

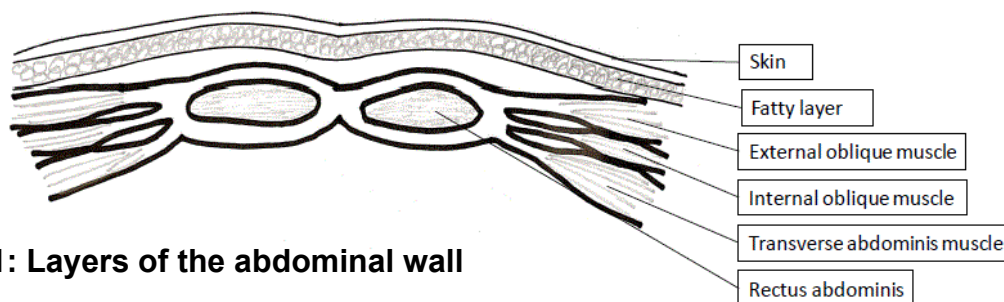
## INFORMATION FOR PATIENTS, RELATIVES AND CARERS

# Using preoperative Botox injection to the abdominal wall to aid closure in complex incisional hernias

This leaflet aims to describe the process of injection of Botox® into the abdominal wall muscles to aid closure of the defect in large incisional hernias.

### What is the abdominal wall?

The abdominal wall forms the front covering of the abdomen and is made up of, from the outside in, skin, fat and abdominal wall muscles (see **figure 1**).



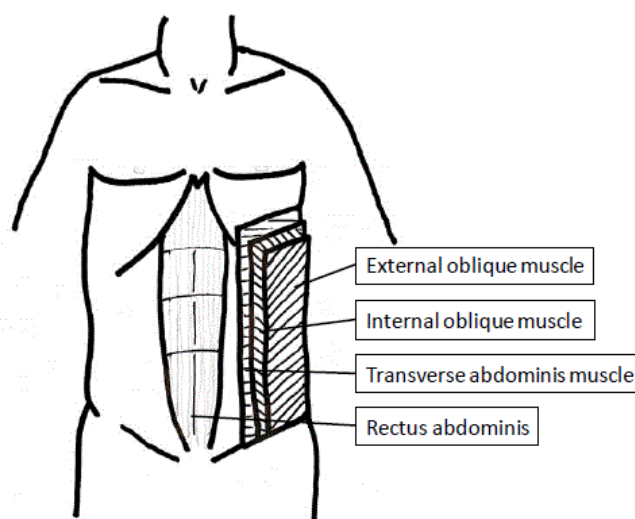
**Figure 1: Layers of the abdominal wall**

### What does the abdominal wall do?

This group of muscles have their own blood supply and nerves. Together they create a structure which supports the internal organs. They also help in providing abdominal pressure when breathing out or going to the toilet. A number of muscles are grouped together in layers to make up the abdominal wall.

In the middle of the tummy there are a pair of bulky muscles called the rectus abdominis (RA), also known as the six pack muscles. These muscles are about 10 centimetres wide.

Lateral to these on both sides of the abdomen there are three muscles. These three muscles cross over each other and give the sides of the abdominal wall strength. They are known as the transversus muscle, internal oblique and external oblique (see **Figure 2**).



**Figure 2: Muscles of the abdominal wall.**

## What is an abdominal wall hernia?

A hernia of the abdominal wall is a bulging of the abdominal contents through an area of weakness in the wall. An abdominal wall hernia can be small and simple, or large and complex.

Many hernias do not cause symptoms, but some may cause pain. If you have symptoms like pain and you would like your hernia repaired, we can consider this. However, you must be fit enough for surgery.

## What is a complex abdominal wall hernia?

This can be due to the size of the gap between the muscles and tissue that the abdominal contents have herniated through; defects larger than 10cm are often considered complex. The amount that has herniated through the hole can also make a hernia complex; this is termed loss of domain, as can the number of previous attempts at repair. All these factors make surgery more difficult and complex.

## Why do we fix incisional hernias?

Not all incisional hernias need repairing if they are not causing any problems or if surgery is considered too high risk, this is a discussion to have with your surgeon.

The main aims of incisional hernia repair are:

- 1) To prevent a future complication such as bowel obstruction or strangulation, although these are relatively rare events.
- 2) To improve abdominal wall function.

## How are incisional hernias fixed?

Your surgeon will explain your operation in detail as there are several techniques used in incisional hernia repair. These all generally rely on dissecting between the muscles of the abdominal wall to release them and try to bring them together to close the defect. This repair is usually reinforced with a mesh to reduce the chance of the hernia coming back again. Although this can still occur, the risk is lower when a mesh is used.

## Why use Botox® preoperatively?

Botox® may be injected into the lateral abdominal wall muscles a few weeks before the operation. This temporarily weakens the muscles of the lateral abdominal wall. The muscles become flaccid and can stretch further. The extra stretch may allow the central muscles to come together without the need for a more complex component separation technique.

In some patients the Botox® may not avoid the component separation. However, it may still help in facilitating the closure of a wide hernia defect, making it more likely to fully come together.

## What is Botox®?

Botox® is a brand name for the drug Botulinum toxin. This toxin is produced by a specific bacteria and is naturally occurring in soil. It is used commercially to treat many disorders where there is spasm of muscles. Its effects start in a few weeks and last for about three months.

## How is Botox® used in hernia surgery?

Botox® is injected a few weeks before the hernia repair as a Day Case procedure. The procedure is done using an ultrasound machine that allows visualisation of the abdominal wall muscles.

A needle is then passed into these muscles at three sites on each side of the abdominal wall. You feel the pin prick of a needle and the discomfort it causes. The procedure can be done with some local anaesthetic and sedation if needed.

## Are there any risks of side effects?

Botox® injection is a very safe procedure. There is a small chance of reactions to any sedative or local anaesthetic drugs if they are used. There may be some discomfort that persists for a few hours after the procedure, but this is usually mild. The injection sites can bleed a little after the procedure; this usually stops with some gentle pressure. Some people do notice a weakening of the side muscles of the abdomen, which may make it more difficult to cough, or make the abdominal wall look like it is bulging more.

Most people can return to normal activity the day after this procedure.

The effects of Botox® are usually temporary and have worn off completely by three months.

## Is there an alternative to Botox®?

The operation can be done without Botox® but this is more likely to require a full component separation operation or some 'bridging' of the defect with mesh. There is no specific alternative to Botox®.

## Further sources of information

NHS Choices: [www.nhs.uk/conditions](http://www.nhs.uk/conditions)

Our website: [www.sfh-tr.nhs.uk](http://www.sfh-tr.nhs.uk)

### **Patient Experience Team (PET)**

PET is available to help with any of your compliments, concerns or complaints, and will ensure a prompt and efficient service.

**King's Mill Hospital:** 01623 672222

**Newark Hospital:** 01636 685692

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