

The bear facts

by Maxine Lipner EyeWorld Senior Contributing Writer

Enucleated eye survives on a tree branch

It happened without warning on Sept 21, 2013. A 50-year-old woman was attacked by a bear who mauled her eye out, according to **Sudhir Singh, MS**, Mount Abu, India. Early that evening, after she had gone to worship at a temple near the forest area, she and her grandson were making their way home when a bear with two cubs in tow attacked her, Dr. Singh explained.

Subsequently, with all the damage, it took awhile for surgeons to realize that the woman's eye was even missing. "When we were operating and suturing for other injuries, we could not find her eyeball," Dr. Singh said. "We presumed that the eye was lost." By then they expected it was long gone.

All that changed the next morning, however, when the woman's son went in search of her cell phone. It was then that they found the eye. A call from the hospital informed an astounded Dr. Singh that the eye had been found on a tree branch. He rushed over to the hospital where it had been brought to see for himself.

"I was very surprised," he recalled. "How did it happen that a bear has taken out the eye with a surgeon's precision?" After the eye was cleaned, it looked very normal, Dr. Singh marveled. Somehow in a matter of seconds the bear had used his nails like the scalpel of a surgeon, he observed, adding, "If I had to take any eye out of a socket, it would take around 15 to 20 minutes minimum. That animal had taken it out within seconds and without destroying it."

A natural moisture chamber

Dr. Singh described the state of the eye as unbelievable. After enucleating it, the bear had thrown the eye at such an angle that it had landed on a tree branch where it remained until the next morning, when it was found by the woman's son. Fortunately, the weather on Mount Abu was quite conducive to preserving the tissue, Dr. Singh said. "There was a light drizzle and the eye remained moist," he said. "The temperature for Mount Abu remained cold." In short it was the perfect environment

to preserve the eye, much like a moisture chamber, Dr. Singh said.

He was amazed that an animal foraging for food had not gotten to it first. Furthermore, he observed that the only damage done was by the attack itself, and that was no more than had a surgeon skillfully removed the eye.

The patient's family asked if the eye could possibly be restored to her. "We explained that was not possible because a whole eyeball cannot be transplanted," Dr. Singh said. "Only a cornea can be transplanted."

Still, they were not deterred. "They again asked whether (part of) this eye could be utilized for someone," Dr. Singh said. "I told them, 'You can donate it, and it would be the first time in my knowledge that any living person has donated his or her eye.'"

Making a living donation

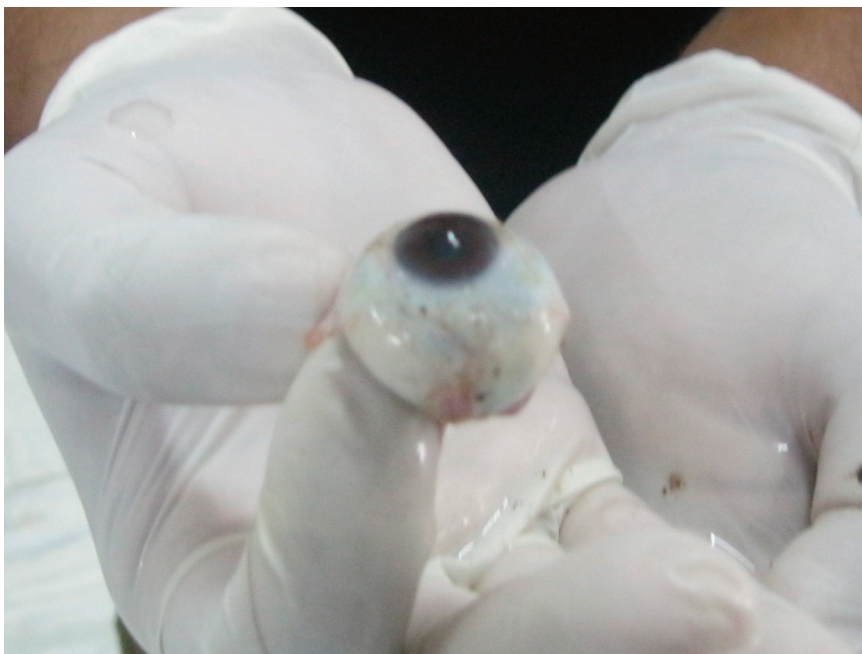
The family decided that this was the best course of action. Despite the unusual way the donation occurred, no extra steps were needed. "We saw that [the eye] was as normal as when we take anyone's donation," Dr. Singh said. With no in-house case pending, the eye was sent to the nearest eye bank, where the tissue was utilized, Dr. Singh said.

Under the circumstances, the mauled woman is doing well at about the two-month mark. "The other eye has good vision, and the left is healed basically," Dr. Singh said. "That orbit is now healthy, and we have a plan for a cosmetic prosthesis." As far as her psyche is concerned, she is also doing as well as could be hoped for. "Of course she has lost that eye, but in India people are quite strong emotionally for taking on these things—she's a courageous person," Dr. Singh said.

Ironically, she is far from alone. "I [have been] here about 14 years and I have seen too many bear [attacks]," Dr. Singh said. Because a standing bear is about equal height to a human, eyes are frequently mauled. Within the past year, Dr. Singh recounted there was another woman who was attacked in a similar way. Her optic nerve was damaged, but her eyeball remained in the orbit. There was also an older man whose right eye was punctured by a bear. "These were three patients



Eye as found on a tree branch after bear attack



After cleaning the eye was found to be in good condition to donate tissue.

Source (all): Sudhir Singh, MD

within just one year," Dr. Singh said.

Still, the uniqueness of the latest case has garnered particular attention and done some good for bolstering tissue-donation awareness, he said. In India, tissue donations tend to be less frequent than in other parts of the world. Now that word has gotten out through the local media about what has occurred here with a living donor,

others have been inspired to make more tissue donations in the typical fashion. **EW**

Editors' note: Dr. Singh has no financial interests related to this article.

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