ANOMALOUS ORIGIN OF A LUMBRICAL MUSCLE AS CAUSE OF A TRIGGER FINGER

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We report a case of a trigger finger due to an anomalous origin of the fourth lumbrical muscle. Total excision of the involved muscle fibers gave complete relief of symptoms.

Keywords : trigger finger ; lumbrical muscle ; anomalous origin.
Mots-clés : doigt à ressort ; muscle lumbrical ; insertion anormale.

INTRODUCTION

Trigger finger or stenosing tenosynovitis commonly is caused by constriction of the flexor tendons as they pass under the A1 pulley ; it may be subsequently worsened by localized swelling in the tendons themselves (5, 7). Other reasons for triggering which have been identified and published mostly concern congenital abnormalities, that predispose to the condition and trauma. Some collagen diseases, tumors and rheumatoid arthritis can also elicit the triggering effect (1, 5, 7). We have operated on a patient with triggering of the left little finger due to an anomalous origin of the fourth lumbrical muscle.

CASE REPORT

A 38-year-old White man presented with triggering of the left little finger. The symptoms started gradually over a 2-month period, and there was no history of previous trauma or surgery. His profession is physiotherapy.

On examination he had a normal range of motion with a triggering effect. Localized swelling could be felt in the palm of the hand just proximal to the metacarpal-phalangeal joint, which followed the gliding of the tendons on flexing and extending the finger, but to a lesser extent.

Under locoregional anesthesia and with the use of a tourniquet an oblique incision was made over the swelling. During the dissection the swelling appeared to be a greyish mass, and at first we thought it to be a cyst of the flexor tendon sheath. After full dissection it appeared to be a mass of muscle fibers attached to both the superficial and deep flexor tendon ; the flexor tendon sheath was virtually absent.

Further dissection showed the muscle fibers belonging to the fourth lumbrical muscle. Because of the direction of the fibers, the mass seemed to be an anomalous origin of the lumbrical muscle. On passive flexion-extension the muscle fibers entered under the A1 pulley causing the triggering effect. Therefore the muscle fibers were partly excised and the tendons cleaned until we obtained normal gliding of the tendons. No fibrous thickening of the tendons could be observed.

Postoperatively normal rehabilitation followed and 1.5 years later the patient has no clinical evidence of recurrence.

DISCUSSION

Variations of the anatomy of the lumbrical muscles of the hand are very common. Basu and

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Hazary (2) found only approximately half of the examined hands to have "normal" lumbricals. Mehta and Gardner (4) only found 16% to correspond to the pattern described in the textbooks they consulted.

Anomalous origin of a lumbrical muscle from the tendon of a flexor digitorum superficialis (FDS) is, as far as we know, until now only reported for the first and second lumbrical muscles (4). In our case we found an anomalous origin from the FDS involving the fourth lumbrical muscle.

Textbooks (3, 6) describe in the palm of the hand full coverage of the flexor tendons for the fifth finger by a tendon sheath. We found a virtually absent flexor tendon sheath and a firm contact between muscle fibers and tendons. We found no other articles dealing with this anatomical variation.

Although trigger finger and anomalous anatomy of a lumbrical muscle are very frequently observed independently, we found only one previous observation considering a lumbrical muscle as the cause of a trigger finger (1). Therefore this pathological condition remains a very rare entity.

REFERENCES

1. Bartell T. H., Shehadi S. I. Trigger finger secondary to anomalous lumbrical insertion : a case report and review of the literature. Plast. Reconstr. Surg., 1991, 87-2, 354-357.
2. Basu S. S., Hazary S. Variations of the lumbrical muscles of the hand. Anat. Rec., 1960, 136, 501-503.
3. Hoppenfeld S., de Boer P. Orthopaedics, the anatomical approach. J. B. Lippincott Company, Philadelphia, 1984, 178-181.
4. Mehta H. J., Gardner W. U. A study of lumbrical muscles in the human hand. Am. J. Anat., 1961, 109, 227-238.
5. Milford L. Stenosing tenosynovitis, in Campbell's operative orthopaedics, 7th ed., A. H. Crenshaw ed., C. V. Mosby Co., St. Louis, 1987, 461-466.
6. Netter F. H. The Ciba collection of Medical illustrations vol. 8, part 1 Ciba-Geigy Corporation, 1987, 59-65.
7. Turek S. L. Trigger finger, in "Orthopaedics", Principles and their application, 4th ed., J. B. Lippincott Company, Philadelphia, 1984, 1044-1046.

SAMENVATTING

G. A. MATRICALI, J. VERSTREKEN. Springvinger ten gevolge van een abnormale origo van een musculus lumbricalis.

De auteurs beschrijven het geval van een man met een springvinger ten gevolge van een abnormale origo van de vierde musculus lumbricalis. Volledige excisie van de betrokken spiervezels bracht genezing.

RÉSUMÉ

G. A. MATRICALI, J. VERSTREKEN. Doigt à ressort, causé par une insertion anormale du muscle lumbrical.

Les auteurs présentent un cas de doigt à ressort dû à une insertion anormale du quatrième lumbrical. L'excision totale de ce muscle a fait disparaître toute symptomatologie.