

Examination of the radial nerve

Anatomy

The radial nerve (C5–C7) spreads along the lateral side of the arm, the sulcus nervi radialis on the humerus runs further to the dorsum of the arm. It has both a sensory and a motor component, so it is a mixed nerve.

Motor innervation area

- m. triceps brachii;
- m. brachioradialis;
- m. anconeus;
- m. supinator;
- m. extensor carpi radialis longus et brevis;
- m. extensor digitorum;
- m. extensor carpi ulnaris;
- m. extensor indicis;
- m. extensor digiti minimi;
- m. extensor pollicis longus et brevis;
- m. abductor pollicis longus.

Sensitive innervation area

The radial nerve mainly innervates the dorsal side of the forearm, rather its radial half. Next, part of the back of the hand, II. and III. finger.

Examination in paresis

Clenched fingers test

We ask the patient to join the hands with the palms together with the fingers extended. Thanks to the weakening of the extensors, the fingers on the paresis side fall into flexion.

Clenched fist test

In classic clenching of non-paretic muscles, a compensatory extension occurs in the wrist when clenching into a fist. We invite the patient to clench his hand into a fist, due to the weakened extensors, a normal compensatory extension reaction will not occur, but instead a flexion of the wrist and subsequent clenching into a fist.

Extensor test

The patient is asked to place his hand on the table so that the wrist and fingers are off the table and hang down freely. Next, we want him to do wrist extension, MP, PIP and DIP. Due to the weakening of the PIP and DIP extensors, they assume a flexion posture or cannot manage extension at all.

Clinical picture of the lesion

A typical symptom of a radial nerve lesion is the so-called teardrop hand, when the forearm is in slight pronation, the hand falls into palmar flexion at the wrist, and the fingers and thumb hang weakly down.

Causes of the lesion

The radial nerve is most commonly affected by trauma. Damage is often found in the sulcus nervi radialis, when the extensors of the hand and wrist are affected by the mechanism of a fracture or long-term pressure, e.g. while sleeping. In the event of a violation in the axilla region, the function of the triceps brachii muscle is damaged, this often happens due to the oppression of the axillaris nerve, along with damage to other nerves of the upper limb.

Links

Related articles

- Examination of the median nerve
- Examination of the tibial nerve
- Examination of the ulnar nerve
- Median nerve

Použitá literatura

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