CASE REPORTS

LIPOMA PRODUCING A LESION OF THE DEEP BRANCH
OF THE RADIAL NERVE

CASE REPORT

CHARLES S. CAMPBELL, M.D.,* AND ROBERT F. WULF, M.D.
Salem, Oregon
(Received for publication October 21, 1938)

Nontraumatic lesions of the deep branch of the radial nerve in the forearm are apparently not common and have seldom been reported.1 A case exhibiting damage to the deep branch of the radial nerve,† caused by pressure of a lipoma on the nerve in its course in the supinator muscle of the forearm, is herewith presented.

CASE REPORT

A single white female, aged 40, who was a church worker, complained of noticing a lump at the outer side of the left forearm 3 months before admission. At about the same time she noticed that she could not use the left index finger properly, and after several weeks she noticed that the finger would not extend completely. There was no unusual sensation in the finger except “a little numbness.” She had some intermittent pain in the front and back of the upper arm, and she thought she could bring on this pain by pressure over the lump in the forearm.

She had suffered from chronic back pain for years and had an x-ray abnormality in the 3rd lumbar vertebra which was thought to be congenital, perhaps a hemangioma. Her family history was noncontributory.

Examination. Positive neurological findings were limited to the left arm. The index finger and the thumb could not be completely extended (Fig. 1). There was a deep swelling on the forearm in the general area of the supinator muscle. This swelling was soft on palpation and not readily movable. There seemed to be some weakness of the dorsiflexors of the wrist (extensor digitorum communis muscle). The wrist drop test and the brachioradialis test3 gave a normal response, indicating that there was no lesion of the radial nerve above the forearm. Careful study for sensory changes showed only equivocal decrease in sensitivity to light touch, pain, and pressure over a small area at the dorsum of the metacarpophalangeal joint of the index finger.

The neurological findings indicated a lesion of the deep branch of the radial nerve. This nerve supplies the following muscles: extensor digitorum communis, extensor digiti quinti and extensor carpi ulnaris. At a more distal level it gives branches to the abductor pollicis longus, extensor pollicis longus, extensor pollicis brevis, and extensor indicis proprius.1

Operation. The tumor was exposed through a vertical incision 4 inches long, just to the ulnar side of the brachioradialis muscle, which was retracted laterally, exposing the superficial branch of the radial nerve. The vessels in this area supplying the brachioradialis muscle were divided and ligated to further expose the supinator muscle and the common radial

---

* 1280 Center Street, Salem, Oregon.
† Properly termed: ramus profundus nervi radialis (O.T. posterior interosseous nerve) or often called dorsal interosseous branch.
nerve, showing its superficial branch and its deep branch. The deep branch was then followed distally to where it perforated the supinator muscle. The nerve was retracted laterally, and the upper, thinned-out, atrophic fibers of the supinator muscle were incised to expose the lipoma located beneath it. The lipoma extended laterally and distally to where it perforated the supinator muscle. The nerve was retracted laterally, and the upper, thinned-out, atrophic fibers of the supinator muscle were incised to expose the lipoma located beneath it. The lipoma extended laterally around the outer aspect of the head of the radius, forcing the deep branch of the radial nerve anteriorly and laterally.

The tumor was thought to have arisen near the periosteum of the ulnar aspect of the radius or the interosseous membrane.

Microscopically it was a typical lipoma.

Course. The surgical wound healed by primary intention. At the time of this writing a sufficient period has not elapsed for recovery of nerve function.

SUMMARY

A case is described of a lipoma producing paralysis of the deep branch of the radial nerve.

REFERENCES