

High Ligation of Patent Processus Vaginalis in Children **兒童鞘膜結紮手術**

Introduction

A hydrocele is a collection of peritoneal fluid along the inguinal canal, sometimes extending down to scrotum in boys and labia in girls. In children, most of these are congenital. Hydroceles can be communicating or non-communicating. It is more common in newborns, in which a majority will resolve spontaneously. About 5-10% of children will suffer from this condition, and most are males. Persistent hydroceles after the age of three are recommended for surgical treatment, as they are unlikely to resolve spontaneously beyond this age.

Surgical repair of a hydrocele

High ligation of patent processus vaginalis (or simplified as 'high ligation') is one of the most commonly performed operations in children. The principle of repair is to close the defect at the deep inguinal ring, either by open or laparoscopic approach.

1. Open approach

This is the traditional method to treat hydroceles in children. A small oblique incision is made over the groin region, and the inguinal canal is opened. In boys, the vas deferens and testicular vessels will be separated from the sac. The defect is identified and closed at the deep inguinal ring. The wound will be closed by stitches that will dissolve.

2. Laparoscopic approach

This approach is only applicable to communicating hydroceles. Three small wounds will be used over the abdomen and after inflation with carbon dioxide, the defect at the deep inguinal ring is closed using non-absorbable sutures. Again, the vas deferens and testicular vessels will be preserved in boys.

Optional procedure

In laparoscopic approach, the contralateral deep ring can also be examined. In cases with an incidental defect on the other side, the surgeon can also perform surgical closure with or without an additional wound.

Preoperative preparation

In children, the operation has to be performed under general anaesthesia. Fasting is required as indicated by the anaesthetist and it is important to follow these instructions, or else the operation may need to be postponed or cancelled. The operative risks will be explained by the surgeon before the consent is signed, and parents should make sure that all concerns have been answered before signing the consent. Preoperative anaesthetic assessment will be done by anaesthetist with the risks and complications informed. Please inform the doctors if your child has any medical problems such as allergies and past history of surgery.

Postoperative care

There shall be one to a few dressings over the abdomen, consult the doctors or nurses for their care. Normal diet may be resumed a few hours after the operation, a painkiller such as Panadol may be prescribed and may be used according to the prescription. Normal ambulation is encouraged but vigorous exercises should be avoided during the early postoperative period. The child shall be discharged as appropriate and return for follow-up assessment(s).

Risks and complications

In general, high ligation is a safe operation with low complication rates. However, potential complications may still occur, please discuss with the surgeons about the incidence.

General

1. Bleeding or wound haematoma
2. Wound infection, abscess or dehiscence
3. Hypertrophic scar
4. Urinary retention

Specific

1. Recurrence
2. Groin or scrotal edema
3. Reactive hydrocele
4. Injury to vas deferens and/ or testicular vessels resulting in hypotrophic

testis

5. Injury to testis or epididymis
6. Testicular atrophy
7. Iatrogenic testicular ascent
8. Nerve injury resulting in groin numbness

Rare but significant (if any)

1. Injury to major vessels, intestines, omentum, ovary, fallopian tube, urinary bladder
2. Torrential bleeding

Follow up

Oral analgesics will be prescribed after the surgery, and the patient will be followed up one to two weeks after the surgery for any early complications. At least one follow up will be scheduled a few months after the initial surgery to look for recurrence and any other complication. If the patient is well, he/ she can be discharged from the clinic.

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.