Until February 2001, the outlook for 14-year-old Diana Bell was bleak. She began having seizures at age ten. Over the next four years, Diana was institutionalized three times for violent behavior brought on by seizures, diagnosed as schizophrenic, removed from her Chicago public school classroom, and sent to a school for violent offenders by the Chicago Public School System. Despite the anticonvulsant and behavior medications she was taking, Diana remained a source of fear and concern to her mother and siblings.

When Diana was brought to the University of Chicago Children’s Hospital, she underwent EEG video monitoring, a standard technique for evaluating seizures and locating their source. However, monitoring in the Pediatric Epilepsy Center could not detect the source of her seizures, causing doctors to consider that these might be pseudo-seizures.

As months passed, Diana’s condition did not improve. Kurt Hecox, MD, PhD, Director of the Pediatric Epilepsy Center at the U of C Children’s Hospital, and his colleagues decided to venture outside the realm of conventional diagnostics in hopes that they could help her.

In the attempt to locate the source of Diana’s seizures, Falk Center research leader Wim von Dronglin, PhD, turned to beam forming, a technology that had previously been used only by the military to detect enemy craft, such as planes and submarines. Utilizing this beam-forming technique for the very first time in a medical, clinical context and combining it with a wide range of additional diagnostic techniques, Dr. von Dronglin and his team eventually located the source of Diana’s seizures deep in the between the hemispheres of her brain.

Locating the source of Diana’s seizures was a major turning point. It enabled University of Chicago neurosurgeon David Frim, MD, PhD, and his team to remove the source of Diana’s seizures and open up a whole new life for her. Since the surgery, Diana’s seizures have disappeared along with the accompanying violent behavior. Diana graduated from grammar school and started high school the following fall.

Today, Diana dreams of being an artist or a chef when she grows up. And, odds are very good that she can be. Her future indeed looks bright.

The Falk Center

The Falk Center for Advanced Study and Care of Pediatric Epilepsy is the largest pediatric research program in the United States dedicated to improving the care of children who have intractable epilepsy (seizures which cannot be controlled with medication). In addition to size and scope, the center is unique in that it enables scientists the world over to interact with clinicians at the University of Chicago for the purpose of making progress in both arenas.

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