

Gorilla goes under the knife for cataract repair

October 5 2009, By Elinor J. Brecher

The patient was a 42-year-old, 160-pound grandmother with thick bilateral cataracts that had left her nearly blind, markedly diminishing her quality of life.

No longer did she socialize with special friends Alice, Fredrika, Kumbuka and JJ. She sat by herself, her back to the wall. Once quick to the buffet, she was lagging behind.

What was a gorilla to do?

In the case of Josephine, menopausal doyenne of Miami Metrozoo's great apes, the same thing that three million American humans did last year: have the cataracts surgically removed and replaced with high-tech plastic lenses the size of an infant's fingernail.

Health insurance for the \$10,000-\$12,000 procedure? Not an issue -- though in gorilla years, Josephine would qualify for Medicare.

The veterinary and medical specialists who attended her in the zoo's operating room on Friday donated their services. Alcon Laboratories sent equipment, supplies and a technician gratis.

While rare, the procedure has been done before, at zoos in Dallas and Salt Lake City.

The risks are the same for [gorillas](#) and people: infection, bleeding,

[anesthesia](#) complications and the chance that sight won't improve.

From the moment that handlers zinged the three-foot-six Josephine with a tranquilizer dart until her return to her straw-lined night house, she lost three hours -- and regained the vision of her youth.

Before surgery, she couldn't tell a cantaloupe from a cabbage. Now she'll have the primate equivalent of 20-20 vision, said Dr. Frank Spektor, the Kendall, Fla., ophthalmologist who adapted a procedure he performs 50 times a month to the needs of a gorilla.

With 32 years' experience, Spektor, 59, still finds every [cataract](#) case "a challenge, because it's always unpredictable, never routine."

All the more so with the brown-eyed Josephine, given her bony facial structure and distinctive scent: urine and body odor, with a hint of gorilla breath.

Spektor and his team, which included [zoo](#) vet Dr. Christine Miller, Dr. Tim J. Cutler and Dr. Lorraine Karpinski -- veterinary ophthalmologists who have done cataract surgery on dogs, cats, horses, even birds -- had examined Josephine last month.

They found her in good health for an aging ape -- the oldest captive gorilla lived to 55 -- but nearly immobilized by her poor sight.

Her cataracts were "as hard as baseballs," said Spektor, and about as impenetrable. But structurally, her eyes were little different from those of human beings.

And so the procedure began as it would for a person, except that the sedated patient arrived at 9:29 a.m. in the bed of a pickup truck.

Handlers then transferred her, via bedsheet sling, to a ground-level gurney.

Miller, the zoo vet, drew blood, inserted a catheter in her right arm and a breathing tube down her throat. She listened to Josephine's heart with a stethoscope and took her temperature with a rectal thermometer.

She was normal: 98.9 degrees.

Spektor struggled to navigate Josephine's ridgy brows and cheeks with a handheld keratometer -- a scanner gun-like device that transmits cornea measurements to an ultrasound screen. The measurements dictate what power the lenses should be.

At 10:02, attendants hoisted the sleeping gorilla onto the operating table.

Spektor and Cutler scrubbed, draped Josephine with a plastic sheet, then went to work on her left eye.

Because the cataract was so thick and milky, the membrane covering it like plastic wrap wasn't easy to see. In a procedure more common with dogs than people, according to Cutler, they injected blue dye into the membrane for contrast.

That made it easier to cut a tiny round hole in the membrane through which they'd extract the cataract then insert the replacement lens.

A machine, operated by a foot pedal, injects fluid and ultrasound vibrations into the eye, emulsifying the cataract -- "turns it into a milkshake," Cutler said -- then vacuums out the goo.

At 10:55, after inserting the lens then closing the hole with a single nylon suture, the doctors declared themselves done with the first eye.

They re-scrubbed, repeated the procedure on Josephine's right eye, and at 11:44 finally seemed to exhale.

"Perfect," Cutler said. "Fantastic."

"Exhilarating," Spektor said, "and exhausting."

Josephine is supposed to rest quietly in her night house for a day or so. Vets will watch through binoculars and telephoto lenses for complications.

Perhaps on Sunday, she'll venture outside, squint in the sunlight, and wonder why suddenly, the world looks so much brighter.

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