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Eruptive collagenoma in a child

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Abstract

Eruptive collagenoma is a rare entity, with unknown etiology, considered to be a type of connective tissue nevus composed of collagen. It is usually reported in young adults occurring predominantly on the trunk and extremities. Systemic findings and family history of a similar condition are not typically associated and the prognosis is excellent. There are few pediatric cases reported in literature. Herein we report an uncommon case of eruptive collagenoma in a 12-year-old child and present a brief review of the literature.

Keywords: connective and soft tissue neoplasms, collagen nevi, hamartoma, elastic fibers, collagenoma

Introduction

Connective tissue nevi are hamartomas consisting of different proportions of extracellular matrix components including collagen, elastic fibers, and proteoglycans [1]. Collagenomas are hamartomas of collagen. These lesions are characterized histologically by accumulation of disarranged, dense collagen bundles and a decrease or absence of elastic fibers in the dermis [2]. Collagenomas are classified [3] based on distribution (localized or generalized) and genetic transmission (inherited or acquired). Inherited forms include familial cutaneous collagenomas and Shagreen patches of tuberous sclerosis) and acquired forms may be either eruptive or isolated. Eruptive collagenoma presents with abrupt appearance of multiple fibrous, skin color or brownish papules and nodules typically on the trunk, more frequently in young adults. Its incidence and pathogenesis is unknown; usually there is no family history and no involvement of other organs and systems [4].



Figure 1. One 10mm sized, oval, erythematous-brownish papule on the chest.



Figure 2. Two oval shaped, skin-color small papules on left abdominal quadrants.



Figure 3. Two oval shaped, slight hyperpigmented small papules on lumbar region.

Case Synopsis

A 12-year-old boy came to our hospital because of an eruptive appearance, one year before, of five 5-10mm sized, oval skin-color or erythematous-brownish papules on the chest (**Figure 1**), abdomen (**Figure 2**), and lumbar area (**Figure 3**). These lesions were asymptomatic and there was no previous history of trauma or inflammatory dermatosis. Physical examination was otherwise unremarkable. There were no affected relatives or family history of other inherited diseases.

A skin biopsy was performed and revealed thickened homogenized and disarranged collagen fibers in the superficial and deep dermis (**Figure 4**), highlighted by Masson's trichrome stain (**Figure 5**), and a decreased density and fragmentation of elastic fibers in reticular dermis with orcein-Giemsa stain (**Figure 6**). The clinical appearance of lesions associated with these histopathological findings confirmed the diagnosis of eruptive collagenoma. No treatment was performed and after one year of follow-up no new papules had appeared and the remaining papules were stable.

Case Discussion

Eruptive collagenoma is a rare dermatosis and the current literature is limited to about 30 cases reported. The differential diagnosis may be difficult in some cases and clinical lesions can be confused with eruptive xanthomas, molluscum contagiosum, or even with keloids. Other connective tissue nevi are closely related and mimic eruptive collagenoma clinically and histologically. Papular elastorrhexis is also characterized by multiple small firm papules distributed over the trunk and extremities and nevus anelasticus presents as focal grouped perifollicular papules. Some authors advocate that these entities are different presentations of the same disease process [5]. In this case the diagnosis of eruptive collagenoma was made based on presentation of multiple typical lesions, histopathological results, and absence of systemic involvement and family history. Description of pediatric patients in the literature is even more scarce; as far as we are aware there are only four cases of eruptive collagenoma reported in children and adolescents in the English language [6-9]. Similarly to our patient, lesions tend to persist but prognosis is good.

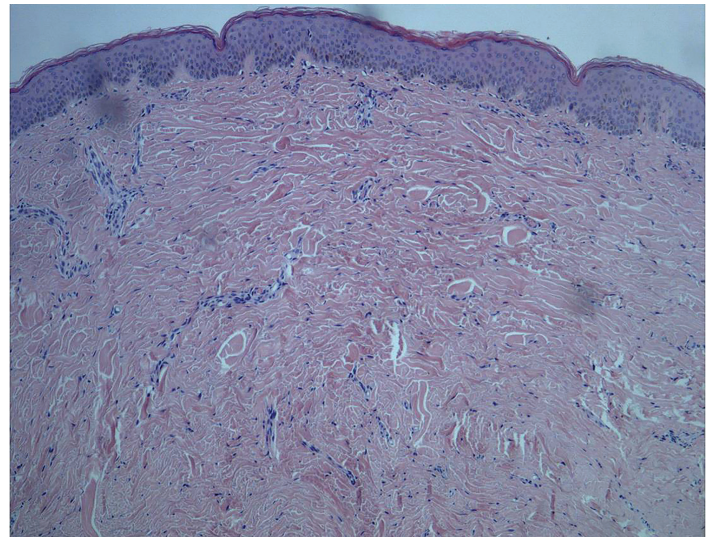


Figure 4. Thickened collagen bundles in superficial and deep dermis (haematoxylin and eosin stain 100x).

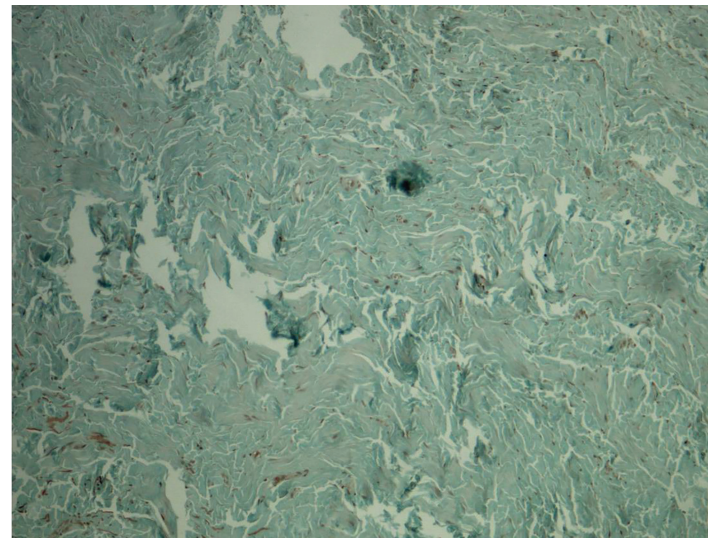


Figure 5. Homogenized and disarranged collagen bundles (Masson's trichrome stain 400x).

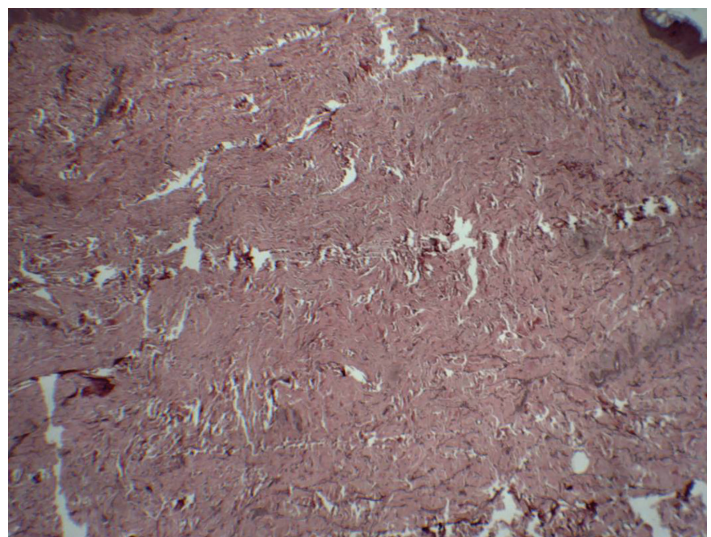


Figure 6. Decrease and fragmentation of elastic fibers (orcein-Giemsa stain 100x).

Conclusion

This case is reported because of its rarity describing eruptive collagenomas in a child. The authors believe that the publication of new cases should be encouraged in order to improve our recognition of this condition.

References

1. Uitto J, Santa Cruz DJ, Eisen AZ. Connective tissue nevi of the skin. Clinical, genetic and histopathologic classification of hamartomas of the collagen, elastin and proteoglycan type. *J Am Acad Dermatol*. 1980 Nov;3(5):441-61. [PMID:7217375]
2. De Almeida HL Jr, Breunig Jde A, Wolter M, de Castro LA, Rocha NM. Light and electron microscopy of eruptive collagenoma. *J Cutan Pathol*. 2009 Oct;36(1):35-8. [PMID:19775392]
3. Uitto J, Santa-Cruz DJ, Eisen AZ. Familial cutaneous collagenoma: genetic studies on a family. *Br J Dermatol*. 1979 Aug;101(2):185-95. [PMID:486326]
4. Xiao M, Yang L, Dong L, Wang Y, Sun X, Tao J. Three cases of eruptive collagenoma and a literature review, 1970-2012. *Eur J Dermatol*. 2014 May-Jun;24(3): 384-5. [PMID:24751341]
5. Ryder HF, Antaya RJ. Nevus anelasticus, papular elastorrhexis, and eruptive collagenoma: clinically similar entities with focal absence of elastic fibers in childhood. *Pediatr Dermatol*. 2005 Mar-Apr;22(2):153-7. [PMID:15804307]
6. Lee MW, Choi JH, Sung KJ, Moon KC, Koh JK. A case of eruptive collagenoma. *Pediatr Dermatol*. 2002 Nov-Dec;19(6):565-7. [PMID:12437568]
7. Yahya H, Rafindadi AH. Eruptive collagenoma in a Nigerian girl. *Int J Dermatol*. 2006 Nov;45(11):1344-6. [PMID:17076722]
8. Sharma R, Verma P, Singal A, Sharma S. Eruptive collagenoma. *Indian J Dermatol Venereol Leprol*. 2013 Mar-Apr;79(2):256-8. [PMID:23442476]
9. Barad P, Fernandes J, Shukla P. Eruptive collagenoma: a rarely reported entity in Indian literature. *Indian J Dermatol*. 2015 Jan-Feb;60(1):104. [PMID:25657425]