

'World-first' surgery gives Australian boy new hope

November 1 2012, by Amy Coopes

Australian doctors Thursday hailed what they described as a world-first surgical treatment for a boy suffering from a rare disease that sends his blood pressure soaring and triggered a stroke.

Matthew Gaythorpe, 10, has suffered severe hypertension his entire life due to a combination of kidney and liver conditions called autosomal recessive [polycystic kidney disease](#) and congenital hepatic fibrosis.

He had a minor stroke last year and has lived with seizures and [extreme fatigue](#) requiring him to take about 30 medications a day. He was also diagnosed, at age four, with the chronic sleep disorder [narcolepsy](#).

Matthew was facing the prospect of daily dialysis, a dual kidney-[liver transplant](#) and even another stroke until his doctor was granted special permission to try a highly experimental operation with a custom-made device.

"Using innovative [radio frequency technology](#), we were able to effectively zap some of the nerves and tissue surrounding Matthew's renal arteries," said surgeon Ian Meredith from the Monash Heart institute.

"This has resulted in a noticeable reduction in Matthew's symptoms and blood pressure."

Meredith's plea to be allowed to try the renal denervation

procedure—never before performed on a child and still experimental with adults—went before three separate ethics panels before it was approved.

"We didn't know whether it was going to work in a child, whether it was appropriate to do in a child and whether it should be done in a person with such a complex set of illnesses," the surgeon said.

"But on balance we collectively as a team came together and felt on compassionate grounds it would be a good thing to do."

The instrument used, a small balloon with [electrodes](#) on its surface, had to be specially designed for keyhole insertion into Matthew's tiny arteries by an American firm.

Meredith said the "ingenious" device worked by targeting faulty nerves to the kidneys, which are critical in [blood pressure control](#).

Five weeks on Matthew's mother, Alex Gaythorpe, said the results had been incredible, with a noticeable improvement in her son's behaviour which she described as more calm and focused, as well as a significant drop in his blood pressure.

"He has begun reading novels again," she said.

"It may seem trivial but (it's) something he hasn't been able to do for a while. He is also focusing more at school."

Gaythorpe said her son "was often referred to as a puzzle with pieces that didn't quite fit" but the surgery had given him a new lease on life, also putting off the prospect of transplants and dialysis.

"Avoiding that for as long as possible is a bonus. We now have hope,"

she said.

Matthew is also looking forward to enjoying some of his favourite things, which include cricket and Australian Rules football (AFL), dreaming of the future.

"I want to be an AFL player, yeah, or play basketball," the schoolboy told ABC television. "If not, be a shark scientist."

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