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Colorado Surgeon Offers Teen Scoliosis Patients a Motion-Preserving Alternative

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A surgical breakthrough pioneered by a team of physicians in Colorado is giving new hope to teenagers diagnosed with scoliosis, a spinal condition that causes abnormal curvature of the spine. The procedure, known as vertebral body tethering (VBT), is designed for children and adolescents whose spinal curves continue to progress despite wearing a corrective brace.

One of the patients to benefit from this treatment is 16-year-old Ava, a California resident with a lifelong passion for music, dance, and cheerleading. Ava was diagnosed with scoliosis at age ten after her pediatrician noticed a curve in her spine during a routine check-up. By the time she turned 14, Ava began experiencing increasing back pain that affected her ability to perform. “My back would just be hurting a lot, so I wouldn’t be able

to do everything – or do all the dances full out,” Ava recalled. “I would have to take a lot of breaks and miss a lot of practices.”

Her doctors initially recommended a wait-and-see approach, combined with wearing a brace between 12 and 24 hours a day. However, after years of trying various braces, Ava’s spinal curvature continued to worsen. A standard treatment option for severe cases is spinal fusion surgery, which can correct the curve but often limits flexibility – a serious drawback for athletes and dancers.

Searching for an alternative that would preserve mobility, Ava’s family found Dr. Jaren Riley, a scoliosis specialist at HCA HealthONE Rocky Mountain Children’s Hospital in Denver, Colorado. Dr. Riley is regarded as a leading expert in vertebral body tethering, a minimally invasive surgery that uses a flexible cord to partially straighten the spine while allowing it to retain motion.

In April, Dr. Riley performed the VBT procedure on Ava, which he described as a success. “I think this is going to be a great way for her to continue dancing, maintaining her range of motion and still keep the curve under control,” said Riley. “Allowing her that range of motion while controlling the scoliosis is the best of both worlds.”

Now recovering, Ava is grateful to Dr. Riley and the surgical team for helping her avoid spinal fusion and maintain her ability to dance. She plans to return to the studio pain-free this month.

Scoliosis is the most common spinal deformity in school-aged children, and while many cases are mild, some progress to a degree that requires surgical intervention. Vertebral body tethering is approved by the United States Food and Drug Administration (FDA) for select patients and is increasingly seen as a promising alternative to spinal fusion for those who qualify.

Medical experts say that for patients like Ava, the procedure offers a chance to correct spinal curvature while preserving the flexibility needed for active lifestyles – a combination that could change the outlook for many young people facing scoliosis.