

Sat Nav on the operating table at the Sick Kids

A seven-year-old boy has become the first child in Scotland to undergo brain surgery using groundbreaking electro magnetic 'sat nav' equipment purchased by the Sick Kids Friends Foundation.

Beau Rendall, from Craigentenny in Edinburgh, became the first patient to undergo a brain operation using the Medtronic equipment at the Royal Hospital for Sick Children in Edinburgh on 3 November.

Beau has spina bifida, a birth defect which causes the incomplete development of the spinal cord, and hydrocephalus, which is a build up of spinal fluid in the brain that can sometimes be caused by spina bifida.

The groundbreaking surgery took place to replace a blocked tube (called a shunt) inserted between Beau's brain and abdominal cavity. The tube drains the fluid from the brain.

It was the fifth time Beau has undergone the operation since he was born, but the first time using equipment with the capability for increased precision.

Beau, who uses a wheelchair, first had this operation performed when he was just one week old.

The cutting-edge Medtronic equipment – which enables surgeons to carry out vital neurosurgery on babies and infants – arrived at the Royal Hospital for Sick Children in early November and has so far been used to carry out two operations.

The hospital is the first children's hospital in Scotland and only the second paediatric centre in the UK to receive the equipment. It is estimated that the equipment will benefit

more than 100 children each year.

Beau's mum, Tracy Rendall, 43, said:-“It is wonderful that Beau was the first patient to be able to benefit from this new piece of equipment. Giving surgeons increased visibility when they are operating is a tremendous step forward and I hope it will help hundreds more children at the Royal Hospital for Sick Children. Beau came round from the operation quite quickly and he was in good spirits in the few days afterwards – laughing and joking with the staff on the ward.”

Beau lives in Craigentenny with his mum Tracy, dad Stuart, 45, sisters Meg, 9, Jos, 5, and brother Fin, 8.

The Medtronic equipment will ensure that patients receive the most up-to-date neurosurgery treatment and will greatly improve the care of children with brain tumours, hydrocephalus, epilepsy and brain infections.

The equipment uses image guidance technology to ‘map’ the patient's brain by combining MRI, CT and Fluoroscopy to give 3D images of the child's head.

The position of the surgeon's instruments can then be tracked against those images during operations.

The ‘sat nav’ kit allows this type of technology to be used on children without the need to fix pins into the head, making the procedure available to babies – whose skulls are too soft for the use of pins – for the first time.

Tracy, who runs a kitchen design and installation company with husband Stuart added:-“Beau was born with a hole in his back and he spent the first two weeks of his life in hospital. He had his first shunt operation when he was just one week old, and because babies heads are too soft to be pinned, operating when they are that young can be difficult. The surgeons did a fantastic job operating at the time, but if this technology had been available back then it would have

been easier for the surgeons to operate on such a small baby.”

The Sick Kids Friends Foundation (SKFF) ran a fundraising drive over the last few months to raise the £220,000 needed to buy the equipment through a campaign involving their supporters, businesses and the community in Edinburgh and throughout the East of Scotland.

Jerard Ross, Consultant Neurosurgeon at the Royal Hospital for Sick Children, said:

“This piece of equipment is a significant advance in neurosurgical technology. It will help us manage patients, both new and old, who come to Sick Kids for help with a range of conditions, including hydrocephalus.

“It will keep us at the cutting edge of paediatric neurosurgery for some time to come.”

Maureen Harrison, Chief Executive of the Sick Kids Friends Foundation, said:

“We were absolutely delighted to hear that the equipment has now begun to benefit children and of course we wish Beau a speedy recovery from his operation.

“He is the first of many children who will have operations combining the skill of the surgeons with this wonderful technology.

“We could not have bought the equipment without the tremendously generous donations from the public. On behalf of all those patients and their families thank you to everyone who donated to the SatNav Appeal and made this fantastic purchase possible.”