

PHOTO QUIZ

## A 61-year-old diabetic and alcoholic male with bilateral ‘stiff fingers’

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**Figure 1.** Bilateral contraction (grade 2-3) of the middle, ring and little fingers, and hypotrophy of the dorsal interossei muscles. The changes are more accentuated at the left.

A 61-year-old white right-handed man was admitted because of recent loss of weight and difficulty in swallowing solid foods. There was gradually progressive apathy, postural instability with falls backwards and cognitive deficit. His past history included controlled diabetes mellitus and arterial hypertension, tobacco smoking and heavy alcoholism. During the last two years, an unexplained bilateral contraction developed in some of his fingers. He was not a manual worker nor a guitar or piano player, and denied previous

hand trauma or similar disturbance in members of his family. Physical examination confirmed postural instability and revealed vertical gaze palsy, and the suspicion of progressive supranuclear palsy (PSP) was confirmed, based on clinical data and the study of brain images. Moreover, there was bilateral contraction of the middle, ring and little fingers, and thickened linear structures were palpated over the third, fourth and fifth flexor tendons on both palms. Furthermore, the patient was not able to lay his palms flat on a tabletop; and conspicuous hypotrophy of the lumbrical and interossei muscles was observed (Figure 1). The evaluation of the shoulders, plantar and genital regions showed no abnormality. Laboratory tests were unremarkable, and specific studies were made to clear the hand changes. The patient was treated with conservative clinical, nutritional, and physiotherapy procedures, before being referred for specialized treatment and outpatient surveillance.

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**What is your diagnosis?**

## ANSWER to PHOTO QUIZ

### Dupuytren's contracture

Dupuytren's contracture (DC) is a fibro-proliferative disease, which was first described in 1831. It affects the metacarpophalangeal and proximal interphalangeal joints of the hand [1]. Deformities and dysfunctions mainly affect the little and ring fingers of the dominant hand [1]. DC is characterized by progressive proliferation of myofibroblasts, and type III collagen, with the development of nodules, accentuated fibrosis, resulting in permanent digit contractures [2]. The prevalence of DC ranges between 0.2 and 56% among diverse age and population groups [3], and is more frequent among males (8-10:1) [1,2] between 30-50 years (rarely before 30 or after 70 years) [1]. The etiology and pathophysiology of DC are not entirely known. Although this entity is more prevalent in manual workers [3] it also occurs in alcoholic, diabetic, HIV-infected, epileptic, and sedentary people [2,4]. The aim of this case study is to exemplify the occurrence of bilateral DC in a sedentary patient with a past history of diabetes, alcoholism, tobacco smoking and arterial hypertension. These comorbid conditions may interfere with the therapeutic management and can adversely influence the outcome of patients with DC. The patient presented herein with bilateral DC denied inherited predisposition; he was a tobacco smoker and alcoholic and had longstanding diabetes and arterial hypertension. Diabetes and alcoholism are prevalent conditions among elderly males, and can cause diverse central and peripheral neurologic disturbances that may pose diagnosis challenges with DC; however, the ultrasound study of the hands detected diverse hypoechoic bands adhering to the margins of the flexor tendons and the dermal deep surface, associated with hypoechoic hypervascular nodules; typical findings

considered conclusive for the diagnosis of DC [5]. Invasive surgical procedures were not immediately performed because of his general clinical condition and comorbidities, which deserved priority medical and nutritional management, as well as functional rehabilitation (physiotherapy, hand therapy, and occupational therapy). The patient also had PSP, starting after the age of 40, and the features were strongly suggestive of Richardson syndrome [6] but the coexistence of DC with this syndrome seems to be a casual phenomenon. Moreover, his neurological symptoms, including falls, could be mistaken as an unsuspected epilepsy, which is a well-known predisposing factor for DC [1,7]. Other disorders related to DC include myocardial disease and reflex sympathetic dystrophy [1], hepatic disease, arthritis, fibromatosis, use of antiepileptic drugs, and compulsive personality. Differential diagnoses involve other conditions associated with diabetes, as multiple "trigger fingers" and "ulnar tunnel" syndrome, but these entities were ruled out based on clinical features [1,6,7].

### References

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