

Media release

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Inselspital: Conjoined Twins Successfully Separated

Bern University Hospital has successfully separated premature conjoined twins in cooperation with the Geneva University Hospitals (HUG). These are the smallest conjoined children which have been separated up to now.

Paediatric surgeons from the Bern Paediatric Clinics entered new medical territory in cooperation with colleagues from Geneva on 10 December. They successfully separated conjoined twins in a five-hour operation. The two girls born 8 weeks before the due date were extensively conjoined on the liver, but had all vital organs. In the past 30 years conjoined twins were only born and successfully separated two other times in Switzerland.

It is the first successful operation of such small conjoined twins in Switzerland and possibly even worldwide, and therefore – apart from great luck for the parents – a medical sensation. A paediatric surgical team from *Hôpitaux Universitaires de Genève* (HUG) also took part in the operation organised by the Department of Paediatric Surgery at Bern University Hospital.

Birth of triplets

The children were born on 2 December in the 32nd week of pregnancy in a birth of triplets by Caesarean section. The mother's state of health necessitated the intervention. The third girl was born healthy.

Mother and children were taken care of together by specialised experts from the fields of obstetrics, neonatology, paediatric intensive care medicine, paediatric imaging, paediatric anaesthesia, surgical nursing, paediatric surgery and paediatric heart surgery.

Complex surgery with very small twins

The conjoined twins weighed 2,200 grams together. They had great problems, because a very great amount of blood flowed from one child to another through the liver. That is why one child had too much blood and blood pressure that was much too high, while the other child did not receive enough blood and had blood pressure that was too low. In order to save the children, the interdisciplinary treatment team decided in consultation with the parents to already risk the surgical separation on an emergency basis after a good week.

Such small conjoined siblings had never been successfully separated before. The livers of the two girls were extensively conjoined, and the large blood vessels passing through the livers had to be separated. That is why Barbara Wildhaber and Jim Wilde, the experienced team of paediatric liver surgeons from Geneva, were informed on developments early on and mobilised for the operation at short notice. Paediatric heart surgeon Alexander Kadner from Bern was also involved, because the children were also conjoined at the pericardium and thorax.

Only possible in a team

Steffen Berger, Head of the Department of Paediatric Surgery, speaking about the complex intervention at Bern University Hospital: “Even the preparation and support of the birth by obstetrics and neonatology colleagues was challenging. The subsequent stabilisation of the children in the paediatric intensive care unit and an MRI examination by the paediatric imaging department with specially adapted techniques were the prerequisite for being able to risk the intervention with such small children.”

Two complete paediatric anaesthesia teams, which also continued to smoothly provide support for the girls after the separation, were on duty during the operation. “The perfect teamwork of physicians and nursing personal from various disciplines were the key to success here”, says Berger. “We are very happy that the children and parents are faring so well now.”

After their abdominal walls could be gradually and entirely closed in further operations, the separated twins are now recovering in the paediatric intensive care unit. During this time their condition will be further closely monitored. Up to now the still very small children are developing quite well.

Caption: [The interdisciplinary treatment team shortly after the successful operation](#). From left to right: Isabelle Schnyder (Department of Paediatric Surgery, Bern), Barbara Wildhaber (Department of Paediatric Surgery, Geneva), Jim Wilde (Department of Paediatric Surgery, Geneva), Alexander Kadner (Department of Paediatric Heart Surgery, Bern), Melanie Bollinger (paediatric surgical nurse), Steffen Berger (Department of Paediatric Surgery, Bern); at the time the photo was taken, paediatric anaesthesiologists Stefan Seiler and Thomas Riva were still busy with caring for the little patients. (Photo: Department of Paediatric Surgery, Bern University Hospital).

Further information for media representatives:

Inselspital, Bern University Hospital (in German): Prof. Dr. med. Steffen Berger, Chairman and Head of the Department of Paediatric Surgery, +41 (0)79 962 72 22 (accessible on 31 January, 10 am-6 pm).

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