



DR SRIRAM SHANKAR

# Check for heart defects in baby early

One day in the 1990s, a secondary school student, whose complex heart defect my colleagues and I had repaired five years ago, came to see me.

Her primary complaint was that she could not play competitive tennis games lasting more than two sets.

If she won the first two sets, then great. If the match went to the third set, she did not do so well.

She wanted me to consider enlarging her conduit, the tube we implanted in her that took blood from the heart to the lungs for oxygenation, to increase her exercise tolerance.

And this was a child who had a rough first few months of life. When I first saw her, she had a paralysed diaphragm and a distorted pulmonary artery that carries oxygen-poor blood from the heart to the lungs.

Years later, she had grown into this wonderful, bright and sporty girl.

She taught me an important lesson: We need to repair defects so that children not only survive, but also live life to the fullest.

This was not always the case.

In 1987, I started my cardiac training at the Royal Brompton Hospital in London, which was then renowned for surgery, especially paediatric surgery.

But even so, the outcomes were far from predictable, especially in newborn babies and young infants.

Over the next 25 years, the care has evolved such that most types of surgery now carry a low risk when performed by experienced hands.

Mothers-to-be and fathers-to-be should be aware that early detection of heart defects in a foetus is essential as it then improves the outcomes of treatment.

All pregnant mothers should have an ultrasound scan, at the latest by 20 weeks, to detect if there are any heart defects in their foetuses.

If any defects are detected, they should get an opinion from a paediatric cardiologist experienced in these matters.

Once the defects are confirmed, they should seek a surgeon's opinion to find out what can be done for their baby.

They should also know that it is reasonable to ask the surgeon about his experience with the particular defect in question.

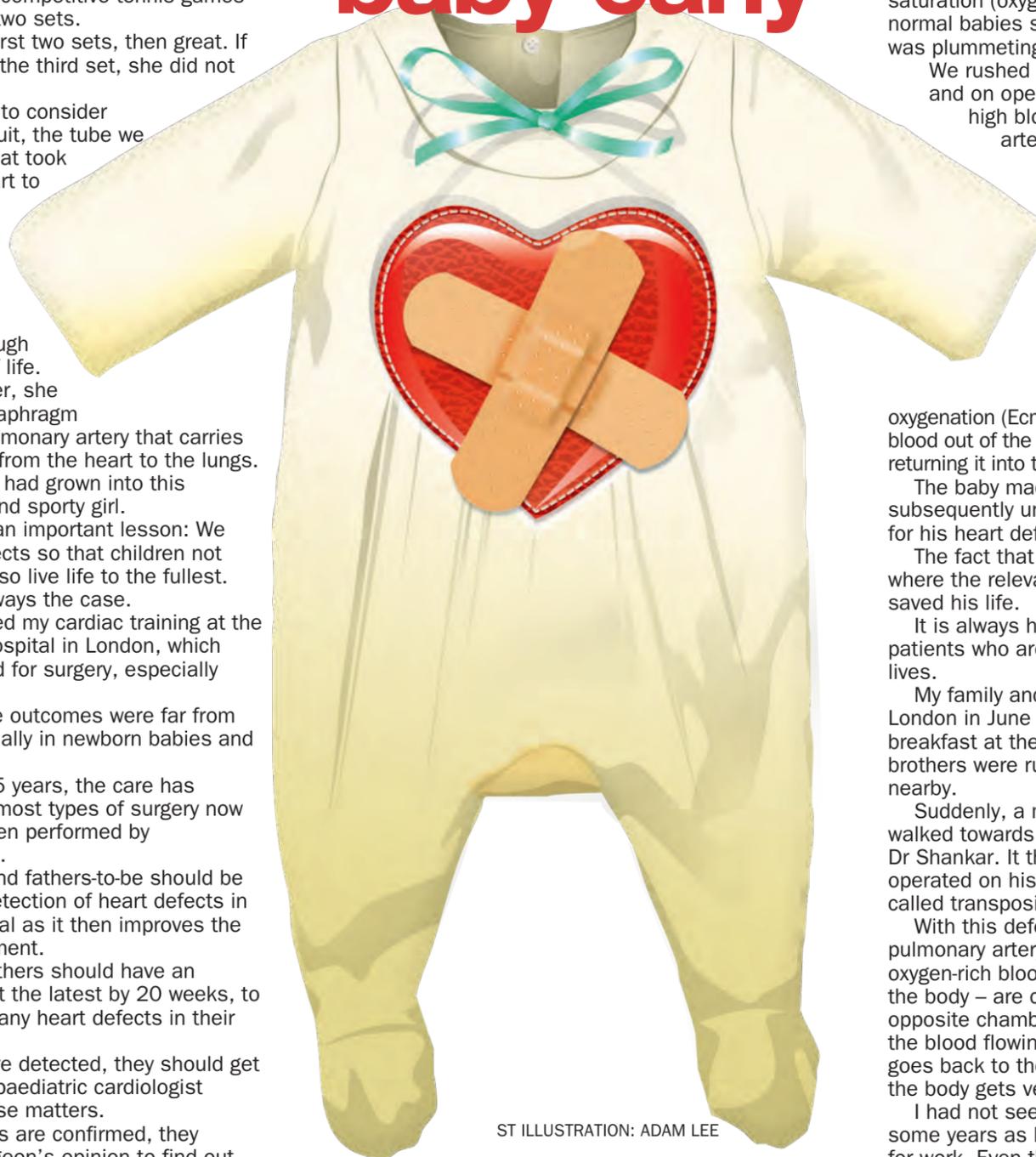
In this era, surgical outcome data should be available for most defects.

It is also best to deliver the baby in a hospital where the defect can be repaired.

It is not in the best interests of a newborn baby who has to cope with the changes after birth, to also have to be transported to a different hospital for surgery.

This approach is necessary for all complex heart defects.

The care for babies with heart defects begins at birth, as was the case for the baby



ST ILLUSTRATION: ADAM LEE

who became the first newborn baby in Singapore to be placed on a machine that acts as an external artificial heart.

His parents had taken the correct steps so he was diagnosed with a congenital heart defect called tetralogy of Fallot before he was born. The defect involves four anatomical abnormalities, which results in low oxygenation of blood.

He was delivered after a 36-week pregnancy. It was meant to be a routine, planned delivery, to be followed by corrective surgery at six to nine months after birth.

However, he appeared rather blue after birth. By the second day, his oxygen saturation (oxygen level in his blood), which in normal babies should be above 92 per cent, was plummeting to below 50 per cent.

We rushed him to the operating theatre and on opening up his chest, found very high blood pressure in the pulmonary artery.

The diagnosis was primary pulmonary hypertension of a newborn baby, a self-limiting condition in newborn babies, meaning it would work itself out and go away after a while.

In the meantime, we placed him on an extracorporeal membrane oxygenation (Ecmo) machine, which pumps blood out of the body, and gives it oxygen before returning it into the body.

The baby made an excellent recovery and subsequently underwent a full surgical repair for his heart defect.

The fact that he was born in a hospital where the relevant expertise was available saved his life.

It is always heart-warming to meet former patients who are now leading happy, normal lives.

My family and I were holidaying in London in June 2010. We were having breakfast at the Crowne Plaza Hotel. Three brothers were running around and having fun nearby.

Suddenly, a man with a familiar face walked towards me. He asked me if I was Dr Shankar. It then dawned on me that I had operated on his newborn son for a condition called transposition of great arteries.

With this defect, the great arteries – the pulmonary artery and the aorta, which carries oxygen-rich blood from the heart to the rest of the body – are connected wrongly to the opposite chambers of the heart. So most of the blood flowing from the lungs to the heart goes back to the lungs again, and the rest of the body gets very little oxygen-rich blood.

I had not seen the man and his son for some years as he had relocated to Hong Kong for work. Even though I did not know which of the three boys running around was my patient, the sight of them made my day.

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*Dr Sriram Shankar, a cardiothoracic surgeon who studied medicine in India and Britain, came to Singapore in 1990. He set up the cardiac unit at KK Women's and Children's Hospital in 1997 and was its head till the end of 2008. He then went into private practice at Gleneagles Medical Centre. In 2009, he was appointed visiting consultant to the National University Heart Centre, Singapore, where he has started a paediatric cardiothoracic programme.*

## Desserts for a good cause

Twenty-nine restaurants are participating in the Sweet Charity fund-raising campaign for NUH Kids' Heart Fund, which subsidises costs of heart surgery for needy children.

This month, Jumbo Seafood and Chui Huay Lim Teochew Cuisine will donate 30 per cent of

each bowl of sweet yam paste with ginkgo nut sold, while the rest will donate \$5 from the sale of each designated dessert to the fund.

Sweet Charity aims to raise \$100,000. For more information, go to [Facebook.com/sweetcharitymonth](https://www.facebook.com/sweetcharitymonth).