What is a pyeloplasty?

The urinary tract includes the parts of the body that are involved in making and passing urine i.e. the kidneys (which make urine), ureters (that take urine from the kidney to the bladder), the bladder (which stores urine) and urethra (the tube which carries urine from the bladder to outside of the body). These are shown in the diagram below:

A pyeloplasty is an operation to relieve obstruction (blockage) at the junction where the kidney joins the ureter. Once the obstructed part is removed, urine can flow freely from the kidney to the bladder.

Why does my child need to have a pyeloplasty?

Due to an obstruction (blockage) at the junction where the kidney and ureter join, urine cannot flow freely from the kidney to the bladder. This means that urine backs up in the kidney which can cause kidney damage. The obstruction within the kidney may have been present since birth or may have developed later.

The affected kidney will often have reduced function and one of the aims of the operation is to preserve what function there is. It is unlikely that a kidney with decreased function will return to having normal function after the operation.
Before admission to hospital

- **Scans and investigations**
  
  Your child will have undergone different scans (such as ultrasound scans which help identify the obstruction and nuclear medicine scans which identify the function of the kidneys) and investigations (such as blood tests).

- **Preoperative assessment:**
  
  You will be asked to complete a ‘health screening questionnaire’ when your child is added to the waiting list; this will be completed immediately after your appointment if your child was seen in one of our clinics at Addenbrooke’s or, over the telephone if your child was reviewed in one of our outlying clinics.

  Children will usually be reviewed in the preoperative assessment clinic for blood tests within six weeks of surgery. A urine test will also be required; if the urine test is not combined with an appointment in the pre assessment clinic, this can usually be arranged via your child’s family doctor (GP).

- **Purchasing suitable painkillers:**
  
  It is important that you purchase some children’s pain killers such as Paracetamol (e.g. Calpol) and Ibuprofen before admission to hospital so that you have these available at home after discharge. If it is likely that your child will need ‘stronger’ pain killers these will be supplied via the hospital and this will be discussed with you during your clinic review.

- **If your child becomes unwell:**
  
  If your child has a cold, cough or illness such as chicken pox the operation will need to be postponed to avoid complications. Please telephone us (the telephone number is provided at the end of this leaflet) to discuss, prior to coming to hospital.

- **Starvation times**
  
  Your child will not be able to eat and drink before the operation. Specific advice about this will be given on the booking letter once a date for surgery is confirmed.

What happens when my child is admitted to hospital?

You will be asked to bring your child to one of our children’s wards, usually early in the morning on the day of surgery. When you arrive you will be seen by the nursing staff plus a doctor and an anaesthetist (if not seen by these persons at the preoperative assessment clinic).

A parent will be able to accompany your child when she/he goes to the anaesthetic room to go to sleep for the operation and also be present in the recovery area when she/he wakes. A bed will be provided for a parent to stay next to your child’s bed.
What happens during the operation?

You will be able to be present while your child goes to sleep and also in the recovery area when your child wakes up.

The operation will be carried out under a general anaesthetic. An incision (cut) will be made, usually on the child’s side. Sometimes it is possible to perform the operation using laparoscopic (‘key-hole’) technique. Your surgeon will explain whether an open or laparoscopic operation is planned for your child and why. The obstructed part of the kidney/ureter is removed and then the remaining parts joined.

The wound(s) will be closed with dissolvable stitches and sometimes paper tapes (steri-strips) are also applied. Some children will have a small tube called a stent left in place which goes between the kidney and incision site. This stent can be used if necessary to help drain urine or, if needed, to insert dye during an x-ray. It can be removed with ease on the ward by a member of nursing staff after a week or so. Very occasionally it is necessary to leave an internal stent in place (called a ‘JJ stent’) at the end of the operation which then needs to be removed some weeks or months later under a further anaesthetic.

What are the complications/risks?

Complications are rare, they include:
- Wound infection
- Bleeding (very occasionally a blood transfusion will be required).
- Urinoma; this is a leak of urine which collects outside the kidney.
- It is possible that kidney function may decrease further despite the operation.

What happens after the operation?

- Your child will continue to rest after their operation on the day of surgery but will be able to mobilise the day after surgery.
- After the operation your child’s urine will be blood stained but this will begin to clear after a few days.
- Your child will be able to have drinks and food again as soon as they feel they wish to. It is common for children to feel sleepy after the operation so fluid is often also given through a drip over the first night after the operation but stopped as soon as sufficient amounts of fluid are being taken orally.
- The nurse will record the amount your child drinks and how much urine they pass.
- Regular pain killers will be given by your nurse and you will be given pain killers to take home for use after discharge.
How long will my child stay in hospital for and can I stay with him/her?

The length of stay will depend on each individual child but the average length of stay is two to five days. A parent will be able to remain resident on the ward in a bed at the side of the child’s bed.

How do I look after my child at home?

- As the stitches used are dissolvable these do not need to be removed. The wound will be covered with paper tapes (steri-strips) and sometimes a small dressing.
- Your child may have some discomfort and should be given Paracetamol (Calpol) as directed on the bottle or by the nursing/medical staff.
- Your child should rest for the first few days at home and should avoid strenuous activities, for example, PE or swimming for two weeks.
- The wound site should be kept dry so your child should not be bathed for five days. After day five the dressing can be removed. The paper tapes applied should be allowed to fall off in their own time or be gently peeled off once baths are allowed.
- If your child has had a stent left in place this is usually removed before discharge but if this is not appropriate they will be able to go home with this stent under a small dressing and then return to the ward for it to be removed.
- If your child develops a fever, increased pain or a swelling over the wound site, you should contact your GP/nurse specialist.

Follow up

Your child will have an ultrasound scan after approximately six to twelve weeks and a MAG 3 scan after approximately three to six months. Your child will then be reviewed with the results of these scans in the outpatient department.

Chaperoning:

During your child’s hospital visits your child will need to be examined to help diagnose and to plan care. Examination may take place before, during and after treatment, is performed by trained members of staff and will always be explained to you beforehand. A chaperone is a separate member of staff who is present during the examination. The role of the chaperone is to provide practical assistance with the examination and to provide support to the child, family member/carer and to the person examining.

For further information please contact:

The ward you were on:

Your nurse specialist: 01223 586973 (Monday to Friday, 08:00 to 18:00)
Patient Information

We are a smoke-free site: smoking will not be allowed anywhere on the hospital site. For advice and support in quitting, contact your GP or the free NHS stop smoking helpline on 0800 169 0 169.

Other formats:

If you would like this information in another language or audio, please contact Interpreting services on telephone: 01223 256998, or email: interpreting@addenbrookes.nhs.uk For Large Print information please contact the patient information team: patient.information@addenbrookes.nhs.uk

Document history
Authors: Department of Children’s Services/Paediatric Surgery
Pharmacist: N/A
Department: Cambridge University Hospitals NHS Foundation Trust, Hills Road, Cambridge, CB2 0QQ www.cuh.org.uk
Contact number: 01223 245151
Publish/Review date: February 2020/February 2023
File name: Pyeloplasty.doc
Version number/Ref: 6/PIN240/Documents ID 1393