MODE OF DELIVERY ACCORDING TO FETAL AND MATERNAL STATUS

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At Danderyd Hospital, the deliveries amount to around 5 000 per year. The delivery department is divided into two sections. In the section for normal deliveries there are six labour rooms. The patients, who go to that part, are carefully selected: women with uncomplicated pregnancies between 38 and 42 weeks of gestation, and a normal start of labour. In the other section, comprising 8 delivery rooms, all other patients are tended to. The midwives alternate between both sections, usually for one year at a time.

The standard surveillance during normal delivery of low risk pregnancies follows the usual routines in Sweden: at admission blood pressure is tested and urine is examined for protein and glucose; temperature is taken if there is a rupture of membranes and CTG - "door test" - is performed. Vaginal examination is performed, and the woman is assessed to be in active labour if the cervix is effaced and open 3cm or more, and she has regular contractions.. If all the tests are normal, the woman is followed by examination of the cervical state every 1-2 hours and the results are plotted in a partogram. The midwife examines the fetus by auscultating fetal heart rate every 15 minutes, making sure that there are accelerations and no decelerations. CTG is performed intermittently, and is recommended in the second stage of labour. Before epidural anesthesia is administered, CTG should be performed for at least 15 minutes, and continously afterwards. In high-risk pregnancies the fetus is monitored more continously, depending on the diagnosis.

Fetal surveillance by measuring pH is usually performed if there is uncertainty about the CTG. It can be done if the cervix is dilated 2 cm or more and the membranes are ruptured. The measurement of lactate is a more simple method to use, and also cheaper.

Antenatal surveillance of high risk pregnancies usually includes ultrasound for fetal growth, umbilical blood flow in cases of fetal growth retardation, and also if the mother is on medication that can affect the umbilical blood flow. Non stress test is applied daily when the mother is staying in hospital.

At our hospital the over all rate of cesarean sections has increased and is now approximately 17% of all deliveries: 40% planned and 60% emergency operations. – In the high risk pregnancies the rate of CS is 40%.

Induction of labour can be performed at the high risk ward by prostaglandins, but if labour is induced by oxytocin or rupture of membranes, the woman is observed at the delivery ward. Patients with oligohydramniosis are surveilled at the delivery ward. The same applies if the woman has a severe preeclampsia and needs intravenous treatment for her blood pressure; in those cases continous fetal monitoring should be performed.

PARVOVIRUS B19 - A CAUSE OF NON-HYDROPIC THIRD TRIMESTER INTRAUTERINE FETAL DEATH

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Objective: *Parvovirus B19 or fifth disease is a common viral disease. Clinical symptoms are rash, fever, and sometimes arthralgia. The virus can also affect bone marrow, liver, and heart muscle. – In pregnancy, the virus can cause fetal anaemia, hydrops, and fetal death, mainly during the second trimester. In a prospective study of pregnant women B19 antibodies were found in 60% as a sign of previous infection.One of the women , with no antibodies for Parvovirus B19, suffered an intrauterine fetal death (IUFD) at 37 gestational weeks (GW). There were no hydropic changes. Parvovirus B19 DNA was found in the placenta and in maternal serum at delivery as well as three weeks before the fetal demise. In Danderyd Hospital an extensive protocol for investigation of IUFD has been in use for many years. By this protocol approximately 45% of the IUFDs can be explained.*

Method: *Since 1992 all women with IUFD have been investigated for Parvovirus B19, IgG and IgM in maternal serum and B19 DNA in serum and placenta. These tests have been added to the former protocol for IUFD.*

During the years 1992-1998 there were 33 759 deliveries including 93 cases of third trimester IUFD at Danderyd Hospital..

Results: *Among the 93 cases of IUFD, 7 (7.5%) had detectable B19 DNA in placental tissue. None of the infants was hydropic. No other explanation for the fetal death was found. B19 IgG was positive in maternal serum in 5 cases. In one case seroconversion took place between 2 and 6 months after delivery (when samples were collected); in one case B19 IgG was negative still 8 months post partum.*

Conclusion: *In all cases of third trimester IUFD testing for Parvovirus B19 should be performed, both serological tests and tests for B19 DNA.*