



Patient Information Sheet: Complex Abdominal Wall Repair

Introduction

This patient information sheet provides detailed information about complex abdominal wall repair surgery. It is designed to help you understand the anatomy of the abdominal wall, why this surgery may be necessary, the procedure itself, and what to expect during your recovery. Due to the complexity of the operation, it is important that you understand the details, benefits, and risks involved. Please discuss any concerns or questions you may have with your surgical team.

What is the Abdominal Wall?

The abdominal wall is made up of several layers of muscles, tendons, and connective tissues that protect your internal organs and support your posture. It consists of three main muscle layers:

1. **External Oblique:** The outermost layer that runs diagonally from the ribs to the pelvis.
2. **Internal Oblique:** The middle layer of muscles, running perpendicular to the external oblique.
3. **Transversus Abdominis:** The deepest muscle layer, which runs horizontally and provides critical support to the abdominal cavity.

In addition to these muscles, the **Rectus Abdominis** (the "six-pack" muscles) runs vertically along the front of your abdomen. A strong, intact abdominal wall is essential for core stability, protecting internal organs, and facilitating movement.

What is a Complex Abdominal Wall Repair?

Complex abdominal wall repair is a surgical procedure aimed at reconstructing a weakened or damaged abdominal wall. This is often necessary in cases of recurrent or large hernias, infections, trauma, or after multiple previous surgeries. Due to the complexity of the abdominal anatomy and potential adhesions from previous surgeries, this operation may require specialized techniques and materials such as mesh for reinforcement.

A **hernia** occurs when an organ or tissue pushes through a weak spot in the abdominal muscles. Large or complex hernias can cause pain, restrict movement, or compromise organ function, necessitating surgical intervention.

Why Might You Need a Complex Abdominal Wall Repair?

You may need this operation if you have:

- **Recurrent hernias:** Hernias that have returned after previous repairs.
- **Large hernias:** Particularly those affecting the ability to move or causing significant pain.



- **Infected or failed previous hernia repairs:** When the previous surgical mesh or repair has failed or become infected.
- **Loss of domain:** When a large portion of abdominal contents have herniated, making it difficult to restore the normal anatomy.

This surgery is designed to restore both the functional and aesthetic integrity of the abdominal wall, allowing for improved quality of life and the prevention of further complications.

Surgical Procedure Overview

Complex abdominal wall repair may be performed using a combination of open surgery and minimally invasive techniques, depending on the extent of the damage. The goal is to strengthen the abdominal wall and close any defects (such as hernias) using surgical mesh, which reinforces the weakened tissue.

1. **Incision:** Your surgeon will make an incision, typically over the previous surgical site or around the area of the hernia. The size of the incision will depend on the complexity of the repair.
2. **Releasing Adhesions:** In cases of recurrent hernias or previous surgeries, there may be scar tissue or adhesions that need to be carefully released before proceeding.
3. **Mesh Placement:** A synthetic mesh will be placed over the weakened or repaired areas of the abdominal wall. This mesh acts as a scaffold to support the tissues and prevent recurrence of the hernia. The mesh may be positioned above or below the muscle layers, depending on the specific anatomy and surgical approach.
4. **Closure:** The muscles and tissue layers are carefully closed over the mesh, reinforcing the abdominal wall and restoring its normal anatomy.

The Benefits of Surgery

- **Restored Functionality:** A stronger, more stable abdominal wall, reducing the risk of hernia recurrence.
- **Pain Relief:** Significant reduction or elimination of pain and discomfort associated with large or recurrent hernias.
- **Improved Quality of Life:** Greater mobility, comfort, and ability to perform daily activities.
- **Reduced Risk of Complications:** Prevention of bowel obstructions, strangulation, or infection that can arise from untreated or poorly repaired hernias.

Risks of Surgery

As with any major surgery, complex abdominal wall repair carries certain risks. These include:



- **Infection:** Infection can occur at the incision site or around the mesh. Antibiotics may be required, and in rare cases, the mesh may need to be removed.
- **Bleeding:** This is usually controlled during surgery, but excessive bleeding may require further treatment.
- **Recurrence:** While rare with mesh reinforcement, hernias can recur in some patients.
- **Bowel Injury:** During the repair, nearby structures like the intestines may be injured, requiring additional repair or treatment.
- **Seroma or Hematoma:** Fluid or blood can collect in the area of surgery, which may need draining.
- **Chronic Pain:** Some patients experience ongoing pain after surgery, which may require additional management.

Preparing for Surgery

Before your surgery, you will undergo a thorough evaluation, which may include imaging studies such as CT scans to assess the hernia and abdominal wall. Your surgeon will provide specific instructions on medications, fasting, and what to expect on the day of surgery. If you smoke, you will be advised to stop prior to surgery, as smoking can significantly delay healing.

Pre-Operative Botox for Complex Abdominal Wall Repair

In some cases, patients may require pre-operative Botox (botulinum toxin) injections as part of their complex abdominal wall repair. Botox is used to temporarily relax the abdominal muscles, which helps to reduce tension in the area and allows the surgeon to close large hernia defects more easily. The injections are usually administered a few weeks before surgery. This technique can improve the success of the repair by making it easier to restore the normal anatomy and reducing the risk of excessive strain on the repair site. Your surgeon will discuss this option with you if it is recommended for your specific case.

What to Expect on the Day of Surgery

- **Admission:** You will be admitted to the hospital on the morning of your surgery. A nurse will check your vital signs, and your anaesthetic team will discuss the anaesthetic plan.
- **Anaesthesia:** You will be placed under general anaesthesia, ensuring you are asleep and pain-free throughout the procedure.
- **Post-Surgery:** After the surgery, you will be taken to the recovery area, where your vital signs will be monitored as you wake up from anaesthesia.

Recovery and Aftercare

Your recovery period will depend on the complexity of the surgery and your overall health. After the operation, you can expect:



- **Hospital Stay:** Most patients remain in the hospital for a few days following surgery, particularly if it is a large or complex repair.
- **Pain Management:** You will receive medication to help manage post-operative pain, which will gradually decrease over time.
- **Drainage Tubes:** In some cases, small tubes may be inserted to drain excess fluid from the surgical area.
- **Physical Activity:** You will be encouraged to start walking as soon as possible to promote circulation and prevent blood clots. However, strenuous activities and heavy lifting should be avoided for at least 6-8 weeks.
- **Wound Care:** Your healthcare team will provide instructions on caring for the incision site to prevent infection.
- **Abdominal binder:** You may be asked to wear an abdominal binder for 6 weeks post op, to allow muscles to heal.
- **Follow-Up:** You will have regular follow-up appointments to monitor your healing and address any concerns.

Long-Term Outlook

With successful complex abdominal wall repair, most patients experience a significant improvement in quality of life. You will regain strength and stability in the abdominal wall, allowing for greater mobility and a return to normal activities. While recurrence is rare, it is important to follow your surgeon's advice regarding lifestyle changes to maintain long-term success.

Conclusion

Complex abdominal wall repair is a highly specialized procedure that can significantly improve your quality of life by restoring the function and integrity of the abdominal wall. With a thorough understanding of the procedure, risks, and recovery process, you can make an informed decision about your care. If you have any questions, please reach out to your surgical team.