

## CONTACT INFORMATION

### **Centre for Fetal Medicine, K79**

08-58581620/70

### **Antenatal Ward K49**

08-58580249

Karolinska Universitetssjukhuset  
141 86 Stockholm

[www.karolinska.se/fostermedicin](http://www.karolinska.se/fostermedicin)

### **Ronald McDonald House**

08-58580211/10

Alfreds Nobels Allé 20  
14152 Huddinge

[www.ronaldmcdonaldhus.se](http://www.ronaldmcdonaldhus.se)

### **Attendo Park hotell**

08-55640700

Hälsövägen 22  
141 52 Huddinge

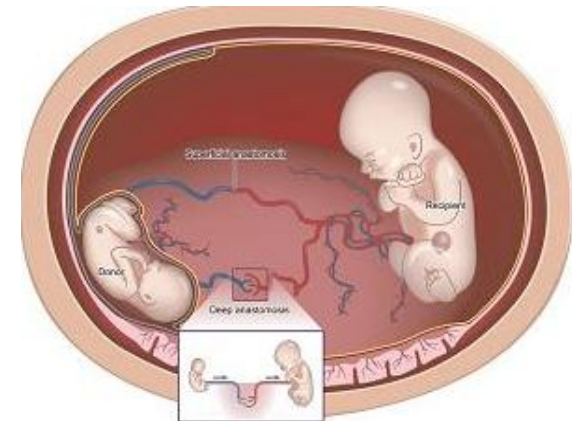
[www.attendoparkhotell.se](http://www.attendoparkhotell.se)

July 2014, Annica Karlström



Patient information about

## **Twin to Twin-Transfusion-Syndrome TTTS**



Karolinska University Hospital  
Centre for Fetal Medicine

## Background

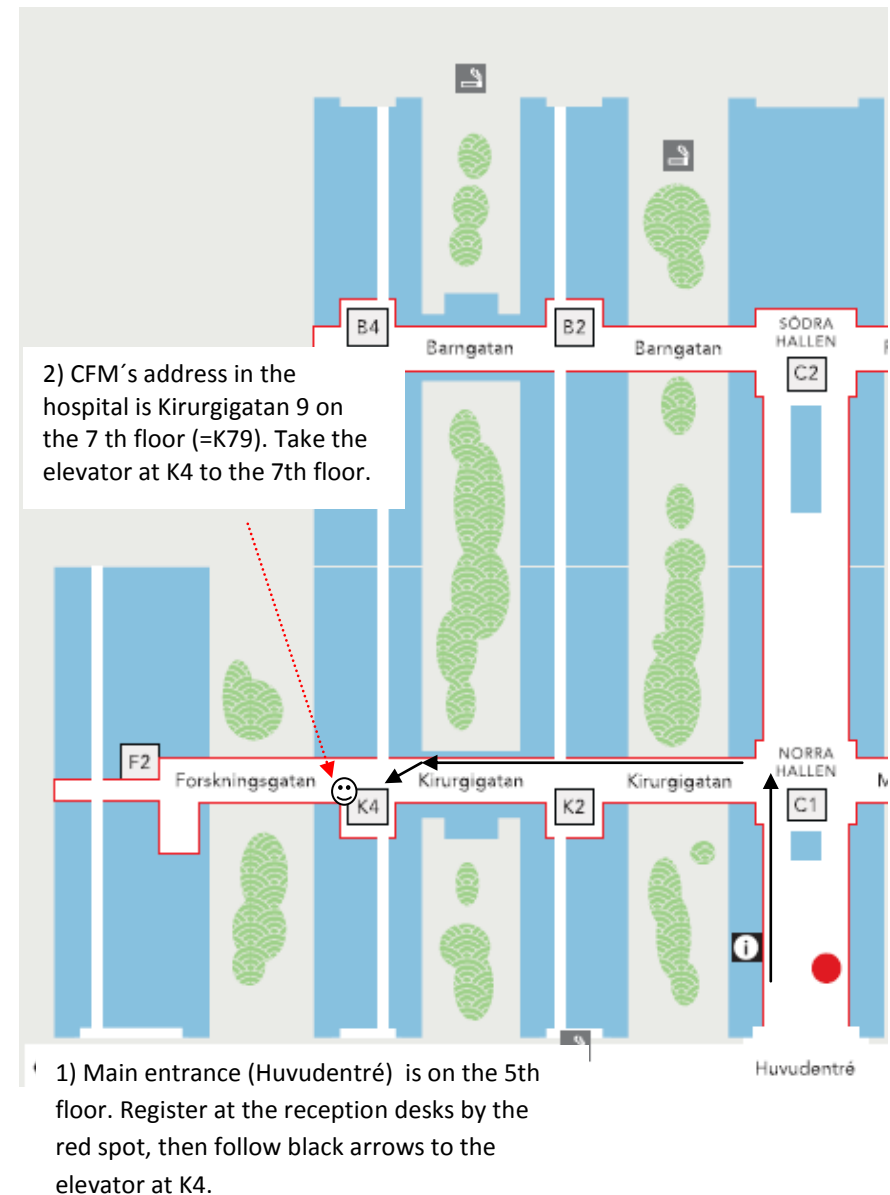
There are two different types of twin pregnancies. The most common is two egg twins, where two sperms fertilize two different eggs. These twins are no more related than normal siblings and can be of different gender. They have their own placenta and separate membranes.

One egg twins come from one fertilized egg, which divides into two embryos. These twins are identical and are always the same gender. Depending on when the egg divides will decide how much the twins will share. If the egg divides before day three it will lead to two separate fetuses having a placenta and membranes each (as in two egg twins), whilst a later dividing can result in the fetuses sharing a placenta and one or both of the fetal membranes. This is the most common form accounting for approximately 70% of all one egg twins.

## TTTS – twin to twin transfusion syndrome

In Sweden approximately 1000 pregnancies a year are multiple. Of all twin pregnancies one third are identical one egg twins. The majority of identical twins share a placenta. About 10-15% of these pregnancies can result in blood vessel attachments (anastomosis) in the placenta between the fetal cords. This can lead to one fetus – the donator – becoming – becoming dehydrated leading to oligohydramnious and non-visible bladder. The recipient as a result becomes hypo-atremic leading to polyhydramnious and an enlarged bladder.

## Karolinska University Hospital



## Notes

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## TTTS laser treatment

Since the middle of the 1990's laser therapy has been accessible for the treatment of TTTS. Since 2001, Karolinska University Hospital in Huddinge has offered treatment for twin to twin transfusion.

A small, thin instrument called a fetoscope is inserted into the uterus. There it is possible to see and identify the joined blood vessels which can then be coagulated with a laser wave. The excess amniotic fluid is then drained.

### Results

If twin transfusion is not treated properly it may lead to intrauterine death of one or both fetuses. After laser treatment both fetuses survive in approx. 50% of the cases and one fetus in more than 80%. Our follow-up studies of our first ten years demonstrated that the majority of TTTS-twins are born preterm. After treatment more than 61% had at least one infant after one year and of these 90% did not show any neurological disability. Recipient twins have a higher likelihood of surviving compared to donor twins, but the neurological developments during the first years are equivalent. The cardiac problems during pregnancy, that sometimes affect the recipient, have an excellent long term prognosis.



## The procedure:

### The day before laser treatment

- The patient comes to CFM for an ultrasound assessment.
- The severity will be determined to assess if laser treatment is necessary and if so when it should be performed.
- The patient is admitted to the antenatal ward K49 for monitoring and preparation for the laser operation.

### On the day of the operation

- The patient should be fasting from 24:00 h.
- The patient receives the pre-operation medicine on the antenatal ward.
- Local anesthesia or a spinal blockade will be administered in the operation theatre.
- The abdomen will be sterilized and prepared for the operation.
- The anesthetic team will have responsibility for pulse and blood pressure observations during the operation.
- With a thin fetoscope, the surgeon penetrates the abdominal wall through the uterus into the recipient's membrane. Here the surgeon identifies the anastomotic blood vessels and coagulates them with the laser. The excess amniotic fluid will at this stage be drained.
- After the operation the patient will be monitored in the post operation ward, later returning to the antenatal ward for overnight observation. The patient can start to eat and drink the same evening.
- The day after the operation, an ultrasound examination will be performed and the patient will be allowed to mobilize free.
- Continuation of care for the patient will then be individually assessed.

## The follow up:

- The responsible doctor at CFM will contact the referring doctor at the patient's original hospital for continuation of assessment of care.

## Information

- We recommend that the patient brings an accompanying *adult*.
- Only the patient can stay overnight in the hospital.
- If the accompanying adult has difficulty in booking accommodation we can offer a place to stay at the Ronald McDonald hostel with self catering, or at Attendo Park Hotel near the hospital. Booking of room can be done through the personnel at CFM or antenatal ward K49.
- You are welcome to contact us if you have any questions, see telephone numbers on the last page.