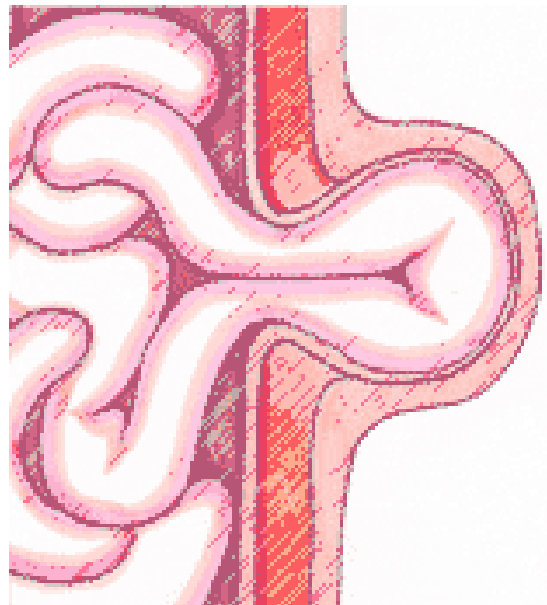


# Laparoscopic Incisional Hernia Repair

## The Hernia Process

### Description

- A hernia is a muscle defect which allows fat and sometimes bowel to pass through
- Hernias feel like a lump which comes and goes, usually when you cough
- Hernias can develop through old surgical wounds as they are naturally weak areas in the abdominal wall
- Hernias don't go away with time and will get bigger
- If the bowel or fat gets stuck in the hernia this is a surgical emergency. In the worse case scenario bowel can strangulate and die in the stuck hernia

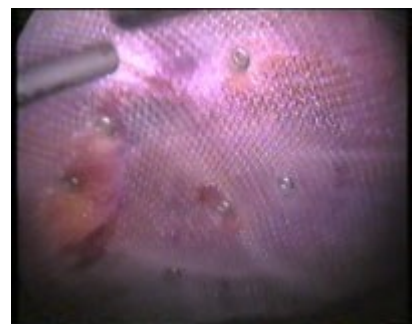
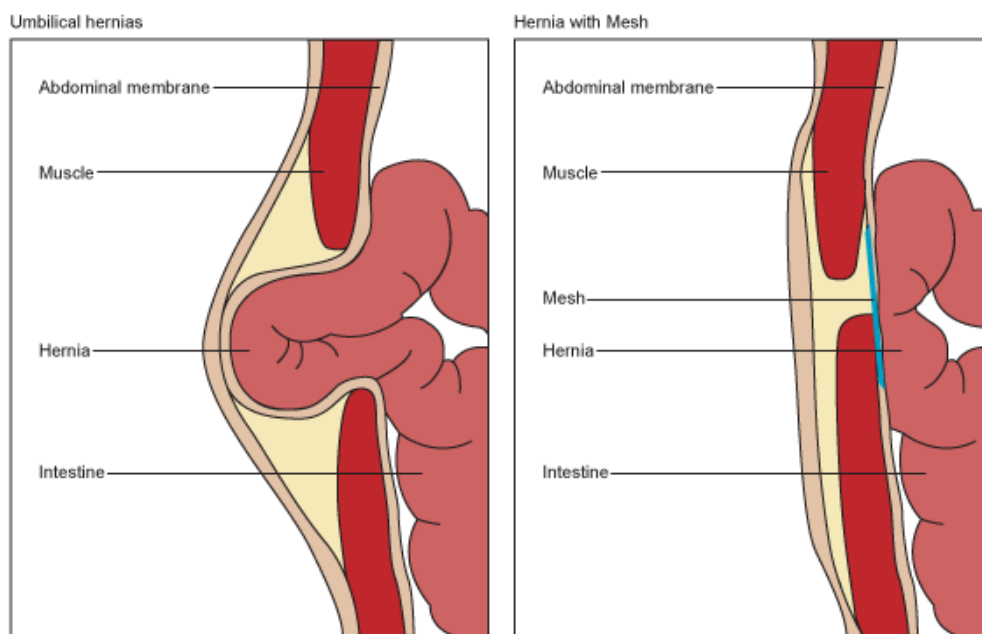


# Laparoscopic Incisional Hernia Repair

## Hernia Repair

### Rationale for repair

- Hernias will only get bigger with time
- They may get stuck or become strangulated at any time which is a surgical emergency
- They are uncomfortable and often limit usual or work-related activity and sport.
- They are often unsightly and affect what clothes can be comfortably worn



# Laparoscopic Incisional Hernia Repair

## Keyhole vs Standard Repair

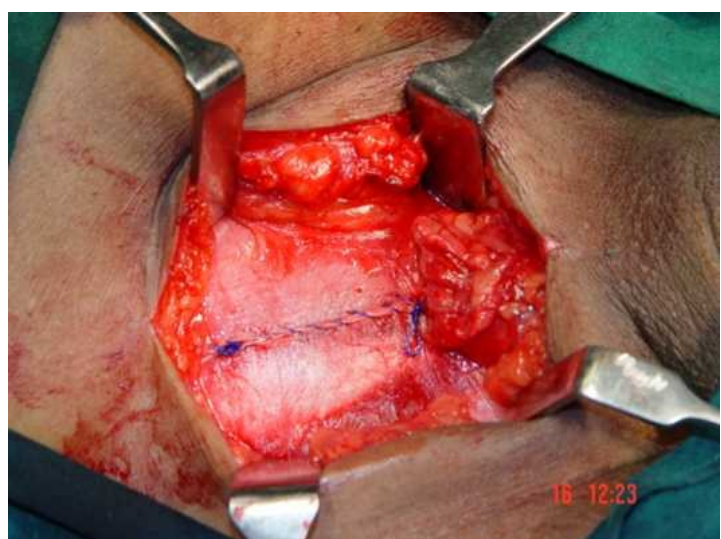
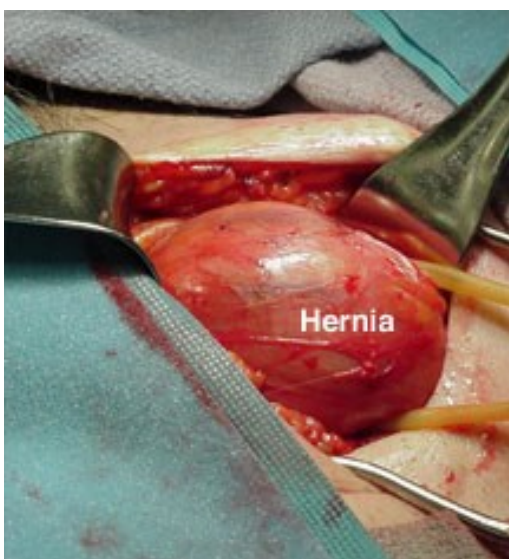
### Standard (open) Repair

- Old cut reopened most of the way, occasionally longer
- Hernia Dissected out and replaced into the abdomen
- Large mesh placed and sutured around its periphery
- Usually sublay, sometimes onlay
- Closure of wound

### Keyhole Repair

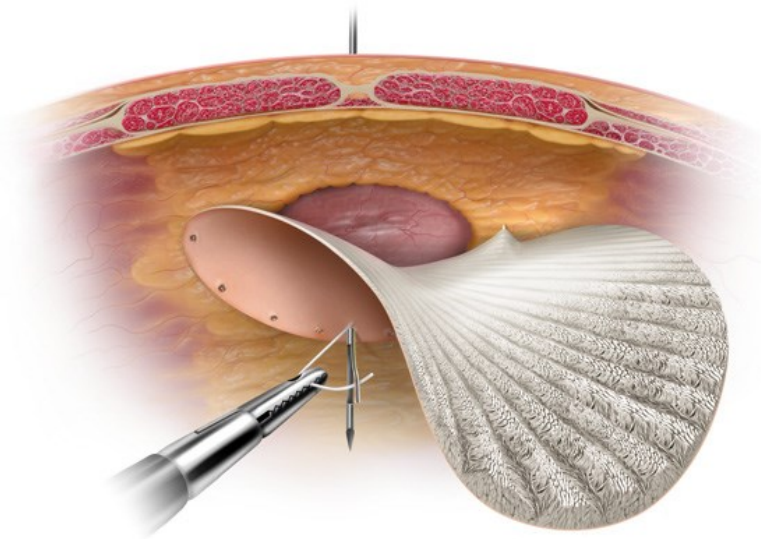
- Three small cuts in flank, occasionally cuts on the other side as well
- Old wound left intact
- Hernial contents pulled back into the abdomen
- Sublay mesh tacked into place with some reinforcing sutures

Open Repair



# Laparoscopic Incisional Hernia Repair

## Keyhole vs Standard Repair



### **Keyhole Repair: PROs**

- Quicker return to work & less perioperative pain
- Shorter Hospital Stay
- Less wound infection & probably less mesh infection
- Possibly less seroma formation
- Equal or lower recurrence rates
- Can easily identify and fix further hernias

### **Keyhole Repair: CONs**

- Slightly higher risk of bowel injury
- May be more expensive—dependent on mesh costs and rebates
- Bowel may adhere to tacks which are not always necessary in open surgery.

# Laparoscopic Incisional Hernia Repair

## Complications

| Complication                         | Incidence            |
|--------------------------------------|----------------------|
| Around the time of the operation...  |                      |
| Visceral Injury                      | 2-3%                 |
| Wound Infection                      | 5%                   |
| Wound Haematoma                      | 5%                   |
| Wound Seroma                         | 10-15%               |
| Mesh Infection                       | 1-2%                 |
| Major Medical Complication           | 1-2%                 |
| Urinary Retention                    | ~5%                  |
| Conversion to Open                   | ~5%                  |
| Respiratory Compromise               | ?? Depends on Hernia |
| Longer Term...                       |                      |
| Chronic Pain/Discomfort/Parasthesiae | ~5%                  |
| Hernia Recurrence                    | 5-10%                |

# Laparoscopic Incisional Hernia Repair

## Literature

### **Recurrence Rates Laparoscopic**

- 4.1% on 85 laparoscopic relook cases during the first 3 years (*Chelala et al. Hernia 2010*)
- 12.5% at 2 years . *Itani et al. Arch Surg 2010*
- Meta-analysis RCTs. Lap 3.4% vs Open 3.6% (FU Length??). *Forbes et al. BJS 2009*

### **Recurrence Rates Open**

- 8.2% at 2 years. *Itani et al. Arch Surg 2010*
- 15-30% historical rates, mesh repairs

# Laparoscopic Incisional Hernia Repair

## Literature—Complications

### **Complication Rates Laparoscopic vs Open**

- Surgical site infection at 8 weeks: Lap 5.6% vs 23.3%. *Itani et al. Arch Surg 2010*
- Mesh Removal for Infection. Lap 1.5% vs Open 10.1% (close to Sig). Meta-analysis RCTs. *Forbes et al. BJS 2009*
- Seroma at 8 weeks: Lap 6.8% vs Open 23.3%,  $p = 0.01$ . *Kaafarani et al. Am J Surg 2009*
- Seroma Lap 11.7% vs Open 15.5% (ns). Meta-analysis RCTs. *Forbes et al. BJS 2009*
- Bowel injury Lap 2.6% vs Open 0.9% (ns). Meta-analysis RCTs. *Forbes et al. BJS 2009*