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Ulnar neuritis (cubital tunnel syndrome)

One of the nerves that supply the hand is called the 'ulnar nerve'. The nerve passes through a tunnel behind the inner bony prominence of the elbow. The nerve can get compressed in this tunnel and cause symptoms. The condition is known as a 'Cubital Tunnel Syndrome'.

Mechanically the nerve gets stretched every time we bend the elbow and it pushes against the medial side of the elbow. With time this causes irritation and compression of the nerve. It usually occurs in patients over the age of 40. The condition is associated with diabetes, previous elbow injuries/fractures and arthritis.

Symptoms and signs

The main symptom is tingling or pins affecting the little finger and ring fingers. This is because the ulnar nerve supplies sensations to these fingers. Tingling is often worse at night or first thing in the morning. This is because most people sleep with their elbows bent or with their arms above their head.

In the early stages, the symptoms are intermittent but later become continuous as the condition worsens. Patients may initially complain of pain on the inner aspect of the elbow and will notice numbness in the fingers.
Later symptoms of weakness and wasting of the muscles of the hand may develop. The most commonly wasted muscle mass is in the first web space, on the back of the hand between the thumb and the index finger. Patients may drop objects and feel clumsy.

The diagnosis of cubital tunnel syndrome is made clinically, however sometimes electrical tests (nerve conduction studies) are needed. The tests may be to confirm the diagnosis in patients in whom the symptoms and signs are not typical, and also to confirm that the nerve is not compressed elsewhere namely the neck or the wrist.

What is the treatment?

Splints: They keep the elbow from bending and may be useful if worn at night. Avoid keeping the elbow bent for a long time, and kneeling with the elbow bent on a table.

Surgery: The aim of surgery is to relieve the pressure on the nerve and prevent deterioration of nerve function.

Decompression of the ulnar nerve: This is an operation done as a day case, either under general anesthetic or a block (local anesthetic of the nerves of the arm). This is done through a 5-7 cm incision, and involves opening the roof of the tunnel that the nerve lie in.

A bulky dressing is applied for a couple of days. High elevation for 2-3 days is advised to reduce swelling and enhance healing. Gentle movement of the wrist, finger elbow and shoulder is encouraged immediately after the surgery. No heavy lifting for 4-6 weeks and no driving for 10 days.

Ulnar nerve transposition: This is an uncommon type of surgery where the ulnar nerve is moved from behind the bone (medial epiconyle), to beneath the muscle on the front of the bone. This way, the nerve will not stretch when the elbow is bent. In my practice this is only indicated if the ulnar nerve can flip to the front of the elbow by itself (subluxing nerve). This happen in about 7-10% of patients. The other indication for this operation is in case of elbow deformity.

The operation has excellent success rate in the early stages. It results in good resolution of night pain and tingling within a few days. However if there is already constant numbness in the fingers and wasting of muscle in the hand, then recovery from symptoms of is unpredictable. However one of the aims of surgery is to stop the nerve from deteriorating due to constant compression. Thus even if the procedure does not reverse the symptoms, it will help to prevent progressive worsening of the nerve function.