

## **Carpal Tunnel Release by Endoscopic Technique**

### **Introduction**

Carpal tunnel is the space underneath the volar side of the wrist. There are muscles, tendons and median nerve running through. In situations, e.g. repetitive movement of the wrist, trauma of the wrist, rheumatoid arthritis, thyroid disease, diabetes myelitis, menopause, pregnancy, where the median nerve is being compressed within the carpal tunnel, patients may suffer from numbness, and tingling sensation of their hands. In turn, this may affect their daily activities.

### **Treatment Modalities**

- Appropriate rest and activity modification
- Oral medication, e.g. anti-inflammatory drugs, diuretics, etc.
- Physiotherapy, e.g. ultrasound treatment. Occupational therapy, e.g. hand splint
- Surgery to relieve the carpal tunnel pressure and free the median nerve from pressure. This can be done through open surgery or endoscopic surgery.

### **Indication**

- Failed conservative treatment
- Severe carpal tunnel syndrome

### **The Procedure**

- The operation is usually done under local anaesthesia or regional anaesthesia. If patient's condition is stable, she/he can be discharged on the same day
- The carpal ligament is reached from a small cut at the wrist
- The ligament is seen using a small telescope, which provides a magnified image on a television screen that the surgeon watches whilst performing the surgery
- Technical difficulties can occur and there is a chance of converting to the open technique
- Endoscopic technique causes a smaller scar and shortens the time taken to get back to normal activities

### **Risk and Complication**

- Tendon injury, vessel injury and Ulnar nerve injury can be occurred during the surgery, that may need additional surgery
- Complex regional pain syndrome (CRPS)
- Pillar pain
- Post-operative infection
- Scar formation at the surgical incision site
- Stiffness
- Recurrence of symptom and it is usually due to incomplete release of the carpal ligament and revision surgery may be need
- Incomplete recovery and it is usually occurring when the presentation is at very late stage

### **After the Procedure**

- Rest the wrist and prevent flexing the painful wrist can help to control inflammation and oedema
- Mobilize fingers and other joints of the upper limb can help to decrease oedema and enhance function
- Keep the wound dry and clean
- Take the prescribed pain killer for the wound pain
- If there is severe bleeding or purulent discharge from the wound, or persistent redness and swelling, seek medical advice promptly

### **Alternative Treatment**

- Conservative treatment using oral medication, physiotherapy and hand splint

### **Remarks**

This is general information only and the list of complications is not exhaustive. Other unforeseen complications may occasionally occur. The actual risks may be different for different patients. During the operation, unpredictable condition may arise, and additional procedures may be performed if necessary. For further information, please contact your doctor.