
Compression of the cubital nerve of the elbow

The function of the cubital or ulnar nerve, is to provide sensitivity to the little finger and half of the ring finger, as well as to ensure hand strength. Unlike the median nerve of the carpal tunnel syndrome, the most usual compression point is at the internal edge/aspect? of the elbow.

Occurring less frequently than carpal tunnel syndrome, this compression-related syndrome is often less well-known and diagnosed late.

1.SYMPTOMS :

Paresthesia (tingling sensations), loss of sensitivity in the little finger and ring finger, and on the internal aspect of the hand. There is a reduction in strength at gripping and wasting of the hand muscles. Pain spreading over the internal aspect of the forearm to the elbow and possibly along the arm to reach the shoulder and neck. The condition may develop progressively or following an accident or unusual movements (sports, moving house...)

-Diagnosis can be confirmed by echography or MRI where there is a doubt.

MRI or arthro-scanner of the shoulder may also be prescribed in cases with a high rupture to check for an associated lesion of the rotator cuff tendons.

2.DIAGNOSIS :

Diagnosis is essentially clinical by observation of the symptoms ; pain may also be present at pressure to the nerve at the elbow.

An electromyogram is systematically requested. This examination takes place with a neurologist and allows the practitioner to diagnose any possible nerve compression. However, this examination is less reliable than for carpal tunnel syndrome, given that compression may be dynamic, i.e. occur during movement, whereas the examination takes place with the patient at rest. The electromyogram therefore constitutes no more than an aid to diagnosis. Imaging techniques (X-ray, MRI or scanner) are generally unnecessary, with the exception of a few cases.

In cases of the beginning stages of compression or cases with few symptoms, treatment is functional with the possibility of physical therapy and modification of the gestures responsible for the compression. An anti-inflammatory treatment may also be prescribed for a few days.

In cases where there is clearly major functional discomfort, persistent hypoesthesia of the fingers or compression observed from the electromyogram, treatment will then be of a surgical nature.

3.SURGICAL PROCEDURE :

-Length of hospital stay: outpatient to two days

-Anaesthetic: loco- regional

-Immobilisation: arm in a sling for 8 days

Treatment consists in recreating space for the cubital nerve at the elbow. Surgery is performed under regional anaesthetic, i.e. putting only the arm to sleep. A tourniquet placed at the root limits bleeding. Simply freeing the nerve in its groove is the procedure in the most straight-forward cases. If the nerve passes over the epitrochlea during elbow flexion (the internal bone protrusion of the elbow, which constitutes the anterior pulley for the nerve), I perform a removal of this epitrochlea, i.e. I remove this bone protrusion in order to provide space for the nerve during flexion of the elbow.

4.AFTER-SURGERY CARE :

A sling is worn for one week and dressings changed every other day for two weeks. There is often a haematoma for the first few weeks, but this will disappear progressively. The different symptoms of compression of the nerves may disappear within a few days or else take several months to improve in some patients. Physical therapy may be required from the fifteenth day in order to recover full elbow movements. Pressure to the internal aspect of the elbow may remain painful for several months due to healing. Functional recovery is complete if surgery is performed in the early stages.

5.POSSIBLE SECONDARY COMPLICATIONS :

- post-surgery **infection** is rare but generally easy to treat with early diagnosed cases.
- Extensive **haematoma** which may necessitate a secondary surgical washing.
- Lesions of the **nerves**, which are exceptional.
- **Incomplete recovery** which is frequent if surgery is carried out too late.
- **Recurrence** is unusual, but always possible.
- **Algodystrophy** which is unpredictable and can also spread to the hand and shoulder .

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