Kidney disease and pregnancy

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Kidney disease and pregnancy

If you have kidney disease and are thinking of becoming pregnant, there are several issues that may need to be discussed with you about your disease and your medications to try and ensure that you and your baby remain healthy. This leaflet explains what some of these issues may be. It is important to remember that all kidney patients are different and this leaflet can only give you a general outline. We run a kidney-pregnancy clinic jointly with Birmingham Women’s Hospital and if you want further information, you should first discuss this with your kidney doctor who may consider referring you for a more detailed consultation in the kidney-pregnancy clinic.

Medications

Not all medications that you are taking will be safe in pregnancy. This is because some of them may cross from you into the baby and potentially cause some harm. For this reason, it is very important if you are thinking of becoming pregnant to discuss with your kidney doctors so that we can if possible make changes before you become pregnant. If you find yourself pregnant it is vital that you let us know as soon as you find out so that we can make any necessary changes to your medication.

The following medication should be avoided:

Blood pressure tablets

In pregnancy we do not like to use ACE inhibitors (e.g. ramipril) or Angiotensin II receptor blockers (e.g. losartan). It is very common for kidney patients to be on these tablets for control of blood pressure or to reduce the amount of protein in the urine. Ideally you should stop taking those before you become pregnant. We opt for labetalol, nifedipine or methyl dopa and aim to change your tablets before pregnancy.
Anti-rejection medication

Tacrolimus, cyclosporine and prednisolone are safe in pregnancy. Mycophenolate however is not. If you are taking this, we would plan to change this to another anti-rejection medicine, azathioprine before you become pregnant.

Immunosuppressant medication

If you have lupus or another kidney disease requiring suppression of your immune system, we may also need to change your treatment. Prednisolone is safe during pregnancy, but as with transplant patients, we would need to change your mycophenolate to azathioprine. Cyclophosphamide is highly toxic to the unborn child and you would need to stop taking this for several months before hand if possible.

There is not a great deal of information on new drugs such as rituximab. Rituximab would not usually be given during pregnancy however, if you become pregnant a few months after being treated with this drug, there is likely to be no harm to your baby.

Changing medications for transplants and for inflammatory disease of the kidney may be associated with a risk of rejection or your kidney disease becoming worse. This needs to be discussed very carefully with your doctor so that changes are made at a time when the risk of this is low. We may suggest that you change your treatment and then wait a few months to make sure that your kidney function is steady before becoming pregnant.

Other medications

Warfarin is not safe therefore your doctor will change this to heparin injections. Ideally this would happen before you become pregnant however, it can happen as soon as you find out that you are pregnant.

You will also be advised to stop taking Furosemide, statin
medications, gout medications and certain antibiotics when pregnant.

Erythropoietin and iron are safe, as is aspirin and cephalixin. These are medications that you may end up taking in pregnancy as detailed below.

We would recommend that you take folic acid before trying to become pregnant to help development of the baby’s spinal column and reduce the risk of spina bifida.

**Urinary tract infections**

Some kidney patients are very prone to suffering from water infections. It is common for these to occur more frequently during pregnancy because of the effects of pregnancy hormones and the way that the kidneys drain. If this is the case for you, we may suggest:

- Making sure that you drink plenty of water, that you pass water often and that you always pass water after sex
- Taking a low dose antibiotic at night to try and prevent water infections from developing. This is usually cephalexin unless you are allergic to penicillin. This causes no harm to the baby

**Protein in your urine**

If you have a large amount of protein in your urine (ACR of more than 200) you are more at risk of developing blood clots in your leg veins (DVT) or in your lungs (pulmonary embolus) in pregnancy. This can be extremely serious. To prevent this from happening we recommend that your blood is thinned during pregnancy (and for six weeks after giving birth) with daily heparin injections which we can teach you or a family member to give. If you already have this amount of protein in your urine at the start of pregnancy, you will need to start this treatment as soon as you find out you are pregnant. It is also common for the amount of protein in your urine to
increase in pregnancy and therefore if the levels rise it may be recommended at some point into your pregnancy. This may sound very unpleasant, but patients learn very quickly and needles are very small to make sure that the injection does not cause bad discomfort.

**Potential problems for kidney patients**

The next section explains what problems can occur in pregnancy for you, your kidney function and your baby.

It is important to realise that these vary depending on what your kidney function is like. If your kidney function is good, with a creatinine of less than 100 μmol/l then your risks are low. However, if your kidney function is such that your creatinine is over 150 μmol/l then you may be much more at risk of complications.

It is very important that your case is considered individually and this information is just for general guidance.

**Change in kidney function in pregnancy**

In pregnancy, the blood supply to your kidneys increases a great deal. This means that your kidneys need to work a lot harder to cope with this increase in blood supply. If you have kidney disease, your kidneys may find it more difficult to cope with this increase in workload and this may have effects for your pregnancy and for your kidneys.

**Effects of kidney problems on pregnancy**

**High blood pressure**

If you have kidney problems you are more likely to develop issues with blood pressure during pregnancy. This is made more likely if you have existing blood pressure problems. High blood pressure in pregnancy can mean that your baby doesn’t grow as quickly and you may need scans to measure its growth.
Pre-eclampsia

Pre-eclampsia is a condition that can occur in pregnant women when there is a problem with the placenta (the organ that links the baby’s blood supply to the mother’s). As a result, the mother can develop:

• high blood pressure (hypertension)
• protein in her urine (proteinuria)
• fluid retention (oedema)
• worsening kidney function
• in very severe cases, liver and blood clotting problems, fits and stroke

In the unborn baby, pre-eclampsia can cause growth problems (intrauterine growth retardation).

Pre-eclampsia usually does not occur until the second half of pregnancy (anytime from around week 20 onwards but usually not until the last couple of months), or sometimes immediately after the delivery of a baby.

Pre-eclampsia may not be noticeable to the woman who has it, but it will show up during routine antenatal appointments by measuring blood pressure, checking for increasing amounts of protein in the urine and watching kidney and liver blood tests. In most cases, the woman will be monitored with regular blood pressure, urine and blood tests and scans of the baby. This can be done with frequent outpatient visits however, some women will need to be admitted to hospital.

The only way to treat pre-eclampsia when it becomes dangerous to either the mother or the unborn baby, is to induce labour (start labour artificially) and deliver the baby. The effect that this has on the baby depends on when the pre-eclampsia has developed. Being born prematurely (before 37 weeks) can be dangerous for the baby and mean that the baby is left with some long term health problems. If the baby has to be delivered very early, it may not survive.
How common is pre-eclampsia?

Mild pre-eclampsia can affect up to 10% of first-time pregnancies. More severe pre-eclampsia can affect 1-2% of pregnancies. If you have kidney disease, high blood pressure or lupus, your risks of pre-eclampsia are increased. The kidney doctors who are specialised in looking after pregnant women will be able to explain to you what your increased risk is. Low dose aspirin (75mg per day) has been shown to reduce the risk of pre-eclampsia in high-risk patients, and we would generally recommend this for all patients with kidney disease as soon as they are pregnant.

Diagnosing pre-eclampsia in patients who already have kidney disease, high blood pressure or protein in the urine is complex and is best done by a team of specialised kidney and pregnancy doctors who have had experience in this field. If you are at significant risk of this problem, we would always recommend that you are looked after in our kidney-pregnancy clinic at the Birmingham Women’s Hospital, even if this is not your local maternity unit.

Kidney function in pregnancy

Depending on how well your kidneys work, it is possible that your kidney function will get worse during your pregnancy. In some cases it will improve after you have had your baby, but if your kidney function is severely impaired before pregnancy it may deteriorate and not get better. In some cases this may mean that you end up on dialysis. This is something that you need to discuss carefully with us before pregnancy.

Anaemia in pregnancy

It is very common for patients with kidney problems to become quite anaemic in pregnancy. This often does not respond to the usual treatment of iron tablets. We may suggest that you receive iron through a drip and that you have
erythropoietin injections (EPO) to stimulate production of red blood cells. These treatments appear to be safe in pregnancy.

**Pregnancy on dialysis**

Very rarely dialysis patients fall pregnant or kidney function becomes so bad during pregnancy that you will need dialysis. The risks of pre-eclampsia and having a very small baby are high if this is the case. In order to keep you and your baby as healthy as possible, we would in most cases, recommend that you have haemodialysis. We would also recommend that by the time you reach 20 weeks you will need very frequent dialysis (six times a week) to keep the blood as clean as possible.

**Other illnesses**

Some patients with kidney problems have other illnesses as well. We would recommend discussion with other specialists as well as ourselves for patients for instance with diabetes, lupus or liver problems.

**Inherited conditions**

Some kidney problems run in families. You may wish to discuss the risks of your child developing your kidney condition before pregnancy. Sometimes we can advise you on the risks, but sometimes we may suggest that you see a genetics specialist.

**Fertility problems**

Unfortunately, some patients with kidney problems have problems becoming pregnant. Fertility treatment is possible in kidney patients. However, we would always recommend that you are seen to discuss pregnancy in the kidney-pregnancy clinic before undergoing any such treatments.
Contraception
As you can see from reading this leaflet, ideally kidney patients plan any pregnancies and don’t fall pregnant by accident. It is therefore very important that you consider contraception to prevent pregnancy. In general, all common forms of contraception are suitable. However, if you have lupus or high blood pressure, certain types of oral contraceptive pill may be best avoided. If you have questions about what would be most suitable for you, please discuss with your kidney doctor, your GP or your local family planning clinic.

What should I do if I become pregnant?
It is very important that you contact us immediately should you have a positive pregnancy test as we may need to adjust your medications to ones that are suitable for pregnancy. Please call us either in Outpatients or contact your consultant’s secretaries.

Where can I get further information?
Further information can be obtained from:
Go online and view NHS Choices website for more information about a wide range of health topics www.nhs.uk.

Useful contact numbers
Hospital switch board 0121 627 2000
Renal Outpatients 0121 371 4446 / 0121 371 4428
Dr Lipkin’s secretary 0121 371 5837
Dr Day’s secretary 0121 371 5835
Please use the space provided to write down any questions you may have:
The Trust provides free monthly health talks on a variety of medical conditions and treatments. For more information visit www.uhb.nhs.uk or call 0121 627 7803

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