

## Thoracic Outlet Syndrome Treatment

### **Neurogenic TOS**

#### **Treatment**

Most people with neurogenic TOS can be helped with intensive physiotherapy and don't require an operation. Sometimes modifications to activities at work may also be required. It is very rare to require an operation to treat neurogenic TOS.

### **Venous TOS**

#### **Treatment**

The initial treatment involves thinning the blood to stop the clot from spreading. If it is caught in time (<2 weeks) we can potentially dissolve the clot with medication, this needs to be done in hospital and will require an inpatient stay of a few days. If it is not caught in time the treatment involves formal thinning of the blood with tablets for 3-6 months to see if the body can dissolve the clot on its own. If the vein is able to be reopened - either by dissolving the clot in hospital, or the body doing the job itself with help of blood thinners - the best way to try to prevent it from reoccurring is to create more space for the vein as it runs under the collar bone. This involves taking away the front portion of the 1<sup>st</sup> rib which requires an operation and a stay in hospital of a few days.

### **Risks of Surgery**

All operations have risks but overall this type of surgery is quite safe. This particular operation has some specific risks which you can discuss in detail with your surgeon. In general however there is a risk of bleeding as there are large blood vessels in the operative field, infection, damage to the lining of the lung (pleura), damage to nerves that run down the arm and damage to lymphatics (this is higher on the left side).

### **Coming into Hospital for Your Surgery**

You must not have anything to eat or drink from midnight the night before. If you do your operation will be cancelled. You can have your regular medications with a sip of water only.

The hospital will contact you regarding where and when to attend on the morning of the surgery.

### **During the Operation**

A cut is made below the collar bone and the pectoralis muscle is split. Underneath the muscle is the 1<sup>st</sup> rib. The muscular attachments are divided off the top and bottom of the rib, and about 2/3rds of the rib is removed from where it joins the breast bone back about 10cms. The subclavian vein is then usually dissected out to ensure there is no unusual scarring around it. The wound is then closed using dissolvable stitches with a drain usually left in place to allow excess fluid to drain out.

This operation usually takes about 2 hours.

### **After the Operation**

You will be taken to the recovery room and then back to the ward bed in the hospital. The nursing staff will check your wound site for any signs of bleeding or swelling and check the nerve and muscle function of your arm. You will get daily chest x-rays. You need to move your arm regularly, and you may need some pain relief to do that – please see the exercise sheet attached.

You will be allowed to eat and drink later in the day.

The drain will usually be removed in the following couple of days.

Most people can go home after 4 nights in hospital.

What to do when home:

You can't drive for 2 weeks after this operation.

Avoid strenuous activity and heavy lifting for 4-6 weeks. Regular gentle exercise such as walking is encouraged. Please see the exercise leaflet for specific arm exercises.

Your stitches will dissolve so don't need to be taken out. You can get the wound wet after 2 days but please pat gently dry.

### **Arterial TOS**

#### **Treatment**

Treatment depends on the cause and the amount of damage that has been done to the artery. The first part of the operation involves removing the extra rib or bony anomaly that is causing the compression. The 1<sup>st</sup> rib is almost always also removed to help prevent recurrence. The second part then depends of whether or not the artery needs repair, and this may involve a bypass operation on that artery. The whole process will be described by me if and when you require this type of surgery.

#### **Risks of Surgery**

All operations have risks but overall this type of surgery is quite safe. This particular operation has some specific risks which you can discuss in detail with you surgeon. In general however there is a risk of bleeding as there are large blood vessels in the operative field, infection, damage to the lining of the lung (pleura), damage to nerves that run down the arm and damage to lymphatics (this is higher on the left side). If a bypass is involved there is a chance the bypass can block, either quickly or after many years.

### **Coming into Hospital for Your Surgery**

You must not have anything to eat or drink from midnight the night before. If you do your operation will be cancelled. You can have your regular medications with a sip of water only.

The hospital will contact you regarding where and when to attend on the morning of the surgery.

### **During the Operation**

A cut is made above the collar bone and the tissues dissected away from the artery and bones. The muscular attachments are divided off the top and bottom of the extra rib (if present) and the 1<sup>st</sup> rib. The extra rib is removed and about half the 1<sup>st</sup> rib is removed. The subclavian artery is then usually dissected out and repaired using either a plastic tube or some of your own vein that is taken from your leg. The wound is then closed using dissolvable stitches with a drain usually left in place to allow excess fluid to drain out.

This operation usually takes about 3-4 hours.

### **After the Operation**

You will be taken to the recovery room and then back to the ward bed in the hospital. The nursing staff will check your wound site for any signs of bleeding or swelling and check the nerve and muscle function of your arm. You will get daily chest x-rays. You need to move your arm regularly, and you may need some pain relief to do that – please see the exercise sheet attached.

You will be allowed to eat and drink later in the day.

The drain will usually be removed in the following couple of days.

Most people can go home after 4 nights in hospital.

### **What to do when home**

- You can't drive for 2 weeks after this operation.
- Avoid strenuous activity and heavy lifting for 4-6 weeks. Regular gentle exercise such as walking is encouraged. Please see the exercise leaflet for specific arm exercises.
- Your stitches will dissolve so don't need to be taken out. You can get the wound wet after 2 days but please pat gently dry.
- You will need regular check-ups if you have a bypass done and this will usually involve ultrasounds which will be arranged by me.