

The lively little girl is a miracle for everyone

October 29 2007

When the bag of waters burst in the 20th week of pregnancy, the unborn child only had a very slim chance of surviving birth. The high risk of infection was not the only risk to Miriam's life. Her lungs stopped growing, and as a result she would have most probably suffocated after birth.

Doctors at Bonn University Clinic presumably saved Miriam's life with surgery in the womb that stimulated lung growth. This was the first time that this method has been used worldwide in a case of premature rupture of the foetal membrane. The baby is now one year old and full of beans. The doctors will report on their case in the scientific journal *Fetal Diagnosis and Therapy* on 29 October.

This is their fourth child, and it is the third time that Lori has had a premature rupture of the foetal membrane. However, this time it happened at an extremely critical time for the unborn child. A rupture before the 22nd week of pregnancy results in the child being constricted due to the lack of its protective liquid cushion and the organs pressing on the lung. Therefore the lung is either much too small at birth or cannot enrich the blood with oxygen. Every second baby suffocates after birth. Moreover, it is now unprotected against germs in the womb, and the danger of a life-threatening infection is high for the child. For this reason the pregnancy is usually aborted after rupture at such an early stage.

But Miriam's parents did not give up on her. "My husband and me prayed and put our faith in God. We were prepared to do anything for

our child. Miracles do happen," the 29 year-old mother says. When Professor Thomas Kohl, Head of the German Centre of Foetal Surgery & Minimally Invasive Therapy (Deutsches Zentrum für Fetalchirurgie & minimal-invasive Therapie, DZFT) at Bonn University Clinic, offered the parents a prenatal operation, they seized this opportunity. This kind of foetal surgical procedure is currently an experiment whose outcome is uncertain. 'But here we were dealing with a healthy child and it was a question of significantly increasing its chances of survival,' Professor Kohl says.

Lungs rose like yeast cake

During the operation, the foetal surgeons insert the operating device, which is the size of a ballpoint pen, into the foetal membranes via a small opening in the mother's stomach. They carefully move this foetoscope -- assisted by a camera and ultrasonic apparatus -- via the mouth and into the trachea of the unborn baby. There a miniature balloon is inflated, blocking the respiratory channel so that the fluid which is continuously produced by the prenatal lung cannot drain away. This way the fluid pressure built up stimulates lung growth. Miriam's case was the first one where Professor Kohl also used the protein serum albumin, which increases the amount of water collected in the lung and amplifies the effect of the latex balloon. "Our little patient's lungs rose like yeast cake. The balloon stayed in the lungs for five days and during this period the volume of the lungs almost doubled," Professor Kohl says. During the whole process, gynaecologists and midwives provided intensive care for the mother and child.

The baby was born in the 33rd week of pregnancy. Then the premature baby specialists of the Neonatological Intensive Care Department (Neonatologische Intensivpflegestation, NIPS) took over the postnatal care. 'The prenatal operation only takes one or two hours. Competent follow-up care of the children after birth is at least as important for their

healthy survival,' Professor Kohl emphasises.

For the parents Miriam is a little miracle. Two weeks before the baby was due to be born, the happy parents were able to take home their daughter, who is as fit as a fiddle. At home in her family Miriam's development has been fantastic ever since. 'It was a hard time. We were torn between anxiety and hope. But we are incredibly happy to have made this decision in spite of all the unknowns,' Heinrich, the 29-year-old father says. For the team in Bonn, the work has only just begun. Now the focus is on testing the life-saving potential of the new method of treatment on further patients with premature rupture of the foetal membrane.

Source: University of Bonn

Citation: The lively little girl is a miracle for everyone (2007, October 29) retrieved 4 May 2024 from <https://medicalxpress.com/news/2007-10-girl-miracle.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.