



February 15, 2009

## Life of blindness now getting clear

### Teenager finds success in China from treatment with stem cells

BY HALLIE WOODS

HallieWoods @coloradoan.com

Macie Morse turned 16, got her learner's permit and got behind the wheel.

That's big news for any 16-year-old, but it's a huge deal for a young girl who a year ago was nearly blind.

"It was one of the most exciting times of my entire 16 years," Morse said, sitting at Poudre High School, where she is now a sophomore.

Until she was 15, Morse had 20/4,000 vision in one eye and only light perception in the other due to optic nerve hypoplasia, or an underdevelopment of the nerve that transmits vision signals from the eye to the brain. She could make out human figures but not see details, could only read if the paper was within inches of her eye, and could only watch TV standing with her nose pressed to the glass.

Having 20/4,000 vision means that if Morse were tested on an eye chart, she could see things from 20 feet that an average person could see from 4,000, said James Thompson, an optometrist and owner of Advanced Eye Care in Fort Collins.

Someone with 20/30 vision can see from 20 feet what the average person can see from 30 feet.

Thompson said usually he stops at 20/400 and will mark a person with vision as "worse than 20/400."

Light perception means the eye can pick up images only if there is light in a room but cannot see anything.

"I've always wondered what it would be like to lay on the couch and watch TV," she said. "It looked so comfortable."

Now after experimental stem-cell treatment, Morse has 20/80 vision in one eye and 20/400-plus in the other.

"I always wondered what it would be like to see my friends," she said.

## A trip to China

After spending most of her life feeling very concerned and protective of her daughter, Rochelle Morse was researching on the Internet when she found information about an experimental stem-cell injection treatment in China.

With an underdeveloped optic nerve, there are few treatments available.

"If the optic nerve isn't healthy, glasses aren't going to do anything for anybody," Thompson said.

Only 10 people had ever completed the treatment and it was very costly —\$40,000, not to mention travel costs to China.

Rochelle Morse sought help from the community, family and friends, and before the money was raised, she booked the plane tickets and enrolled her daughter.

"I knew we would make it," Rochelle Morse said.

After raising \$15,000 from community donations, the mother and daughter set out for China on July 4.

Though both said they were nervous about the new treatment, they knew it was their only chance to see Morse's life improve. She had few friends, bad grades and didn't know where else to turn.

"I was scared and nervous, but I tried to be strong and to be like 'This is my opportunity. I'm ready to do it,' " Morse said.

She received spinal injections of cord blood stem cells each week for six weeks. After her third treatment, she realized she could read and knew the treatments were working.

"I yelled, Mom, stop talking, you have to see this," Morse said.

She made her mother write out words on a piece of paper and hold it far away so she could read it back to her.

Over the next few weeks and months, her vision gradually improved.

"She looked at me and said 'Mom, I know that you have green eyes,' " Rochelle Morse said. "That was a huge step for her in making that human connection. They say you can see the soul through the eyes."

## Able to drive

After Morse turned 15 in January 2007, she asked her mother to go get her driver's permit.

"It was just the devastation of telling her no, she couldn't get one," Rochelle Morse said.

To drive, a person must have a minimum of 20/40 vision, Thompson said. Wearing a monocle, Morse's vision is 20/30 in her right eye.

On Jan. 26, just days after her 16th birthday, Morse applied and got her driver's permit.

"I love it," she said. "My new hobby is driving."

She also speaks about her experimental treatment and what it did for her life.

Rochelle Morse said she has begun to see her daughter, who has always wanted to be a veterinarian, blossom into an independent young lady.

"Before, I was always one step behind her, keeping an eye on her," Rochelle Morse said. "Now I can let her be free. She's going to be fine."

## Additional Facts

### Chat live with Macie

Tune in at 3:15 p.m. Wednesday at [www.coloradoan.com](http://www.coloradoan.com) to watch a live chat with Macie Morse.

---