

When the Dog Bites...

By Scott P. Edwards



Today, Mr. Tyler defies anyone to say which of his ears was injured.

IT ONLY TOOK A SECOND. AS BILL TYLER BENT DOWN LAST LABOR DAY TO PUT A PLANT ON THE FLOOR OF HIS HOME IN EAST LONG-MEADOW, HIS DAUGHTER'S DOG ATTACKED AND BIT OFF A GOOD-SIZED CHUNK OF MR. TYLER'S EAR.

"I immediately realized I was bleeding pretty good," says Mr. Tyler, the vice president of a family-owned construction equipment company. "I was in a daze, and grabbed a towel and pressed it to my ear. I looked down on the floor and saw something. When I reached down to pick it up, I realized it was part of my ear. The dog had spit it out."

Mr. Tyler's family called 911 and the EMTs brought him to Baystate Medical Center, along with the piece of his ear packed in ice. Emergency physicians called in plastic surgeon Dr. David Refermat, who surgically reattached the missing portion of the ear.

"Dr. Refermat did his magic right there in the ER, sewing the piece of my ear back on," says Mr. Tyler. While Dr. Refermat was performing the procedure, he told Mr. Tyler that the odds of success were low. "Research indicates that the chances of successfully reattaching an ear are close to zero because the oxygen demands are so high and the blood supply is so tenuous," says Dr. Refermat.

However, Baystate Medical Center is the only hospital in the region to offer hyperbaric oxygen therapy (HBOT), which Dr. Refermat thought would greatly improve the odds of a successful reattachment of Mr. Tyler's ear.

BENEFITS OF PURE OXYGEN

The air we breathe contains roughly 21% oxygen, 78% nitrogen, and 1% of other gases. Hyperbaric oxygen therapy, the administration of 100% oxygen at increased pressures for a prescribed period of time, dramatically increases the number of oxygen molecules that enter the bloodstream and reach the tissues. By supersaturating patients with oxygen, HBOT greatly increases the oxygen concentration in all body tissues, even those with reduced or blocked blood flow. It stimulates the growth of new blood

vessels to locations with reduced circulation, improving blood flow. It also aids in the treatment of infection by enhancing white blood cell action.

“This large increase in oxygen in the tissues generates physiologic responses such as healing, killing of bacteria, and decreasing swelling and inflammation,” says James Moro, RN, a hyperbaric wound care nurse at Baystate.

HBOT was originally used to treat decompression sickness, a common scuba diving hazard also called the bends, that arises when dissolved gasses form into bubbles inside the body upon depressurization.

Now, says Mr. Moro, guidelines by the Undersea and Hyperbaric Medical Society support 14 different approved conditions that can benefit from HBOT, including wound healing, carbon dioxide poisoning, compromised skin grafts and flaps, crushing injuries in which tissue is damaged, gangrene, and necrotizing fasciitis (the “flesh-eating” disease).

In general, says Dr. Refermat, wounds treated using HBOT show substantial healing within two weeks of injury and nearly complete healing within four weeks. In Mr. Tyler’s case, he was placed in the hyperbaric chamber twice a day for seven days, with each session lasting approximately 110 minutes.

‘LIKE DIVING TO 50 FEET’

During treatment, Mr. Tyler would lay in the hyperbaric chamber; basically, a cylindrical plexiglass-enclosed bed. “The first time I used the chamber,” says Mr. Tyler, “they told me it was like scuba diving, which I do. I was told it would feel like diving to 50 feet pressure wise.”

He continues, “The first time they closed the door, my mind played games, but I just focused on the TV. I had a little claustrophobia the first time, but then it wasn’t an issue. It occasionally got warm inside when the chamber was pressurized. It was easy to clear my ears because of my experience scuba diving. I just got into a routine.”

Mr. Tyler says that the damaged tissue would look white before each treatment, but would “pink up real nice” following his HBOT sessions. Slowly, however, he developed darkened tissue on the upper half of his ear, causing the team to become less optimistic about the outcome.

Dr. Refermat decided more surgery might be required and scheduled Mr. Tyler for a flap, a plastic surgery procedure in which tissue is borrowed from one part of the body to cover a defect elsewhere. However, before the surgery took place, the ear continued to heal and looked “fantastic,” says Dr. Refermat, so the surgery was cancelled.

GOOD AS NEW

Thanks to the combined treatments of plastic surgery and hyperbaric oxygen therapy, Mr. Tyler’s ear now looks as good as new. “I defy anyone to say which of my ears was removed,” he says. “It looks great. The feeling is back. It’s a little sensitive to the cold, but the tissue looks good.”

Dr. Refermat agrees. “Mr. Tyler’s reattached ear is a superior cosmetic result, much better than even the best reconstruction could have achieved,” he says. “He won’t need any further treatment.”



DR. REFERMAT IS A MEMBER OF BAYSTATE PLASTIC SURGERY, A BAYSTATE MEDICAL PRACTICE LOCATED IN THE MEDICAL OFFICE BUILDING ADJACENT TO BAYSTATE MEDICAL CENTER, 2 MEDICAL CENTER DRIVE, SUITE 309, SPRINGFIELD. FOR AN APPOINTMENT, CALL 413-794-5363.