DUPUYTREN’S DISEASE CONFINED TO THE INTERPHALANGEAL JOINTS: A CASE REPORT

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ABSTRACT

Atypical case of Dupuytren’s contracture confined to the interphalangeal joints of the right little finger, occurred in a 79-year-old man. No past history of risk factors or family history of Dupuytren’s disease could be detected. Excisions of the abnormal cords lead to good clinical outcome.

Keywords: Atypical Dupuytren’s Disease; Localised Dupuytren’s Disease; Distal Interphalangeal Joint.

INTRODUCTION

The typical patient of Dupuytren’s disease is usually an old Caucasian male.1 It is typically presented with thickening of the palmar aponeurosis with or without extension into the digits, however both atypical patient2 and atypical presentation3 were previously reported.

We recently experienced a case with atypical presentation of Dupuytren’s disease. The contracture was only confined to the proximal interphalangeal (PIP) and distal interphalangeal (DIP) joints of the little finger without affection of the palm or metacarpophalangeal (MP) joint.

CASE REPORT

A 79-year-old male presented with deformity of the right little finger. The deformity started a year ago without history of trauma. The patient was not a smoker, an alcoholic or a diabetic. Physical examination revealed fixed flexion contracture of interphalangeal joints of 70° at DIP joint and 50° at PIP joint (Fig. 1). The range of motion of MP joint was normal. Subcutaneous cord could be palpated at the volar and radial aspect of the DIP joint, but there was no cord in the palm or MP joint.

Under axillary brachial plexus block, exploration revealed central shift of the neurovascular bundles on both sides. On the radial side of the DIP joint, a thick tight cord existed posterior to the neurovascular bundle (Fig. 2). Another less defined cord existed on the ulnar side. After excision of these two cords full passive extension of DIP joint was achieved (Fig. 3).

Skin closure and dressing of the affected finger was performed in the corrected position. In the early post-operative stage, ischaemia of the finger tip occurred. Removal of dressings and flexion of the finger was done. Intravenous infusion of prostaglandin E1 was added. Few hours later finger vascularity improved.
Fig. 1 Pre-operatively, the right little finger shows fixed flexion contracture of both PIP and DIP joints.

Fig. 2 Intra-operative photo of the DIP joint shows the thick tight lateral cord extending from head of proximal phalanx to base of distal phalanx (black arrow) and the centrally shifted radial neurovascular bundle (white arrow).

Histopathological examination of the excised cords revealed palmar fibromatosis. Three months after surgery the patient showed good clinical outcome (Fig. 4).

DISCUSSION

The exact aetiology of the Dupuytren’s disease is not fully understood and many aspects of the disease remain a mystery. Classic pathogenesis of Dupuytren’s disease, the contracture primarily affects the palmar fascia then extends to the digits.4,5 In our case, finger affection occurred without any cords in the palm or MP joint. To the best of our knowledge, similar pathology was previously reported twice in the English literature.3,6 In those reports, little finger was involved in all three cases, and two of them occurred following trauma.3,6

Pattern of digital contracture was also atypical in our case. The commonly existed stiff central and spiral cords were absent,1,5 instead, two lateral cords had caused flexion contracture. Usually cord stiffness starts in the palmar pretendinous cord, then extends to the central cord of the finger.5 The lateral cords represent thickening of the lateral digital sheet. They are responsible for both joint flexion contracture and midline displacement of the digital neurovascular bundles.1,4 Although a single digit was involved, the clinical and histopathological features were
similar to that of Dupuytren’s disease. We think that Dupuytren’s disease is better classified into palmar type where contracture starts first in the palm (classical type) and digital type.

During surgical exploration, especially for fingers with severe deformity, dissection should start from the normal proximal part to the lesion in order to avoid neurovascular damage. Poor results have been reported after releasing DIP joint contracture in Dupuytren’s disease, because of incomplete removal of fascia and lack of post-operative physiotherapy. In addition, we think that passive manipulation of the DIP joint easily causes vascular spasm. Consequently we experienced ischaemia of the finger, which resulted in delay of wound healing and cold intolerance. Post-operative finger ischaemia is not an infrequently reported complication. In a big series of 253 cases, Bulstrode et al. reported two cases of vascular injury. It occurred in patients with severe deformity and vascular repair was required. They recommended pre-operative digital Allen’s test as a landmark of the extent of digital artery compression. Others recommended PIP joint arthrodesis with shortening of the proximal phalanx. We recommend not to try immediate full correction of the finger, and post-operative dressing should be done in a slightly flexed position. Also unnecessary manipulation of the neurovascular bundles during surgery should be avoided. Immediate shortening osteotomy of phalanx may be considered to avoid vascular insufficiency.

References