

Mistakes Leave Patient Brain Dead

Toxic injection blamed on “tragic series of human errors”

By Steve Sternberg
Knight-Ridder News Service

MIAMI — A longtime Miami Herald photographer lay in a coma Tuesday, apparently brain dead after doctors accidentally injected him with a formaldehyde like chemical during surgery.

Doctors said it was the first time a living human ever had been injected with the toxic substance used to sterilize instruments and preserve tissues removed during surgery.

“It was preventable.” - Dr. James Chandler

The injection, given to retired photographer Bob East late Friday during surgery for facial cancer at Jackson Memorial Medical Center capped what doctors called a "bizarre, tragic" series of operating room errors.

It began when an eye doctor dropped off an unmarked bottle of the preservative glutaraldehyde for cancerous eye tissue East had donated for research. It ended when another doctor believing the chemical to be spinal fluid, jabbed it into East's spine.

The surgeons realized what had happened only after the eye doctor came looking for his glutaraldehyde. At first, they couldn't find it. Then they found an empty bottle and an empty syringe.

“A tragedy,” said Dr. James Ryan Chandler, the lead surgeon. “It was preventable. It didn't have to be. It was a tragic series of human errors.”

East, 64, was an award-winning Miami Herald staff photographer from 1951 until his retirement earlier this year.

“I know nobody did this on purpose,” said East's wife, Tina, 39. “It just fills me with such terrible rage. I think that people who take other people's lives into their hands should be more careful”.

East was admitted to Jackson Memorial late Thursday after spending the afternoon at Bascom Palmer Eye Institute undergoing laser tests on the diseased eye. It was his right eye, the camera eye, which doctors had tried for years to save.

Tumors Recurred

The eye had been jeopardized by the diabetes first diagnosed when East was 24, and then by benign facial tumors first removed by Chandler eight years ago. In May, the tumors recurred and caused maddening headaches.

Chandler operated again in January. He found a malignant cancer that had eaten away at East's cheekbone and attacked the back of the eye. If left in place it would threaten the brain.

He told East he would have to operate. He would remove his eye, the bone around the eye, the right cheekbone and the upper right jaw. Death was the alternative. "It is an extensive operation and an unusual one," Chandler said.

He was wheeled into the operating room at 7:45 a.m. Friday according to George Hill a Jackson Memorial administrator who is investigating the incident.

He was prepped for surgery, and the anesthesia dripped into his Vein. But before Chandler began surgery, he asked that an anesthesiologist remove 50 cubic centimeters of cerebrospinal fluid from the base of East's spine.

This is the beginning. Chandler said he doesn't know which anesthesiologist took the fluid from East's spinal cord. It was left in the capped syringe to be injected again later, he said.

He made the first incision at about 10 am. The Bascom Palmer Eye Institute was told to prepare to receive the eye that East had decided to donate to science. Bascom Palmer's Dr. Allan Slomovic arrived.

The ophthalmology resident was carrying a metal tray with a plastic lid to hold the eye once it was removed. He also was carrying knotted rubber glove containing a small, unmarked vial of glutaraldehyde, Hill said.

Not Labeled

He left the chemical on a tray in the operating room, Chandler said. “It was not labeled, and it should not have been accepted,” the surgeon said. Those were the first of series of tragic mistakes.

Between 2 p.m. and 2:30 p.m., circulating nurse Norma Anderson asked, “What's in this bottle?”

Anderson said that one of the doctors responded "CSF," for cerebrospinal fluid. She is not sure who the doctor was. "What do you want me to do with it?" she asked.

"Give it to the anesthesiologist," she recalls a doctor saying. Anderson does not know which doctor said this, either. She gave the glutaraldehyde to nurse anesthetist Maria Harwood, part of the operating room team.

Harwood marked the bottle "CSF," Hill said.

Anesthesiologist Anthony Gyamfi was taking a break. After he returned, sometime between 4:45 p.m. and 5:30 p.m., Chandler ordered the CSF reinjected into East's spinal column.

Some doctors question whether the CSF should be reinjected at all. The body produces 0.3 to 0.5 cubic centimeters of spinal fluid per minute. By the time the anesthesiologist had reinjected the fluid, East's body already had nearly replaced the amount that had been drawn, doctors said.

"It didn't have to be put in, but we put it back in to check for leaks" in the covering of the brain, Chandler said. "It is routine in this procedure."

Gyamfi emptied the syringe labeled CSF into East's spine. Then he picked up the vial of glutaraldehyde, also labeled CSF, sucked it into the needle and injected it. East's blood pressure and pulse dropped "within moments," Hill said. Still no one realized what had occurred. They did not realize their mistake until Slomovic returned in the next hour to pick up the eye.

Error Discovered

"Where's my glutaraldehyde?" the ophthalmologist said, according to Dr. Frank Kronberg, 30, a resident who assisted in the surgery.

"We froze" Kronberg said. "I was petrified."

Dr. Jorge Hernandez, a neurosurgeon, and Dr. Larry Page, vice chairman of neurosurgery, were called for help. Page ordered that doctors draw spinal fluid to try to drain as much of the glutaraldehyde as possible, but it was too late.

"The fact is that this stuff acts pretty quickly - within seconds or minutes rather than hours," the neurosurgeon said. "This is a totally unique happening. A horrible event."

The brain and spinal cord are literally bathed in spinal fluid. Within seconds of the injection, the preservative was traveling along the spinal column destroying tissue. It traveled up to the brain, where spinal fluid is secreted in cavities called ventricles.

In those cavities is artery-laced tissue, called the choroid plexus, which secretes the spinal fluid. It percolates through the brain and drips into the spine through a vent just above the bony opening known as the foramen magnum.

Then it returns to the brain, where it is drawn off again by pressure sensitive veins.

The glutaraldehyde, traveling throughout the brain, breaks down proteins wherever it goes, Page said. The results are irreversible.

Questions Raised

The handling of the case raises several unanswered questions, doctors said. Typically, when plastic surgeons or specialists in ear, nose and throat surgery venture too close to the brain, a neurosurgeon is called in to assist, Page said.

In this case, the removal of the potato-chip-thin bone behind East's eye would bring doctors perilously close to the dura, the tough coating of the brain. But Chandler said he does not rely on neurosurgeons in those cases. "It is not uncommon at all for head and neck surgeons to expose the dura," he said.

"Some doctors operate in a team," he said. "But that had nothing to do with the accident in this case. I assure you that if I thought having a neurosurgeon there would prevent this bizarre kind of accident, of course I would."

Dr. Joseph Davis, the Dade County medical examiner, has declared jurisdiction over the case because it "falls outside the realm of what is considered an acceptable risk of surgery."

Brain scans performed Monday and Tuesday found East to be brain dead. But East's family had asked that East's life-support equipment not be turned off, at least until later today. The hospital has agreed to comply with the family's wishes, at least for now.

From San Jose Mercury News, March 6, 1985