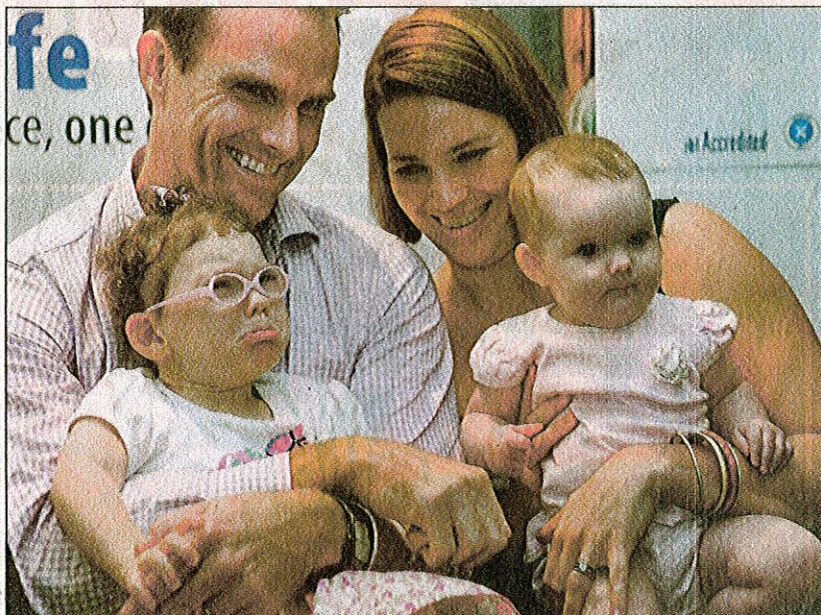


Cerebral palsy baby helped by cord blood

DON'T EXPECT MIRACLES

"As a parent, you secretly hope that this will be a magical cure for your daughter and she will get up and say, 'Wow, that was a wild ride'. Of course, this was not ever going to be the case and we went into the procedure with our eyes wide open."

Mrs Louise Conn, with husband Michael and daughters Georgia (left) and six-month-old Sybilla



ST PHOTO: JOYCE FANG

Infusion a first in S'pore; clinical trial planned for next year

By JUDITH TAN

AN ACCIDENT at birth 2½ years ago deprived Georgia Conn of oxygen to her brain, resulting in cerebral palsy.

The damage to the toddler's brain caused her to move involuntarily, suffer from muscle spasms and have up to 50 seizures a day. But in September, after Georgia was infused with her own cord blood in Singapore, her condition improved.

Her Australian parents, who have lived here for five years, noticed changes in her temperament and concentration. She also regained some muscle strength. Said her 35-year-old mother, Mrs Louise Conn: "These changes happened over the past 2½ months, so we are intrigued as to what might happen over the next year or so."

The procedure marked the first time that stem cells from a baby's own cord blood have been used to treat cerebral palsy here.

The 15-minute infusion was carried out by neurosurgeon Keith Goh at the Conns' home after getting the green light from the Ministry of Health (MOH).

"There were no ethical issues as the cord blood was Georgia's own. The worst that could happen was nothing. At least her body would not reject her own cells," Dr Goh said.

Mrs Conn said: "It took us more than 18 months and an enormous amount of research, mainly on the Internet, to find the information about the potential for using stem cells."

At the time, the Conns thought their best option was at Duke University in North Carolina in the United States. There, a professor of paediatrics and pathology was conducting a study in which 97 children with cerebral palsy were injected with their own cord blood cells.

Mrs Conn and her husband Michael, 37, got in touch with CordLife, a private cord blood bank at which Georgia's had been banked at birth. It was after CordLife put them in touch with Dr Goh that they realised the infusion could be carried out here.

Eighty per cent of Georgia's banked cord blood was used for the \$10,000 infusion - a payment the Conns felt was "worth its weight in gold".

Dr Goh has since applied to MOH to conduct clinical trials on using cord blood stem cells in the treatment of cerebral palsy here. "The type of trial I am looking at involves about 10 cases. I hope to start the trial early next year. Three children with cerebral palsy have come forward to be treated," he said.

Dr William Hwang, medical director of Singapore's only public cord blood bank, said a current Duke University study found that the infusion of such cord blood cells shortly after birth will facilitate cellular repair of perinatal brain injury, reducing the incidence and severity of cerebral palsy.

"Our neonatologists at public hospitals are seeking grant funding and obtaining approval from the Institutional Review Board to conduct an extension of the Duke trial," he said.

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Rich stem-cell source

BLOOD from the umbilical cord is collected and stored in cryogenic tanks soon after a baby is born. It is a rich source of stem cells - immature cells that can develop into a wide range of blood cells. They can be used to replace those ravaged by diseases like cancer and anaemia.

More than 80 diseases can be treated with cord blood and the number is growing rapidly. They include sickle cell anaemia, thalassaemia, leukaemia, metabolic storage disorders which cause the brain and nerves to deteriorate, and genetic disorders that hamper the ability to fight infection.

New areas where research into cord blood stem cells is currently being done include brain injury, juvenile diabetes, amyotrophic lateral sclerosis or Lou Gehrig's disease, cerebral palsy, congenital heart defects, hearing loss, liver disease and spinal cord injury.