Treatment for Cubital Tunnel syndrome

What is cubital tunnel syndrome?

Cubital tunnel syndrome is a condition which affects Ulnar nerve, which is one of the main nerves of your hand. It causes pins and needles, numbness and sometimes pain along your ring and little fingers. You may also have weakness of the hand and in severe cases clawing, curling up, of the ring and little fingers. Your surgeon has advised surgery to improve these symptoms and the aim of this leaflet is to give you more information about the condition and about the surgery.

There is more than one way this surgery is carried out and if you research the internet you will a lot of information about it, some of which may not be relevant to you. The website of the British Hand Society (www.bssh.ac.uk) is a useful resource.

What causes cubital tunnel syndrome?

In most cases there is no obvious reason for cubital tunnel syndrome. There are ligaments and fascia (strong fibrous tissues) over the nerve at the elbow, some of which can get tighter and press on the nerve. Sometimes this condition can develop following healed fractures of the elbow when the nerve is stretched behind the elbow prominence.

What are the benefits of the operation?

The operation is meant to relieve the pressure of the nerve and by doing so, you should get improvement in the pins and needles in the fingers. You may also get improvement in the strength in the small muscles of the hand. This improvement may be instant or gradual over 12-18 months. In cases of advanced compression, the nerve may not recover fully even after release and in those cases surgery prevents further damage.

What are the alternatives to surgery?

In some cases, postural adaptations by avoiding prolonged periods with the elbow bent may help to relieve the symptoms. Splinting the elbow at night may help some people but is often poorly tolerated. Some patients may choose to live with the pins and needles and opt not to have an operation.

What was the 'electrical test' that I had for?

Your GP or surgeon may have arranged a test called Nerve conduction study to confirm the diagnosis. This test is not always sensitive at picking up this problem. Even if the test is negative you may still be having cubital tunnel syndrome. The test however can give an indication about the severity of the condition and also diagnose other conditions which may be confused with this.

How is this operation performed and what happens on the day of surgery?

Remove any rings before you come to hospital and if you are unwell or have any cuts on your hand or arm then please inform before the day us as this may require your operation to be delayed.

You must starve for your surgery. The anaesthetic options are a general anaesthetic where you go to sleep or an axillary block with or without sedation (this is where you are awake but have a numbing injection in your armpit and the whole arm is numb for 12 hours). You must not eat, drink or chew gum for 6 hours before you come to hospital. Up to 2 hours before you can drink clear water only.

On the day of surgery you will come to the hospital day unit and be seen by the nurse who will check your details, medications and past medical conditions and put a wrist band with your details on the arm we are NOT operating

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on.

You will be seen by the anaesthetist who will check your current health, ask specific questions about medications and when you have last eaten or drank. They will the discuss the details of the anaesthetic including the process, risks and answer any questions you have. They will then mark your arm with an 'A' if you are having an axillary block.

You will then be seen by one of the surgical team who will go over your procedure, consent form and answer any questions about the surgery or recovery. They will then draw a mark on the arm you are having on operation on.

When it is your turn to go to theatre you will be asked to change into a theatre gown and walk with a member of the theatre team or porter to the theatre if able.

As you will be having an axillary block or general anaesthetic you will go into the anaesthetic room where your details will be checked again and the anaesthetist performs the anaesthetic.

If you are staying awake for your surgery there is the option to listen to music or watch a video on the tablet screens and headphones we have in theatre. Alternatively you can bring your own device to listen to music on but you must have headphones.

Once you have a general anaesthetic the next thing you know will be waking up in recovery after the surgery. If you have an axillary block, this take 20-30 minutes to work and therefore you will spend this time waiting in the anaesthetic room. Both the anaesthetist and surgeon will check the arm is fully numb before surgery.

If you are having a brachial block and are awake during the operation, you may feel a cuff over the top of the arm. This is called a tourniquet and is to stop the blood flow into your arm during the operation. You may sometimes feel the tightness from it being inflated but if it is uncomfortable, you should let one of the team know.

Surgery time varies from 20-60 mins depending on the complexity of the surgery, your surgeon will be able to tell you the rough operative time on the day of surgery.

Once your arm is cleaned and draped, the surgeon will make an incision over your elbow and release the tight structures on top of the nerve. Once the nerve is fully released, the surgeon will check if the nerve is unstable or too tight behind the elbow by bending your elbow. In both these cases a simple decompression may not relieve your symptoms. If that is the case, you may need another procedure called a 'nerve transposition' or 'medial epicondylectomy'. Your surgeon should have discussed the possibility of this with you during the consenting. In recurrent cases one of these options may have already been planned as the procedure to be carried out.

A nerve transposition is carried out by moving the nerve from the back to the front of the elbow. The nerve may be placed under the skin or under the muscle depending on the surgeon's preference. This allows the nerve to take a 'short cut' to prevent it being stretched behind the elbow when it is bent.

A medial epicondylectomy is an alternative procedure where the medial epicondyle or the tip of the 'funny bone' is shaved down to relieve the tension on the nerve.

Once the operation is complete the wound is closed, and your arm is bandaged. You will be given a sling to keep the arm elevated.

You may go back to the ward straightaway or sometimes sent to the recovery for one hour if

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you have had a general anaesthetic.

Once you are back in the ward the nurses will make sure that you are sufficiently recovered from the operation before you are allowed home. You should have someone to take you home and be with you overnight after the operation.

Almost all patients will go home on the day of surgery. Very occasional, social or medical conditions require an overnight stay.

What should I do about my medication?

Let the doctor know about your medication in the clinic. For all procedures you will be seen in the preassessment clinic before surgery who will advise exactly what to do regarding any medications which you will need to reduce or stop.

What happens if I don't get treatment?

In mild cases where there is no weakness or permanent numbness the symptoms may improve on their own without surgery. If your symptoms are not severe it is not unreasonable to wait and see if they get better.

If symptoms are severe meaning the numbness is there all the time or there is weakness in the hand then not treating it is likely lead to a worsening of symptoms and hand function. The longer the nerve is squashed for and the more severe the symptoms the less likely the nerve will make a full recovery once released. Once muscles become thinned and very weak they are unlikely to recover despite surgery.

What are the possible complications from this operation?

Whilst the surgical team makes sure that the operation is carried out with utmost safety, complications may still happen. Your surgeon should have discussed these with you.

The % values given cover a range from simple to complex cases.

There are risks with the anaesthesia and your anaesthetist will discuss them with you.

Bleeding - As this operation is carried out under a tourniquet, bleeding may happen after the operation is finished causing marked bruising and wound oozing (15%). Very rarely if a blood clot collects under the skin you may need an operation to remove it and stop the bleeding.

Infection – This is rare (2-19%) following this operation but if it happens, you may need to have antibiotics. In very rare cases another operation.

Scar - The scar behind the elbow usually fades well but in some people, it can be more prominent (10-13%).

Pain - The scar will be tender for at least four to six weeks and in some cases such as with anterior transposition and medial epicondylectomy (15-52% have pain) the pain may take 2-3 months to settle around and deep to the scar. Occasionally patients feel pain or abnormal in their fingers after surgery where it has been numb before. This usually subsides as the nerve starts to recover although may take 2-3 months.

Nerve injury - There is a small risk of injury to the nerves in the skin around the scar (1%). If this happens you may have a numb patch of skin on your inner arm and sometimes can have a painful spot in the arm. Often there is some numbness over the scar line in a very small area which doesn't cause any issues (11-32%). The risk of injury to the main nerve is extremely rare and if it happens you may have permanent numbness to your fingers and weakness to your hand.

Nerve instability – Occasionally once the nerve is released it becomes unstable and flicks over the bony part of the elbow as it is

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bent. This can cause tingling and numbness. If this is seen during surgery a transposition or epicondylectomy will be performed. This rarely happens following surgery and may need reoperation (4%).

Continued symptoms - Your symptoms usually improve within three to four weeks after the operation but in some cases, often those with more severe nerve damage, it may not improve. There is a small risk that the symptoms may be worse due to dissection around the nerve. Occasional further surgery may be required if symptoms persist (6-13%)

Complex regional pain syndrome - Very rarely you can develop a condition called complex regional pain syndrome (CRPS) (less than 1%) which can make your hand red, swollen and painful. This is a difficult condition to treat and may last for several years. Treatment consists of pain killers and Hand therapy.

Elbow instability – rarely during a medial epicondylectomy the supporting ligament around the elbow can be injured requiring further surgery (1-10%).

How do I make my operation a success?

If you smoke it is best to stop or reduce as much as you can. If you are diabetic you will reduce your risk of infection and poor wound healing by keeping your blood sugars stable.

Please attend all dressing, doctor and hand therapy appointments after surgery and follow instructions on hand exercises to get the best function and recovery following surgery.

What happens after my surgery?

Once you are home you need to rest and elevate your hand in the sling for 48 hours. You may be able to use your hand for light activities (dressing etc.) after that. The bulky bandage will make it difficult to wear normal clothes and you may need to wear a loose short sleeved top or T-shirt. If you are having a shower you will have to put a waterproof plastic bag to cover the bandage.

The dressings will be changed between five and seven days in the clinic. You may be able to do more things using your hand at this stage and if the stitches are dissolvable ones, you can even get it wet.

The appointments after this will depend on your recovery at the initial review. Once fully recovered you will be discharged.

How long will it take to recover?

You can drive when your wounds are healed and you feel you can safely grip the steering wheel in both hands to control the car. This usually takes 2-3 weeks. Any heavy physical work may be possible only after six weeks.

You can shower or bath as normal once the wounds are healed, but prior to that you need to keep the hand dry. If you have any issues such as elbow or scar pain we will arrange for you to see the Hand Therapist who will help.

The symptoms usually improve gradually and over the six weeks you should be experiencing improvements in the symptoms. If your symptoms fail to improve your surgeon will assess you during the next appointment and advise you.

Summary

Treatment for Cubital tunnel syndrome is a worthwhile operation which usually relieves your symptoms if they are intermittent and will improve them to some extent in more severe cases. Treatment can improve your hands function and reduce the stress and sleep interference of symptoms. Treatment is usually safe but complications can happen. Being aware of the risks and benefits will help you

make an informed decision about treatment and spot problems early if they occur.

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This leaflet is intended for information purposes only and should not replace advice that your relevant healthcare team would give you.

References

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