Wrightington, Wigan and Leigh Teaching Hospitals
NHS Foundation Trust

Antenatal Hydronephrosis

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Antenatal Hydronephrosis

Patient Information

Child Health Department

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What is Hydronephrosis?

Urine is continuously formed in the kidneys and collects in the pelvis of the kidney. The urine then drains from the kidneys to the bladder through tubes called ureters. From the bladder, urine is passed out through another tube called the urethra.

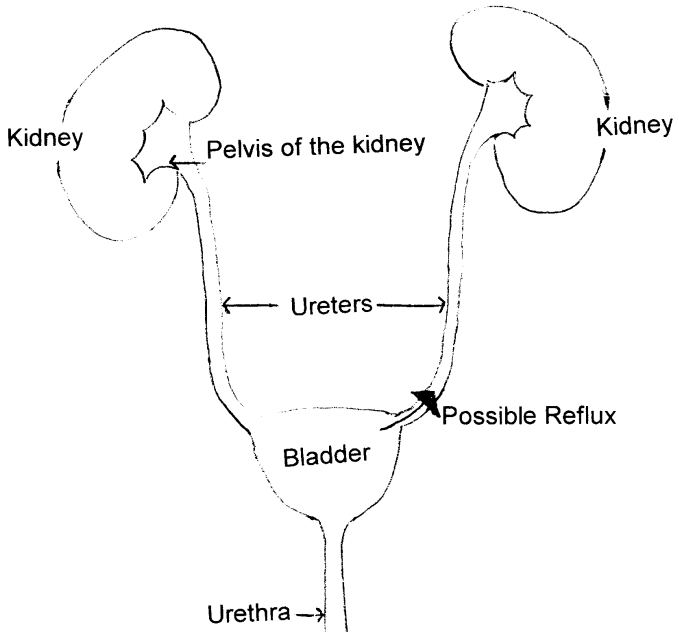
Hydronephrosis is a swelling of the kidney and its draining tubes due to a back-up of urine. This is a relatively common problem which often improves by itself both before and after baby's birth. Sometimes, further investigations are necessary to make sure that there are no significant problems with your baby`s kidneys.

There are two main causes of swelling:

1. An obstruction/blockage to flow of urine which can occur anywhere along the pathway from the pelvis of the kidney to the urethra.

2. Vesico-ureteric reflux where urine flows back into the ureters from the bladder and towards the kidneys as urine is being passed.

If both kidneys are affected, there is more of a chance that an operation might be necessary (typically on the urethra to remove posterior urethral valves).



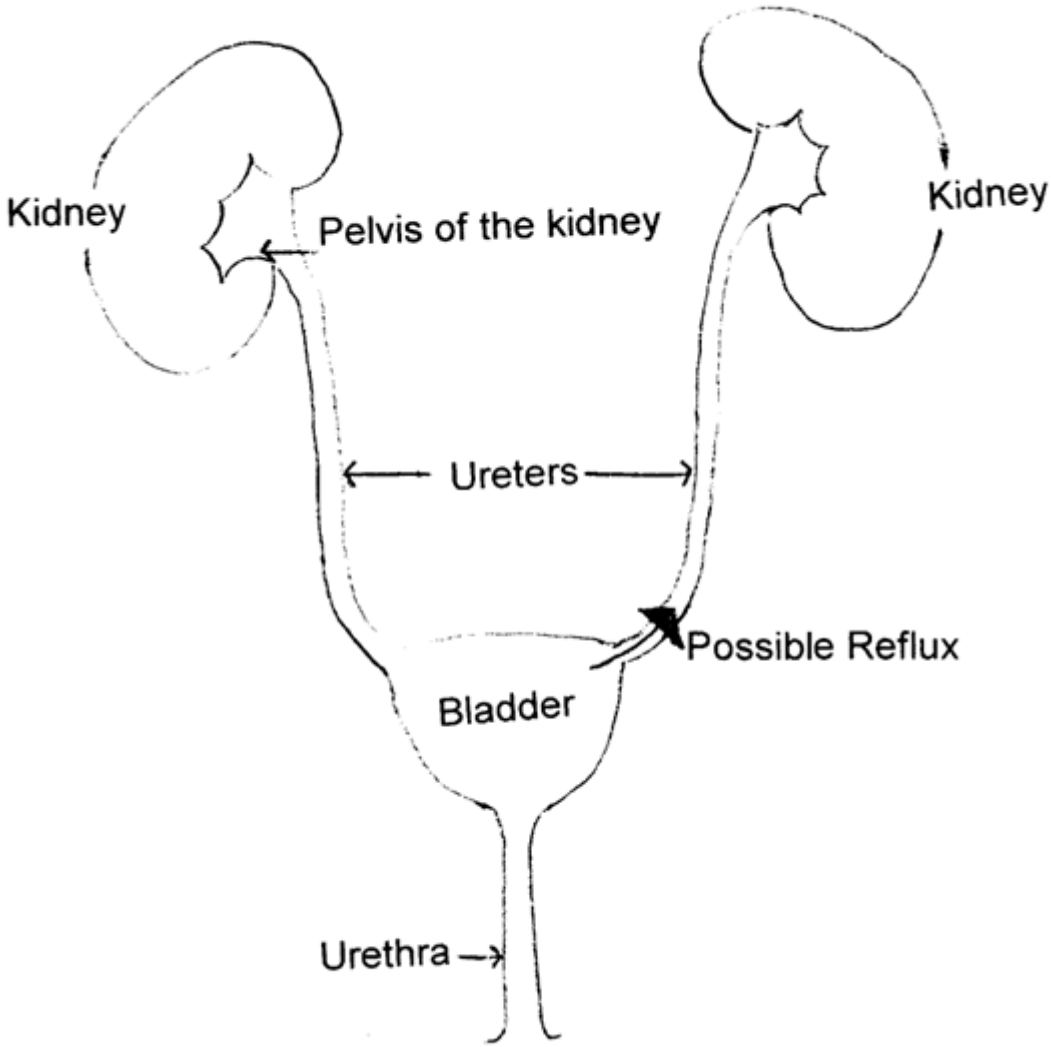


Diagram to show the kidneys and bladder

What will happen when my baby is born?

This will depend on the severity of the swelling and whether this is just on one side or both. Typically, the paediatrician will examine your baby in the usual way on the first day, and check for any swelling of the bladder or kidneys that can sometimes be felt when pressing on the tummy. They will be asking you about your baby's urine stream and it would be nice to anticipate this and watch baby pass urine and also make a mental note of the stream. They might want to check the baby's kidney function by doing a blood test (this is not usually very reliable in the first day of life and it gets better as baby matures) and protect your baby`s kidneys by starting an antibiotic called Trimethoprim. If this is started, then it will need to be given every day until the tests are completed; a process which might take a few months (the Paediatric Team will let you know when this should be stopped). You will be

shown how to give the medicine, which is a syrup. Further tests might also need to be arranged for your baby.

What further tests will my baby have?

Again, this will depend on the severity of the swelling and whether it affects one or both kidneys. Most babies will need an **ultrasound of the kidneys**, like an antenatal scan. This will normally be arranged within a week of your baby being born but might be sooner if the swelling is more severe or both kidneys are affected.

Some babies will require a **micturating cystourethrogram (or MCUG)**. This involves placing a catheter (small tube) into the bladder through the urethra (end of the penis or above the vagina) and inserting some dye. This test gives valuable information about valves at the top of the bladder and shows whether they are refluxing.

Other scans are sometimes necessary such as **an isotope scan (DMSA or MAG3)** of the kidneys to show how they are working. This involves giving some dye through a vein (this will involve a small skin prick) that is then concentrated by the kidneys.

Why do babies need to have these tests?

Although these tests are not pleasant to have done, most babies cope with them extremely well. A potential problem has been identified at a very early stage. It is important that we find out quickly if there is any problem which needs urgent attention, so that it can be dealt with straightaway, before the kidneys are damaged, usually by infection. Very occasionally babies need surgery to help the kidneys drain urine (less than 10%). Where babies have both kidneys affected, they are more likely to have problems.

The overwhelming majority of babies with antenatal kidney dilatation have no serious problem and are discharged from follow up.

How will I know if my baby has a urine infection?

The antibiotic that your baby is given every day will protect against infections. It is very important that any urine infection your baby may have, is treated straightaway with the correct antibiotic (the one they are given to prevent infection will have failed). If your baby is unwell in any way with poor feeding, vomiting, temperature, or smelly urine, then contact your doctor to arrange a specimen of urine to be taken. This needs to be taken in a sterile container, ideally as a `clean catch`.

Please feel free to ask

When a potential kidney problem is identified before your baby is born, the Paediatric team is usually made aware to prepare plans for your baby after birth according to regional guidelines. If you have any questions or queries which we have not covered in this leaflet the staff will be pleased to answer your questions as clearly and honestly as they can.

Special Care Baby Unit telephone 01942 778504, Monday to Friday 9am to 5pm

Alternatively, you could ask to be referred to one of the Paediatric Consultants to have a discussion about any issues you want clarifying or to discuss the management plan after baby is born.

Research

Research is undertaken to add to the existing scientific knowledge on a particular subject. There is a number of staff within the Trust who conduct research studies. It is possible that during the course of your treatment you may be asked to take part in a research study, however, you do have the right to refuse, and this will not affect the care that you receive.



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