Solitary Digital Nodule in an Infant

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Question

A 5-month-old female infant was brought to the Dermatology Department with a single, asymptomatic, firm pinkish nodule present over the distal digit of the left second toe. It began as the size of a lentil at birth and progressively increased to attain the present size (Fig. 1). The lesion covered almost the entire second toenail. Parents denied a history of preceding trauma. The baby was playful, her medical and family history being unremarkable. The increasing size of the lesion was of great concern to the parents.

What is your diagnosis?

Color version available online

Fig. 1. Erythematous, globular swelling overlying the dorsum of the distal digit of the second left toe.

Answer

Infantile Digital Fibromatosis

On request of the parents, an excision biopsy was performed and submitted for histopathology. Hematoxylin and eosin-stained sections (Fig. 2) revealed an unremarkable epidermis and the presence of interlacing fascicles of spindle cells with thick collagen bundles extending from the papillary dermis through the deep dermis into the subcutis. Intracytoplasmic round eosinophilic bodies were identifiable (Fig. 3). Skin appendages were seen entrapped by the fascicles of tumor cells. The clinical and histological features were consistent with the diagnosis of infantile digital fibromatosis (IDF).

IDF, also known as Reye's tumor is a rare benign tumor of fibromatous origin with an unclear etiology. It generally presents in the first year of life as an asymptomatic smooth pinkish nodule overlying the distal phalanx of fingers and toes [1]. The lesion initially shows an indolent or a rapid progression following which it becomes stable and then resolves spontaneously [2]. Histopathology reveals a benign proliferation of myofibroblasts with a characteristic perinuclear eosinophilic inclusion body. The tumor cells stain positive for various immune-histochemical markers including desmin, vimentin, calponin, and alpha-smooth muscle actin [3]. Treatment of IDF remains controversial and includes watchful expectancy for spontaneous resolution, intralesional injections of corti-

costeroid and 5-flourouracil, and surgical excision [4]. The latter is undertaken for cosmetic concerns, if there is associated severe dysfunction, and in order to establish the diagnosis. Our decision to excise the lesion was based on the request from the parents, who were deeply concerned about the rapid increase in the size of the lesion. However, due to a high recurrence potential, tendency to resolve spontaneously, and lack of propensity to metastasize, IDF is generally managed with a conservative approach. Our patient did not show any evidence of recurrence on the 8-month follow-up.

Statement of Ethics

Written consent has been obtained from the patient's parent.

Disclosure Statement

The authors hereby declare to have no conflict of interest regarding the paper.

Keywords

Infant · Digital · Fibroma · Spindle cells · Eosinophilic inclusions

Fig. 2. Interlacing fascicles of spindle-shaped cells in the dermis (HE, $\times 100$).

Fig. 3. Round, eosinophilic intracytoplasmic inclusion bodies (black arrow) (HE, $\times 400$).

References

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