Dupuytren’s Contracture Associated with Long-Standing Diabetes Mellitus

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Dupuytren’s contracture is a slowly progressive fibroproliferative disease of the palmar fascia in the hand.¹ The etiology and pathogenesis of Dupuytren disease are not well understood. Abnormal collagen deposition results in nodule and cord formation that causes the affected fingers to contract. Genetic associations of disease revealed reduced expression levels of three matrix metallopeptidases (MMP1, MMP3, MMP16), follistatin, and STAT1, and significantly increased expression levels of fibroblast growth factors (FGF9, FGF11), a number of collagen genes and other ECM genes in DD patient samples.² Besides genetic predisposition, the other most common associations are cirrhosis of liver, diabetes and seizure disorders. Literature suggests that the frequency of Dupuytren’s disease is ten times greater in diabetes than in the general population, with an incidence of 5%.³ Although bilaterality of Dupuytren’s disease has been reported in 53% of the cases, in diabetics the condition presenting as bilateral and symmetrical is very uncommon and review of literature, no case reports were found.

In Dupuytren’s disease frequently multiple fingers or joints are affected and eventually may limit hand movement and severely impair hand function. The contracture is usually severe in diabetes, it is nodular in form and usually crushes the palmar surface of the long and ring fingers.⁴ It is the duration and severity of type II diabetes which leads to such a deformity mainly due to localized ischemia and subsequent xanthine oxidase-derived free-radical formation from endothelial cells causing activation of myofibroblast through growth factor abundance causing contractures.⁵ The mainstay of treatment accepted by most is surgical, use of collagenase injections, of Clostridium histolyticum aimed at chemically disintegrating pathologic cords may emerge as an important addition to the armamentarium of treatments for Dupuytren’s disease.⁶

The present case is a 56 year old man with type 2 diabetes mellitus since 12 years with uncontrolled blood sugar and he had been on oral hypoglycaemics (metformin 1gm and glimepiride 2mg per day). He had presented with slowly progressive Dupuytren’s contracture of palmar aponeurosis of both hands with crippling deformity (Figures 1 and 2). A detailed work up revealed haemoglobin - 10.2 gm%, Total Leucocyte Count - 12,000/mm³, platelet count - 1.2 lakhs, blood urea - 28 mg%, serum creatinine - 1.2 mg%, serum uric acid - 5 mg/dl, SGOT - 34 U/L, SGPT - 41 U/L, serum alkaline phosphate - 52 U/L, serum protein and A:G ratio being normal, glycosylated haemoglobin of 10.6 % and antinuclear antibody was negative. Electrocardiogram and X-ray chest, bilateral hands showed no abnormality. Ultrasound abdomen was normal.

References


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