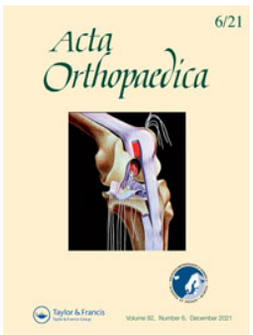

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Extensor digitorum brevis manus

A case report

A 45-year-old man presented with swelling on the dorsum of both hands, discomfort and pain, all of which became aggravated with activity. An anomalous muscle, the extensor digitorum brevis was found bilaterally. Division of the extensor retinaculum was performed in one hand, excision of the anomalous muscle in the other. One year after surgery, the patient was asymptomatic in both hands.

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Extensor digitorum brevis manus (EDBM) is an anomalous muscle found on the dorsum of the wrist and hand (Strauss 1941), often bilaterally. Reef and Brestin (1975) found 18 well-documented cases in the literature. Forty-six cases have been reported since that time, of which 38 in one study (Gama 1983). The presence of the muscle has often given rise to misdiagnosis resulting in exploratory surgery. The aim of our report of a bilateral case is to increase the clinician's familiarity with the condition.

Case report

A 45-year-old man complained of a painful swelling on the dorsum of both hands. The swelling had been present for 2.5 years on the right hand and 1 year on the left hand. It was associated with mild discomfort that developed into pain with increased activity.

Bilaterally, a 3-cm-long fusiform, soft, non-tender mass was oriented in the longitudinal axis between the third and fourth metacarpal bones. The mass was freely moveable laterally. There was normal range of motion of the radiocarpal joint, but dorsiflexion and volar flexion were painful.

At surgery an anomalous muscle was found. It originated from the joint capsule of the carpus, extended distally beneath the extensor tendons as a single muscle belly, and inserted into the extensor mechanism of the ulnar side of the third finger.

On the left hand, a nerve entered the muscle. It appeared to be a branch of the posterior interosseus nerve. The right muscle belly was excised in toto. On the left side, the extensor retinaculum was divided. One year after surgery the patient was free of symptoms from both hands.

Discussion

The EDBM is thought to be atavistic and a remnant from the amphibians. The digital joints of amphibians are entirely controlled by intrinsic muscles, and the EDBM could represent a homologue of the extensor digitorum brevis on the dorsum of the foot (Strauss, 1941).

The prevalence of EDBM has been reported to be from 1 to 10 per cent in cadavers (Murakami & Todani 1982, Gama 1983). In clinical practice it has not been encountered this often. The muscle usually presents in adults, although it undoubtedly is present at birth. This is explained by the development of the muscle in conjunction with work and other physical activity.

The most common insertion is to the index

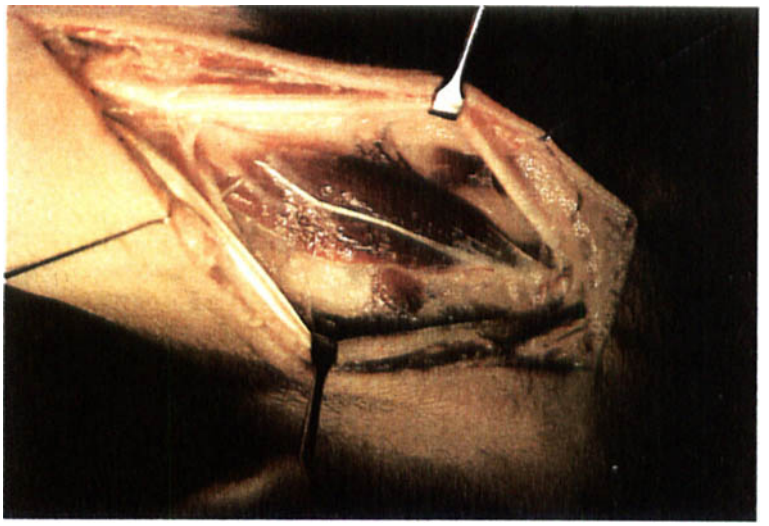

Figure 1. Exploration of the left carpus with the fingers to the left. The extensor tendons are held aside and the extensor digitorum brevis is in the center.

finger (extensor indicis brevis). The second most common insertion is to the third finger (Smith & Browne 1979). Anomalous muscles are often confused with ganglia, synovial cysts, synovitis, tumors, and exostosis (Gama 1983). The presence of the muscle can be established by EMG (Reef & Brestin 1975). Histologic examination will show normal striated muscle (Gama 1983).

If pain is severe enough, surgery is the treatment of choice. Most authors advocate excision, but we found relief of symptoms by division of the retinaculum extensorum, and this is a simple operation with less risk of postoperative fibrosis.

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