

## Eruptive Collagenoma – A Rare Case Study

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### ABSTRACT

Eruptive collagenomas are non familial connective tissue nevi of unknown etiology presented with an abrupt onset. While most cases are reported in young adults with lesions over trunk and extremities. We report a case of a 30 year-old female who presented with multiple asymptomatic, papules, plaques and nodules on the scalp, face, trunk and upper extremities including axilla, and genitalia with uncommon sites of presentation in the literature. And without systemic involvement. Histopathologically, the lesion showed thickened homogenized collagen fibres highlighted by Masson's trichrome stain and increased collagen and paucity in elastic fibres by Verhoeff-van Gieson stain, confirming the diagnosis of eruptive collagenoma.

**Keywords:** Axilla, Eruptive collagenoma, Face, Genitalia.

### INTRODUCTION

Eruptive collagenoma is a rare acquired connective tissue hamartoma consisting predominantly of collagen without family history<sup>1</sup>. Eruptive collagenoma has been described as multiple small papules with areas of decreased or degenerated elastic fibres, usually on the trunk and arms. We herein report a case of eruptive collagenoma which developed an unusual location over scalp, face, trunk and upper extremities including axilla, and genitalia in 30 year-old female.

### CASE REPORT

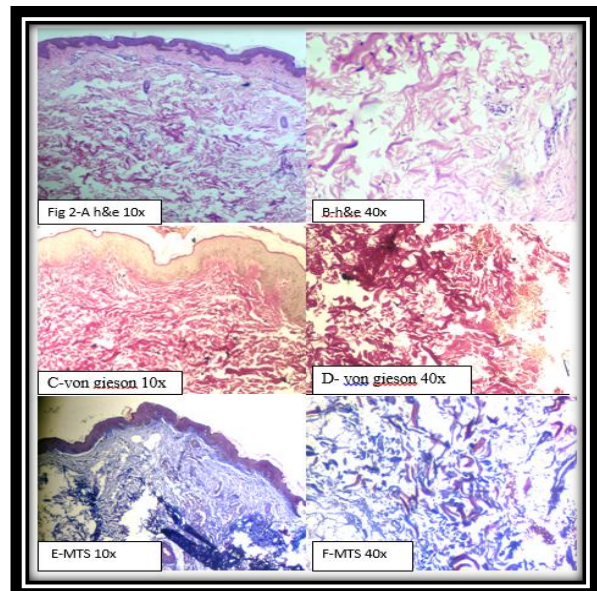
A 30 year old female presented with multiple, asymptomatic raised skin coloured to pink coloured lesions over scalp, face, trunk and upper extremities including axilla, and genitalia since 6 months. Lesions first appeared over face then progressed to involve genitalia. No history similar complaints in the past. No history similar complaints in spouse and family. And no history of tropical and oral drug intake prior to development of lesions. On examination there were multiple, discrete, skin coloured to pink coloured papules 2 to 5mm in diameter with adjacent skin and skin over papule normal. Palm and soles normal. Oral and genital mucosa normal. No neuro cutaneous markers noted.

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**Figure 1:** Clinical picture showing non tender multiple papules over face, neck and axilla.



**Figure 2:** HPE 2309/19- A&B(H&E)- stratified squamous epithelium, sub epithelium shows mild periadnexal inflammatory infiltrate. Dermis shows increased collagen bundles randomly arranged throughout dermis. C&D- Verhoeff-van Gieson showed a marked increased collagen and paucity of elastic fibres. E&F- Masson's trichrome highlighted an increase in the collagen tissue in the dermis.

Routine investigations were normal, The Dermatologist had clinical differentials of Eruptive Xanthoma and Molluscum contagiosum with those clinical diagnosis a skin punch biopsy was done for a definite diagnosis. On routine H & E examination we found while histopathology revealed stratified squamous epithelium, sub epithelium shows mild periadenexal inflammatory infiltrate. Dermis shows increased collagen bundles randomly arranged throughout dermis suggestive of eruptive collagenoma. Special stains were done to further confirm the diagnosis. Masson's trichrome highlighted an increase in the collagen tissue in the dermis, while Verhoeff-van Gieson showed a marked increased collagen and paucity of elastic fibres.

## DISCUSSION

Eruptive collagenoma is an acquired connective tissue nevus without family history. Connective tissue nevi of the skin are acquired hamartomatous lesions consisting predominantly of one of the components of the extracellular matrix, namely collagen, elastin, or glycosaminoglycans.<sup>[1,2]</sup> Among these, collagenomas are connective tissue nevi composed predominantly of collagen.<sup>[2]</sup> They have been classified as either inherited or acquired. Inherited collagenomas include familial cutaneous collagenoma and Shagreen patch of tuberous sclerosis.<sup>[2]</sup> Acquired collagenomas contain isolated collagenoma and eruptive collagenoma depending on the number of lesions but they cannot be differentiated clinically.

Eruptive collagenoma, first reported by Cramer in 1966,<sup>[3]</sup> presents with sudden symmetrical appearance of several firm skin-coloured papules and nodules of various sizes, usually less than 1 cm in diameter,<sup>[4]</sup> on the trunk and upper extremities,<sup>[5]</sup> in the first two decades of life. The incidence and pathogenesis is unknown with no established family history or associated systemic findings.

Histopathologically, the lesions are characterized by an excessive accumulation of randomly arranged dense collagen bundles with either diminished, altered or absent elastic tissue.<sup>[4]</sup>

Eruptive collagenoma should be differentiated from other diseases with focal absence of elastic fibers such as nevus anelasticus and papular elastorrhesis. Nevus anelasticus has been defined as acquired perifollicular papules with a paucity or lack of elastic tissue.<sup>[6]</sup> Papular elastorrhesis is a variant of nevus anelasticus and it occurs in the twenties as multiple asymptomatic small, white papules scattered over the trunk and extremities with no predilection for the perifollicular areas.<sup>[6]</sup> Nevus anelasticus and papular elastorrhesis show histologically focal area of decreased and fragmented elastic fibers and most cases are sporadic but some familiar occurrence has been described. Some authors have mentioned these

three entities represent a single disease or disease spectrum because of similar clinical and histopathologic features.<sup>[7-9]</sup> They also have common features in terms of peak age of onset, distribution of lesion involving the trunk and upper extremities, and a lack of history of trauma, inflammation, family history, or extracutaneous manifestations.<sup>[8-10]</sup> The pathogenesis of eruptive collagenoma is unknown. Uitto et al,<sup>[11]</sup> showed that collagenoma almost exclusively consists of type I collagen and the underlying defect seemed to be a reduced production of collagenase in that location, and therefore a decreased local degradation of collagen. And some reports that the growth of collagenoma was influenced during pregnancy or puberty imply that hormone may be involved in the pathogenesis of this disorder.<sup>[12]</sup> No specific treatment is given in most cases.

## CONCLUSION

Our case has a different characteristic from the previously reported cases. Eight cases,<sup>[10,12-18]</sup> in the English literature and two cases in Korean literature have been reported to date. Most patients developed eruptive collagenoma mainly on the trunk, abdomen and upper extremities, whereas one patient developed lesions localized on the left back.<sup>[19,20]</sup>

To our knowledge, this is the first report of the eruptive collagenoma localized characteristically over the scalp, face, axilla, upper extremities and genitalia. But the cause of distribution was not known. We here by highlight the peculiar presentation of the case.

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