GREG MALHAM
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CARPAL TUNNEL DECOMPRESSION

DEFINITION:

Carpal Tunnel Syndrome is when the nerve that runs through the wrist to the hand is compressed. This nerve is called the median nerve. The median nerve supplies the muscles of the thumb and fingers for gripping and sensation to the outside or lateral part of the palm. It runs under the flexor retinaculum ligament.

The flexor retinaculum forms the roof of the tunnel and when this becomes thickened is causes pressure on the underlying median nerve causing pain, tingling, numbness and weakness of the hand.

Carpal Tunnel Syndrome is commonly seen in people who use their hands for heavy manual work, repetitive computer use, or repetitive hobbies such as craft or knitting. Other causes are pregnancy & hormone disorders, such as acromegaly and diabetes.

INDICATIONS:

Weakness and altered sensation in the thumb and finger gripping muscles. There is numbness and pain in the fingers, worse at night that wakes the patient from sleep, relieved by having to shake the hand. The patient has problems holding objects with frequent dropping.

If pain and numbness in the hand worsens and does not respond to a hand splint or local steroid injections, then operative intervention is indicated.

Carpal tunnel syndrome is diagnosed by special electrophysiological tests, called nerve conduction studies. This is when a nerve impulse is measured across running from the neck to the fingers. The nerve impulses are both slowed and reduced as they cross through a narrowed carpal tunnel. A Neurologist performs the nerve conduction study.

Patients can have symptoms in both hands, usually with the dominant hand displaying worse symptoms.

SUCCESS OF THE OPERATION:

80 - 90% success rate for improvement in pain, strength, sensation and sleep.

10% of patients will experience no change in symptoms.

RISKS OF THE OPERATION:

2% risk of the following:
- Infection, usually a superficial skin infection requiring antibiotics;
- Bleeding with bruising in the palm of the hand;
- Damage to the median nerve or its recurrent branch with weakness of the thumb;
- Ongoing pain along incision site;
- Failure to improve symptoms of pain, weakness and tingling needing redo surgery.

If your symptoms do not improve following the operation you will be carefully reviewed for approx.

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RISKS OF THE OPERATION (CONT.):

3 months after the operation
You may require repeat nerve conduction studies to assess if there is any residual compression/ nerve damage. It is rare for patients to require repeat decompression to satisfactorily relieve pressure on the underlying median nerve to improve symptoms.

BEFORE SURGERY:

Tell Mr Malham about any medical conditions or previous operations. If you have a medical condition such as diabetes, heart problems, high blood pressure or asthma, Mr Malham may arrange for a specialist physician to see you for a pre-operative assessment and medical care following the neurosurgery.

Inform Mr Malham of medication that you are taking and/or have allergies to medications. Patient must stop using the following, 10 days pre-operatively:
- Aspirin
- Plavix
- Isocover
- Asasantin

Patient must stop using blood thinning medication *(such as Warfarin)*, 3-5 days pre-operatively.

THE OPERATION:

Operative time: 30 minutes

You will be admitted as a day case to the hospital. You will go home the same day. You must not drink or eat for 6 hours prior to the procedure.

Carpal tunnel decompression/release can be performed under sedation with a local anesthetic or general anesthetic. You will be lying on your back on the operating table with your hand out stretched and resting on a special arm table. Local anesthetic will be injected into the palm where the skin incision is made. Your arm and hand will then be washed with an antiseptic solution then your arm will be covered with drapes.

A 2cm incision is then made in the middle palm of your hand from the wrist crease. The fat below the skin is separated and the thickened flexor retinaculum is then carefully opened. The flexor retinaculum is then fully decompressed along its entire length to free the compressed median nerve. All small bleeding points will be coagulated.

The wound is washed, and the skin carefully sutured with fine nylon sutures. A wound dressing is then placed over the wound followed by a cotton wool pad. A crepe bandage is wrapped around the wrist and hand.

You will then be taken to the recovery room.

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AFTER SURGERY:

Your hand will be elevated on a pillow in the recovery room with nurses checking your finger sensation and movements. They will also check your breathing, blood pressure and heart rate.

You usually are given pain relief in the form of tablets. A small arm sling is given to keep you hand elevated.

You will go home 3-4 hours later after having a drink and eating some light food. It is essential that a relative/friend collects you from the hospital and drives you home.

Keep your hand elevated above your heart for 24 hours following the operation. The crepe bandage can be removed 3 days after surgery. The skin sutures are to be removed 10 days after your operation by your GP/nurse.

Mr Malham will review you in the consulting rooms 4 weeks following the operation to assess your progress. Return to work timing will be discussed.