

Conservative Management of Plantar Fibromatosis

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Fibromatous nodules occasionally develop in the plantar aponeurosis in a manner consistent with the biomechanical etiology of Dupuytren's contracture. This is of course a benign lesion of the plantar surface of the foot and may appear at any age with the greatest prevalence at middle-age and beyond. Associated fibroblastic clinicopathological predispositions include Dupuytren's contracture, intratendonous fibrous nodules, periathrosis humeri, Peyronie's disease, and keloids, to name a few. Although histological findings suggest a chronic inflammatory process, the etiology is idiopathic. Epileptics seem to be predisposed.

There is a thickening of the plantar fascia due to the formation of a firm, irregular, lobulated mass of small nodules which coalesce into an indurated irregular fibromatous mass. The mass is commonly found in the longitudinal arch and although it does not tend to involve adjacent structures, it does tend to adhere to nearby tendons, muscles, nerves, blood vessels, and overlying integument. This is an inflammatory reaction since lymphocytes and mononuclears are found near the proliferative nodules, although the actual cause is unknown. It may be related to plantar fasciitis, but with intermittent episodes of amelioration and exacerbation which do not allow for progress of the lesion to complete clinical development (an opinion of this writer). This nodular mass enlarges over a period varying from months to years and eventually the patient complains of pain when standing or walking.

In the opinion of this author, if this lesion progresses to the point of forming a fibromatous nodular mass it must be surgically excised, along with the plantar aponeurosis. Failure to remove the aponeurosis, in the presence of such a history, tends to invite recurrences, which are common.

Also, in the opinion of this author, if this lesion is discovered by an astute physician prior to the development of the fibrous nodules and treated vigorously, progression to the point requiring surgical correction may be avoided.

Conservative care involves lidocaine (2.5 percent)/hydrocortisone (1 percent) phonophoresis directly applied to the area of the lesion using the menstruum of the phonophoretic agents as the coupling agent, b.i.d., or p.r.n. to relieve local distress or interfere with the progress of the fibrous network. Pulsed ultrasound is recommended at 0.5 to 0.7W/cm² for eight minutes per application.

Since a constant finding histopathologically within the developing nodules is the formation of blood vessels, cauterization may be achieved by applying a refrigerant spray directly to the area of the lesion sufficient to achieve this effect clinically. This lesion may prove somewhat intractable to treat, even in the early stages of formation.

References

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