Lipofibromatous hamartoma of a digital nerve

A case report

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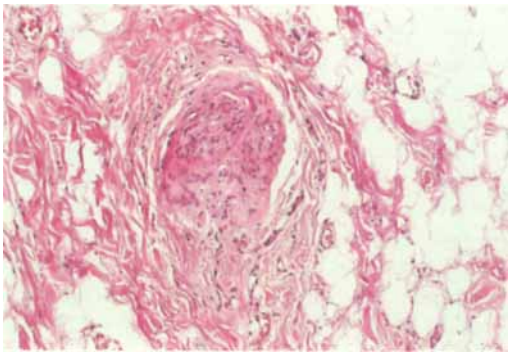
Lipofibromatous hamartoma is a rare, benign tumor, most often affecting the median nerve. Our case involved the volar radial digital nerve of the index finger, treated with a partial excision of the tumor. Important nerve branches should not be sacrificed in order to achieve radical excision.

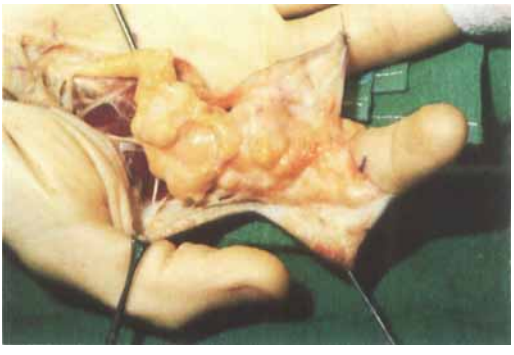
Lipofibromatous hamartoma of nerves is a rare condition in which slowly growing proliferative fibrofatty tissue surrounds and infiltrates major nerves and their branches. Treatment of this benign neoplasm is controversial (Amadio et al. 1988). We report a case where the volar digital nerve of the index finger was affected by this tumorlike process.

Case report

A 30-year-old woman was admitted because of a slowly growing fusiform mass of her right index finger. She worked as a typist and had for 2 years noticed an increasing swelling on the radial side of the index finger. At examination a soft subcutaneous mass was found ranging from the thenar region along the entire radial side of the index finger to the distal interphalangeal joint. The swelling was not tender, the digital sensation and range of motion were normal, and no signs of a carpal tunnel syndrome were found. Radiographic examination and laboratory tests were normal. A fine-needle aspiration of the swelling did not give a conclusive cytologic diagnosis. At operation the radial digital nerve branch of the median nerve was enlarged by a fusiform lipomatous mass extending from the branching of the nerve to the distal interphalangeal joint and involved both the volar and the dorsal digital branches. The tumor resembled an infiltrating lipoma of the nerve, but there was no invasion of the surrounding tissues (Figure 1). With the aid of an



A. The tumor follows the digital nerve and does not infiltrate the surrounding tissues. Observe the intimate relationship between the tumor and the digital nerve.



B. A nerve fascicle surrounded by fibrofatty tissue. H&E ×100.

Figure 1. A 30-year-old woman with a lipofibromatous nerve hamartoma of her right index finger.

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operation microscope, a microdissection of the nerve was performed aiming at removing as much of the tumor as possible without sacrificing the nerve branch. The major part of the tumor was excised leaving the volar digital nerve intact. The smaller dorsal branch was excised for histologic examination. The immediate postoperative recovery was uneventful. Two years after the operation, the patient's only complaint was a slight numbness of the index finger.

Upon histologic examination the diagnosis of lipofibromatous hamartoma of the median nerve was confirmed (pathology report by Helena Willén).

Discussion

Lipofibromatous hamartoma, sometimes also referred to as intraneural and perineural lipofibroma or fibrofatty proliferation, is a slowly growing, probably congenital, benign soft tissue tumor most often involving the median nerve of the hand and commonly associated with macrodactyly (Johnson and Bonfiglio 1969, Amadio et al. 1988). Single cases of involvement of the ulnar, radial, and peroneal nerves have been reported (Enzinger and Weiss 1983, Gouldesbrough and Kinny 1989). The condition is most often found in young adults indicating that the tumor may often have a self-limiting natural course. However, size or associated nerve compression symptoms may warrant an operation. No malignant transformation has been reported, and several authors report decreased tumor size in untreated cases (Callison 1968, Johnson and Bonfiglio 1969, Paletta and Rybka 1972, Patel et al. 1979). Thus, a conservative approach may be emphasized with no attempt to sacrifice important nerve branches to achieve radical excision of the tumor. Although we employed a microdissection technique, this is not without hazard, because ischemic complications of the nerve might develop. Amadio et al. (1988) reported this in at least 1 of their cases. At follow-up 2 years after surgery, our patient had a slight numbness of the index finger. This does not interfere with her work as a typist. There was no sign of tumor reccurrence. Amadio et al. (1988) also concluded that within a period of 50 years, in which 14 cases where treated, efforts to preserve nerve function by microsurgical dissection were not notably more successfull than radical excision.

This condition should be suspected when a patient presents with a soft fusiform mass of the hand, sometimes with signs of median nerve compresssion of varying degree (Johnson and Bonfiglio 1969, Amadio et al. 1988). The tumor resembles the fatty tissue seen in lipomas, but the infiltrative character separates it from ordinary lipomas.

Recommended treatment for suspected lipofibromatous hamartoma of a nerve branch would thus be an exploratory operation with excisional biopsy for histologic diagnosis. Radical excision sacrificing important nerve branches should not be made.

References

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