https://www.wvnews.com/wvumedicine/wvu-medicine-childrens-expands-treatment-options-for-craniosynostosis-with-new-tools-techniques-staff/article_0897611c-e549-11e9-a747-bfc509404a94.html

WVU Medicine Children's expands treatment options for craniosynostosis with new tools, techniques, staff

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With new tools, techniques, and a growing staff, WVU Medicine Children's aims to be a regional leader when it comes to addressing the condition of craniosynostosis in children in the Mountain State.

Craniosynostosis is the early closing of one or more of the sutures, or soft fibrous seams, that separate the plates of the skull. When the sutures close too early, the skull cannot grow normally, resulting in an abnormal head shape.

Dr. Hal Meltzer, Section Chief of Pediatric Neurosurgery at WVU Medicine Children's, said this is a relatively common condition that affects about one child out of every 2,000.

Dr. Hal Meltzer

“Most of the time, we think it’s because, perhaps, the head was positioned in a certain way before birth, and it got stuck that way or squeezed in a certain shape. The medical term for that is fetal constraint,” he said. “Basically, what that means is that something was pushing on the head before the baby was born, which led to the head being that shape.”

Dr. Meltzer said genetics may also play a role, but the precise causes of it are still being researched. Either way, families tend to notice within a few weeks.

Sometimes, he said, a baby that was born through the birth canal rather than a C-section might exhibit an unusual head shape at first, but this is corrected naturally as the infant’s brain begins to grow.

“If you’re born with a fusion of one of the bones in your skull, then your head shape actually doesn’t improve over time as your head grows,” Meltzer said, adding that developmental delays of the brain and other effects can result from the condition.

The shape of the skull can be corrected with a surgical procedure, the timing of which depends upon which suture is involved and the baby's overall health and development. This is where WVU Medicine Children's Pediatric Craniofacial Center comes into play.

Meltzer, who joined WVU Medicine this spring, has performed about a thousand of these surgeries and is now applying his expertise to a highly balanced team that includes plastic and reconstructive surgeons specializing in craniofacial procedures, nurses, nurse practitioners, pediatric anesthesiologists, and pediatric intensivists, in addition to pediatric neurosurgeons.

"This is a super exciting time to be here because we have forward-thinking leadership, and WVU Medicine Children's has identified its multidisciplinary craniofacial program as one that's going to be fostered as a leadership program for the children of West Virginia," he said. "It's been up and running for a few years, and I think the exciting thing is the opportunity to expand it even further."

He hopes this expansion will lead to the hospital system not only being a comprehensive care resource for West Virginia's families but also those in the surrounding states. With WVU Medicine Children's new tower under construction and set to open in 2021, this has been the driving force behind the expansion.

Meltzer said technological shifts toward minimally invasive procedures mean these children and infants can be helped with just a small incision and surgeons working with an endoscope for the reconstruction. A cranial band or helmet is then worn during the child's development as the brain grows and the cranium takes its proper shape.

While WVU Medicine is taking the lead across the state in this area of care, Meltzer said another craniofacial surgical program is being formed in southern West Virginia. Its members have already reached out to ascertain the possibility of collaboration, something Meltzer said has him excited because more patients can be reached on a large scale.

In the meantime, he said the focus now is on outreach through various media and medical websites to give parents some peace of mind on how to best approach the matter of craniosynostosis and its treatment. In the end, he said the best is yet to come.

"We've done some amazing things in the past, and we look forward to doing phenomenal things in the future."

Tags

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