Dupuytren contracture is a myofibroblastic condition that causes one or more fingers to bend toward the palm of the hand. The affected fingers can't straighten completely due to knots of tissue that form under the skin. They eventually create a thick cord that can pull the fingers into a bent position. It most often affects the two fingers farthest from the thumb. This can complicate everyday activities such as placing your hands in your pockets, putting on gloves or shaking hands.

Dupuytren contracture gets worse slowly, over years. The condition begins with a firm lump in the palm of the hand. This lump might be a little tender, but usually isn't painful. Over time, the lump can extend into a hard cord under the skin and up into the finger. This cord tightens and pulls the finger toward the palm, sometimes severely.

Dupuytren disease is a genetic disorder that often is inherited in an autosomal dominant fashion, but is most frequently seen with a multifactorial etiology. It is associated with diabetes, seizure disorders, smoking, alcoholism, HIV, and vascular disease. Occupation and activities have not been shown to be risk factors.

The pathophysiology of Dupuytren disease involves abnormal myofibroblastic growth in the hand, predominantly composed of type III collagen. Numerous cytokines are involved including interleukin-1, transforming growth factor beta-2, epidermal growth factor, platelet-derived growth factor, and connective tissue growth factor.

Dupuytren contracture progresses through three phases: (1) proliferative, (2) involution, and (3) residual. The proliferative phase has a characteristically high concentration of immature myofibroblasts and fibroblasts arranged in a whorled pattern. In the involution phase, fibroblasts become aligned in the longitudinal axis of the hand following lines of tension. In the residual phase, relatively acellular collagen-rich chords remain causing contracture deformity.

Diabetes, as an example of the pathogenesis of Dupuytren disease, has long been considered a risk factor for Dupuytren disease. One of the proposed biochemical processes is the formation of advanced glycated end products (AGEs). AGEs have

been associated with other fibroproliferative disorders, such as diabetic cardiomyopathy and idiopathic pulmonary fibrosis, and carpal tunnel syndrome. Data from biopsies from the palmar fascia in patients with diabetes showed higher levels of AGEs compared to a control group, which possibly may cause increasing levels of collagen deposition and increased collagen stiffness.³ Furthermore, studies have also shown that diabetes can cause increased formation of myofibroblasts, one of the proposed main cell types responsible for contraction the finger. The study has confirmed that participating patients with diabetes at baseline had marked increased risk for development of Dupuytren disease during follow-up; even when adjusting for other known risk factors, e.g. alcohol consumption and BMI.

Wellness Recommendation

The wellness recommendation includes the Gold Patch. The Gold Patch is a topically applied product that removes nodules and stasis. It helps dissolve cell masses due to abnormal cell growth or hardened plaque, scars, or protein deposits in the tissue directly by activating cell mediated immune function. Herbal ingredients in the Gold Patch have been shown to markedly reduced the expression of proinflammatory cytokines and matrix metalloproteinases, relieve cellular fibrotic activities, and significantly suppress protein expression levels of collagen type I and TGF-β1.¹²





Patients can experience symptom improvements in 4 to 6 weeks and 3-5 months of the protocol is recommended for significant improvement.

If patients also have diabetes, LC Balancer and Brown are recommended. LC Balancer improves overall microcirculation which in turn reduces blood glucose levels. Herbal ingredients in LC Balancer have been shown to inhibit the formation of advanced glycated end products which decreases collagen deposition in the palmar fascia.⁴ Brown improves liver function and structure to help normalize liver enzyme levels and blood lipid levels to restore the activity of the insulin signal transduction pathway which increases insulin activity and lowers blood glucose levels. Patients can experience improved liver enzyme levels (AST/SGOT and ATL/SGPT), blood lipid levels and blood sugar levels within 3-4 weeks. It will require to 6 weeks to 3 months of the protocol for sustained blood sugar control.

Selected Case Studies

<u>Case 1: Nodule Resolution in Dupuytren's Contracture Patient</u> *Ross Douglas, DC, CO*

Testimonial from patient:

"Dupuytren's Contracture is a terrible disease, with a nodule growth on the ring finger palm of the hand, progressively contracting the finger inward into disuse, and one that medical doctors do not have good solutions. Each medical solution is horribly painful and fraught with side effects and complications.

Using the gold patches, first 10 years ago on my left hand and then in the last couple of months, with Dupuytren's showing up on my right hand, the gold patches fully, painlessly, simply, resolved the nodules, without any side effects. I am fortunate and privileged to have had access to this extremely efficient solution to an otherwise debilitating disease. Thank you, Wei Labs!"

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