

# DUPUYTREN'S DISEASE MAY EXTEND BEYOND THE WRIST CREASE IN CONTINUITY

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**Debate continues about the origin of Dupuytren's disease, which is usually in the palm but is seen elsewhere as ectopic lesions. We describe a young patient with Dupuytren's disease extending proximal to the wrist crease in continuity with the palmar lesion.**

**Our findings support the view that the condition starts within the palmar connective tissue, but there is no palmar aponeurosis in the forearm and the proximal extension probably started in the deep layer of the superficial fascia.**

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Dupuytren's contracture is usually confined to the palm of the hand, but associated lesions are Garrod's knuckle pads, nodules in the plantar fascia and Peyronie's disease. 'Ectopic lesions' have been described involving the tendo Achillis, the tongue<sup>1</sup> and the forearm.<sup>2</sup>

We report a patient with Dupuytren's disease extending beyond the wrist crease, but in continuity with the palmar lesion. This has been reported only rarely,<sup>2-4</sup> but is significant in regards to the origin of the disease, since the palmar aponeurosis does not extend into the forearm.

## CASE REPORT

A 35-year-old man developed thickened tissue at the base of the ring finger of his right hand 14 months after sustaining a comminuted Colles' fracture. After a further 26 months the disease had progressed in the palm, producing about 30° flexion contracture at the metacarpophalangeal joint of the finger. There was a palpable lump at the base of the hypothenar area with a cord-like thickening extending proximal to the wrist near its ulnar border (Fig. 1). There was full range of wrist movement.

At operation, Dupuytren's tissue was found to extend from the base of the ring finger to a fairly large nodule at

the wrist and then superficial to the flexor retinaculum towards the flexor carpi ulnaris tendon, to which it was attached (Fig. 2). Histopathology showed that the proximal lesion was consistent with Dupuytren's tissue, but the flexor carpi ulnaris tendon in close proximity with the diseased tissue did not show any abnormal features.

## DISCUSSION

Two similar cases have been reported.<sup>2</sup> In both there was progressive recurrent Dupuytren's disease of the palm and fingers with proximal extensions of proliferating fibrous tissue involving the volar aspect of the wrist, including the flexor tendons. This rare type of extension, remote from the main palmar fascia has also been described by Barton<sup>3</sup> and McFarlane.<sup>4</sup>

The incidence of this type of Dupuytren's disease is unknown. The average age of onset in the three reported patients was 40 years. Hueston<sup>5</sup> stated that the disease affecting such younger patients belongs in a separate category, which he termed the "young fulminating type". Hueston developed the concept of the intrinsic and extrinsic theories of the pathogenesis of Dupuytren's disease.<sup>6</sup> In the intrinsic theory the palmar aponeurosis is considered to be the tissue primarily involved. This was based on Skoog's<sup>7</sup> demonstration of microruptures within the fascial bands. In the extrinsic theory, the hyperplastic nodule is thought to be the essential structural element. Histological studies by Dabrowski<sup>8</sup> confirmed that the plane of hyperplastic nodules is within the subcutaneous space on the anterior surface of the palmar aponeurosis. McGrouther<sup>9</sup> and Flint, Gillard and Reilly<sup>10</sup> have shown that this subcutaneous layer is the palmar 'connective tissue continuum' which includes the connective tissues of the superficial palm from the underside of the epidermis to the deeper aspect of the deep longitudinal fibres of the palmar fascia.

In the forearm there is no palmar aponeurosis. The longitudinal pretendinous fibres of the aponeurosis represent the distal fascial bundles of the palmaris longus when it is present. These are well developed even when the tendon is absent and may merge with other fascial systems in the flexor retinaculum or receive an insertion from flexor carpi ulnaris.<sup>11</sup>

In our case, the tissue in continuity proximal to the wrist partially involved the flexor carpi ulnaris tendon although

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Fig. 1

Photograph showing Dupuytren's disease extending into the wrist.

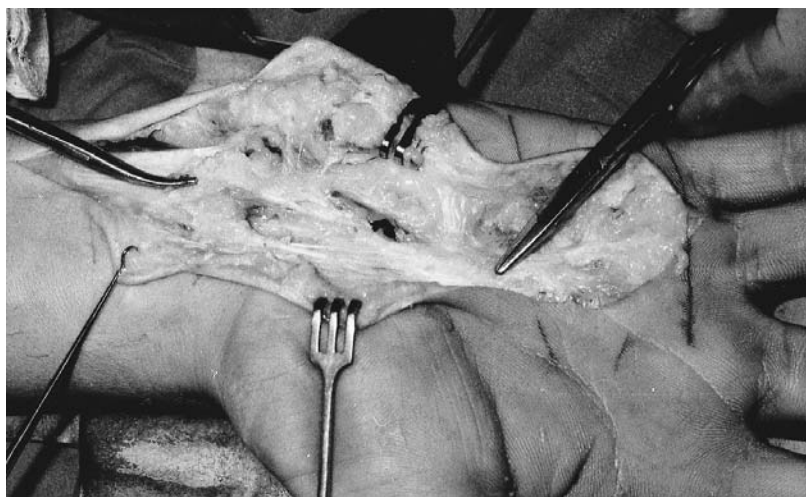


Fig. 2

At operation the Dupuytren's disease was found to extend from the base of the ring finger to a nodule on the ulnar side of the wrist.

the tendon itself was not diseased. The tendon lies superficial to the deep fascia and the flexor retinaculum and therefore it would be reasonable to suggest that the proximal disease began superficial to the flexor carpi ulnaris tendon, coming from the deeper layers of the superficial fascia. Boyes and Jones<sup>2</sup>, however, stated that the deep fascia of the forearm is probably the tissue involved in the proximal extension of Dupuytren's disease. In their cases there was secondary involvement of the tendons as they lay between the superficial and deep layers of the fascia. We support the view that Dupuytren's process begins somewhere within the palmar connective tissue continuum.<sup>12</sup> As there is no palmar aponeurosis in the forearm the proximal extension probably starts from the deeper layers of the superficial fascia.

Our patient had no impairment of function of the wrist, but we now examine every young patient with Dupuytren's disease and those with recurrent disease for evidence of extension into the wrist and the forearm.

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#### REFERENCES

1. **Hueston JT.** *The management of ectopic lesions in Dupuytren's contracture.* 'Dupuytren's disease'. Churchill Livingstone, 1974: 145-7.
2. **Boyes JH, Jones FE.** Dupuytren's disease involving the volar aspect of the wrist. *Plast Reconstr Surg* 1968;41:204-7.
3. **Barton NJ.** The ulnar side of the hand. In: McFarlane RM, ed. *Dupuytren's disease: biology and treatment.* Churchill Livingstone, 1990:176-83.
4. **McFarlane RM.** Dupuytren's diathesis. In: McFarlane RM, McGrouther DA, Flint MH, eds. *Dupuytren's disease.* Edinburgh, etc: Churchill Livingstone, 1990:250-2.
5. **Hueston JT.** Dupuytren's contracture: the trend to conservatism *Ann. Roy. Coll. Surgeons Eng* 1965;36:134-50.
6. **Hueston JT.** Aetiological questions in Dupuytren's contracture. 'Dupuytren's disease', Churchill Livingstone, 1974:29-36.
7. **Skoog T.** Dupuytren's contraction with special reference to aetiology and improved surgical treatment: its occurrence in epileptics. *Acta Chir Scand* 1948;96 [Suppl 139] 1-190.
8. **Dabrowski T.** Microscopic lesions in Dupuytren's disease. *Acta Medica Polona* 1967;8a:477-504.
9. **McGrouther DA.** The microanatomy of Dupuytren's contracture. *Hand* 1982;14:215-36.
10. **Flint MH, Gillard GC, Reilly HC.** The glycosaminoglycans of Dupuytren's disease. *Connect Tissue Res* 1982;9:173-9.
11. **Fahrer M.** The proximal end of the palmar aponeurosis. *Hand* 1980;12:33-8.
12. **Flint MH.** Connective tissue biology. In: McFarlane RM, ed. *Dupuytren's disease: biology and treatment.* Churchill Livingstone, 1990:13-24.