

## **Pullthrough Operation for Hirschsprung's Disease (HD)**

### **結腸拉出術治療先天性巨結腸症（巨結腸症）**

#### **What is Hirschsprung's disease?**

Hirschsprung's disease is a rare disease most commonly involving the large bowel. In HD, the nerves (ganglion cells) that control the muscles in the bowel are missing. Faeces cannot be pushed through the bowel in the usual way. The main symptom of HD is constipation with abdominal distension that cannot be relieved by laxatives or stool softeners. HD may be suggested by a plain abdominal X-ray or by a contrast enema. However, the diagnosis can only be confirmed by the absence of ganglion cells on histological examination of the rectal biopsy specimens. Rectal biopsy can be done in small babies without anaesthesia.

#### **What is a Pullthrough Operation?**

Surgery is the only effective treatment for HD. The majority of patients can be treated by a primary pullthrough operation. This is the operation to remove the part of the bowel missing the ganglion cells and to attach the healthy end to the anus. This re-establishes the healthy bowel with ganglion cells to control the muscles and hence defaecation.

The operation can be performed by laparoscopic assisted, laparotomy or total transanal approach. Your surgeon will discuss with you about the most appropriate method for your child.

During the operation, the surgeon will perform a series of bowel biopsies to identify the part of the normal bowel with ganglion cells. The part of bowel missing the ganglion cell will be removed. The healthy bowel will be attached to the anus.

If the diseased bowel also involves the small bowel, it may be necessary to perform a temporary stoma on the abdominal wall. The faeces will pass out from the stoma and be collected in a stoma bag.

**Risk**

The surgery will be performed under general anesthesia. The anaesthetist will talk to you on the detail of general anaesthesia and the related risk.

Overall, pullthrough operation is a safe operation and serious complications are uncommon. Nevertheless, a number of potential complications may occur. Parents shall discuss with their surgeons should these complications arise.

**General-**

1. Bleeding
2. Wound complications e.g infection, haematoma, dehiscence, incisional hernia, etc
3. Urinary retention

**Specific-**

1. Visceral injury including bowel, ureters, urinary bladder, vas deferens, fallopian tube, uterus, kidney, liver, spleen and pancreas,
2. Anastomotic leakage
3. Transitional pullthrough
4. Kinking of pullthrough bowel
5. Intestinal obstruction
6. Hirschsprung's associated enterocolitis

Reoperation may be necessary if complication arises.

**Preparation before the procedure**

Your child may need to have various tests before surgery. After admission, the surgeon will explain the operation in detail to you before signing the consent form. The surgeon shall also tell you the preparation including the regimen of rectal washout before surgery. An anaesthetist will explain to you about the general anaesthesia and the related risk, the time to start fasting before surgery and postoperative pain relief.

### **Care after the procedure**

For the first few days after surgery, your child shall be kept nil by mouth to allow bowel rest and the anal wound to heal. Pain killers will be prescribed. Antibiotics will be given to minimize the risk of infection. Your child may initially have frequent bowel motions that can be ameliorated with medication. You will also be taught about buttock care of your child.

Anal dilatation shall be started at around 2 weeks after the operation when the anal wound has healed. You will be taught about the method of anal dilatation.

### **Follow up**

Your child will require regular follow up in the specialist out-patient clinic. Patients after pullthrough operation may have difficulty in bowel motions and faecal soiling. Long- term assessment of the bowel function is essential and, if necessary, special bowel management program is required.

Patients after pullthrough operation have a lifelong risk of potentially fatal Hirschsprung's associated enterocolitis. Urgent medical attention should be sought if your baby develops abdominal distension and fever.

### **Remarks**

This is general information only and the list of complications is not exhaustive. Other unforeseen complications may occasionally occur. In special patient groups, the actual risk may be different. For further information, please contact your doctor.