlikely given the numerous differences in histologic findings in our patient's case, such as striated muscle, telangiectatic deposition, fibroadipose, and nervous tissue.[1] Several other soft-tissue tumors were considered in the differential (eg, nodular or proliferative fasciitis, angiofibroma of soft tissue, soft-tissue malignancies, neural tumors, and so forth); histologic analysis show tissue types with the absence of spindle cells, disorganized myofibroblast, or malignant changes, such anaplastic cells, pleomorphism, or loss of polarity.[1]

Given the rare presentation of our patient's tumor, this case is a useful addition to known documentation of RMH being seen in adults and raises the suspicion of a trauma-induced lesion. Notably seen at birth, there have been 2 other broad etiologies of pediatric reports, such as a 7-year-old patient's RMH arising from previous trauma and a 13-month-old patient's presentation at a previous surgical site.[9,10] Among the adult population, this heralding case differs from other reports because of the history of trauma to the site, as seen in a case series comparing previously known acquired RMH in 5 women of Asian descent in which all mentioned no prior history of injury before the development of RMH.[5] Our report can contribute to the greater understanding of later onset of RMH as well as the need for inclusion of a differential diagnosis by both clinicians and pathologists when considering similar patient findings. It leaves further development of the etiology and understanding of RMH open among possibly acquired cases. The future addition of such case reports could collectively further change the understanding of RMH.

Conflicts of interest

None disclosed.

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