

Traumatic Localized Dupuytren Disease



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Abstract

We present a Case series of four patients who attended the clinic complaining of a localized lump formation after a specific trauma, which ended being a form of localized Dupuytren. We discuss the still unclear etiology of this disease on comparison to the specific relationship of those cases to trauma.

Keywords: Localized dupuytren; Traumatic contracture

Introduction

Dupuytren's contracture is a benign fibro-proliferative disease of the hand causing fibrotic nodules and fascial cords which determine debilitating contracture and deformities of fingers and hands. There are characterized by a disorder of the extracellular matrix and high myofibroblast proliferation. Different investigators have proposed many theories and documented several findings regarding the aetiology of Dupuytren's contracture affecting large area of the hand, but there are not references to more localized tumor-like disease clearly and directly associated to trauma.

Methods

Three women and one man attended in different occasions the clinic complaining of a localized lump formation associated in some of the cases with reduction of joint movement affecting fingers or palm of the hand, caused by a specific direct trauma to the area where the disease appeared and with an involvement of a maximum two and a half to three centimeter of length, and all of them forming a fascial cord of Dupuytren. MRI scan were organized for all the cases, previous to the surgical treatment, and histopathological results were sought to confirm the disease.

Objective and Discussion

The aim of this study was to present the cause-specific incidence of trauma in the development of Dupuytren disease (DD). Presenting a case series of four cases of Traumatic Localized Dupuytren disease appearing as a result of a direct trauma in a specific area of the hand with no progression of the disease. Most studies have found relationships between the disorder and manual labor; previous hand injuries, genetic susceptibility,

diabetes mellitus, epilepsy, high cholesterol level profile and intake of either alcohol or tobacco. However, according to others, the evidence on risk factors associated with certain lifestyles has been conflicting [1].

Several authors who focused their studies on the genetics of DD recognized an inherited autosomal dominant pattern. Actually, DD is thought to be a multifactorial and complex disease. Myofibroblasts are thought to play a crucial role in its pathogenesis, although their origin is not clear; also Transforming growth factor beta (TGF-beta) is thought to play a role in its pathogenesis [2]. Traumatic events or vibration have been found to have influence on the development of this illness and are likely to trigger different clinical forms of this disease [3,4].

Despite that there was an extended idea that microtraumas may developed the disease, there is not proved evidence that hand injuries or occupations that involve vibrations to the hands cause the condition [5]. In all those reports the relation between the DD and the origin or cause of the disorder was refer to the well-known full developed disease with affectation of the palm and one, two or more digits, in our cases the direct trauma affecting only a small specific area of the hand, clearly produced a localized DD more often seen in the digits with not expansion to the palm of the hand or other fingers.

Result

Pathology confirmed in all the cases the diagnosis of DD. All the patients remember clearly the traumatic event that produced the reaction. Only one refer family history, and neither of them

have any of the recognized risk factors associated to Dupuytren. Most of the cases came to consultation with a previous diagnosis of soft tissue tumor.

Conclusion

Despite the correlation between trauma and Dupuytren contracture has not been proved, this small case series confirmed that trauma has an important role on the developing of a localized form of this disease, even in patients that have neither of the risk factors associated to the condition and could be the answer to some unknown tumor-like formation in the hand.

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