

Twin to Twin Transfusion Syndrome

TTTS

Twin to Twin Transfusion Syndrome - TTTS

A diagnosis of twin to twin transfusion syndrome (TTTS) can be an emotional and confusing time. Although it can happen at any time during pregnancy, it is rare after 22 weeks and usually happens in early pregnancy.

This leaflet has been produced to give you more information about TTTS and to compliment the individual care and advice you will receive from the Multiple Pregnancy Clinics at the Liverpool Women's Hospital and Aintree Centre for Women's Health.

TTTS What is it?

Twin to twin transfusion syndrome is a condition that affects identical twins. This is caused by an abnormal connecting of blood vessels in the twins shared placenta, which results in an imbalance of blood flow from one twin to the other. Unfortunately it can be serious condition.

TTTS affects approximately 15% of identical twins who share the same placenta.

In TTTS pregnancies, blood from the “**donor**” twin is transfused through the placenta to the “**recipient**” twin. The recipient twin (often larger than the other twin) receives more blood than usual from the placenta, which can put a strain on the baby's heart and makes this twin produce more urine than normal. This often results in extra fluid around the baby, within the amniotic sac and is called polyhydramnios. This can be uncomfortable for the mother and also increases the risk to the pregnancy by causing premature labour due to the extra pressure on the neck of the womb (cervix).

The “**donor**” twin (often smaller than the other twin) may become anaemic due to receiving less blood from the placenta. This in turn may result in less fluid around the baby (this twin produces less urine) within the amniotic sac and is called oligohydramnios.

The babies are normal; it is the network of blood vessels in the placenta which are abnormal. This can happen in early pregnancy without warning and can only be diagnosed by the use of ultrasound scanning.

How is TTTS diagnosed?

Sometimes the mother will get symptoms related to this condition such as: premature contractions, rapidly expanding abdomen, the feeling of increased pressure, breathlessness. However there are often no signs of physical symptoms at all and diagnosis is made using regular ultrasound scanning.

Ultrasound Scan

Early ultrasound scanning is necessary to determine the type of twins (chorionicity) in each multiple pregnancy. Early recognition of TTTS is desirable and therefore extra ultrasound scans are performed in early pregnancy if the placenta is found to be “monochorionic.” These scans are usually done at 16, 19 and 22 weeks. TTTS is detected by scanning and assessing differences in the fluid around each baby, differences in their sizes, differences in the bladder sizes, and looking for signs of heart failure in the recipient twin. A doppler scan will also be performed to track the blood flow through the cords to better diagnose the condition. The condition can have different levels of severity depending on the scan findings. Sometimes, in the early stages of the condition, it can be difficult to make a definite diagnosis at one scan, as the problem may be growth restriction in one twin and not TTTS. In these circumstances the doctor would arrange to review the situation in a week or two.

What treatments are available?

Each diagnosis of TTTS is treated individually and intervention is not always necessary. If the condition is mild your pregnancy would be monitored by ultrasound scan and may even resolve on it's own. If treatment is needed then the possible procedures are:

Amnioreduction:

At the Liverpool Women's Hospital management of TTTS has been based on amnioreduction (taking some fluid out from around the twin with polyhydramnios) to try and prevent premature delivery because of over distension of the uterus (womb). A needle is passed through the abdomen into the sac of the recipient twin and fluid removed. This procedure is always performed under direct vision with the ultrasound scan and usually takes about 20 minutes depending on how much fluid is removed. This is usually repeated

more than once and is monitored by repeating scans frequently. This can be weekly or fortnightly at this stage.

Laser Therapy:

Laser ablation therapy is not done at the Liverpool Women's Hospital. It is a very specialised treatment and women in our care can be referred for this treatment to colleagues in London. This treatment attempts to rectify the problem by separating the blood vessels in the placenta. An endoscope (a thin hollow tube) is used in the same way as the amniotic needle and a scope and laser tip are passed down it. The laser is then used to cut the joining vessels apart. Usually only one attempt is made to treat in this way as it is a surgical procedure. There are pros and cons compared to amnioreduction and the doctor will discuss this with you, if necessary.

Septostomy:

Septostomy is not done at the Liverpool Women's Hospital because of doubt about its value. This procedure is similar to amnioreduction, however the aim is to create a hole in between the two sacs with the amniotic needle, allowing fluid to spread evenly and reduce the pressure in the recipient sac.

What does it mean for my pregnancy?

Each placenta can vary differently in each pregnancy, from the size, appearance and location in the uterus. Therefore, the treatment of choice can depend on these and other factors.

Every case of TTTS can be very different and can vary from the very mild to the very severe. If mild, no treatment will be necessary. If more severe your consultant will answer any queries you may have during your treatment. The outcome for each pregnancy will depend on the severity and gestation at diagnosis. The earlier the diagnosis is made the more severe the condition may be and if this is the case, termination of pregnancy may be an option which can be discussed with your consultant.

Many parents go through the diagnosis and treatment and end up with healthy twins. Nevertheless, some parents may not be so lucky and experience a loss.

If you would like more information regarding this condition there are support groups you can contact:

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2 The Willows
Gardner Road
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Tel: 08707703305

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www.twin2twin.org

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Any queries, please contact:

Specialist Midwife
Liverpool Women's Hospital
Tel: 0151 708 9988 Extension 4223 or Bleep 410

or

Specialist Midwife at Aintree on 0151 529 3414
Antenatal Clinic
Aintree Centre for Women's Health

This information sheet may be available in different formats. It is a brief outline of TTTS and is not intended to replace discussion with Medical or Midwifery staff.

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