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'Commando surgery' to the rescue

A 10-hour operation saved Chris Scott's life after a massive infection destroyed his heart

By **Renee Sylvestre-Williams**

IT WAS THE WORST HEART Dr. Chris Feindel had seen in his 30-year career, and if he didn't operate, Chris Scott was going to die. "It was certainly the worst infection and destruction of the heart that I've ever seen," says Dr. Feindel, a cardiac surgeon at the Peter Munk Cardiac Centre (PMCC) at Toronto General Hospital. To save Mr. Scott's life, Dr. Feindel would have to perform a surgery so rare that it's called the "UFO" or the "commando surgery." Dr. Feindel, Dr. Mitesh Badiwala and the surgical team would rebuild Mr.

Scott's heart in a 10-hour surgery. Mr. Scott was receiving dialysis for renal failure, when he developed a severe infection via his catheter. "What had happened is that I had to have my line changed," he says. "That's when [the doctors] assumed I contracted the infection during the surgery." There were no direct indications that Mr. Scott's heart had been infected. It was March 2015, and Mr. Scott had developed a fever while at home, wasn't feeling right and he was a little bit delirious and rambling. His deterioration was rapid and his line fell out.



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At that point, on a Sunday, his parents called 911.

"He was in the Scarborough General [Hospital] for five or six days," says his mother, Susan Scott. "He was on antibiotics and it wasn't clearing up. I don't know whose idea it was, [but] they took a scan of the heart and that's when they realized the infection had gone to the heart." Five days later, on the Friday, the Scotts were called to the hospital. Mr. Scott had been put into an induced coma. The ICU doctor said that the infection had attacked the heart and that Mr. Scott was very ill. He was rushed to the Toronto General Hospital that afternoon.

The Scotts were given the worst-case scenario. "He was dying," says his mother. Mr. Scott spent one day in the ICU, and the next day Dr. Mitesh Badiwala, the cardiac surgeon on shift, said that if Mr. Scott didn't go into surgery, he may not survive another night.

When Dr. Badiwala was asked to see Mr. Scott in intensive care, the valves were leaking freely and not functioning at all. "So what was happening was that every time his heart was squeezing, a little bit was going forward, but a lot of it was going back to his lungs. He was in cardiogenic shock. He wasn't circulating enough blood to his body, and his lungs were

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Dr. Chris Feindel,
Cardiac Surgeon,
Peter Munk Cardiac Centre

filling up with fluid to the point where they had to sedate him and put him on a mechanical ventilator.”

Dr. Badiwala never spoke to Mr. Scott before his operation because Mr. Scott was sedated and on this ventilator the entire time before surgery. Everyone knew his heart was in bad shape, but when Dr. Badiwala opened him up on the operating table, the extent of the damage was far worse than he expected. "Endocarditis can occur," he says. "So his valves became infected and they became destroyed, essentially. Your heart has four valves, two on the left

side, two on the right. Often one or another gets infected, and he had both on the left side. Chris's aortic and mitral valves were infected."

Two of the four valves were completely destroyed and the area between the two, which connected the valves, was completely eaten away, leaving no place to attach artificial valves. Dr. Badiwala knew he couldn't perform the surgery by himself. While he had witnessed a UFO, he hadn't performed one, so he called the senior surgeon on duty, Dr. Feindel.

"To get everything in the [bottom of the heart] to be destroyed, it was a very aggressive bacteria," says Dr. Feindel. He had assumed that when Dr. Badiwala called him, the surgery would be something that they usually see, or that they might have to put a patch in, but that wasn't the case. "It was phenomenal," he says. "I have to say my first response was 'There's no way this guy is going to get through surgery.' We're going to go through with it, but what do you do? He's a young man. You can't just walk away from him, but I was pretty convinced at the time that we'd do the operation but he wasn't going to get through for a whole variety of reasons."

Mr. Scott's situation was dire, but Dr. Badiwala and Dr.

01 Chris Scott, opposite page, had the worst infection and destruction of the heart that Dr. Chris Feindel had ever seen.

02 Dr. Mitesh Badiwala, left, and Dr. Chris Feindel performed the UFO surgery, during which they rebuilt Chris Scott's badly infected heart.

Feindel both say with a patient in that situation, there was no alternative. "He was essentially dying," says Dr. Badiwala. "And when you have a patient in that scenario, there's no fix for them other than to try an emergency salvage operation to try and repair their valves and restore normal blood flow in the forward direction."

The team removed all the infected tissue. Describing it as "mucky," Dr. Feindel says, "You can pick stuff out, it just falls out. It has lost its structure, and you just keep working away until you get down to what looks like normal, healthy tissue. It looks better, it bleeds. This mucky stuff doesn't bleed. It's basically dead," he notes. It was like a boil, including the presence of pus.

After the removal of the infected tissue, there was a great big hole in the heart and a major reconstruction. "It was like a building had been bombed from the inside," says Dr. Feindel. The reconstruction was straightforward, but because of the infection, he wasn't clotting. While the surgery was taking place, Mr. Scott's heart was stopped for five hours. It took a long time for the team to get the bleeding under control. Dr. Feindel suspects that with the fresh and frozen blood, platelets and other products needed for the surgery, approximately 50 to 100 donors contributed to the surgery.

The odds were against Mr. Scott, but he got through the surgery while the Scotts waited. The recovery took four months, including other surgeries, but the UFO was a success.

The family had a quiet holiday, and Mr. Scott continues to heal. He's still off work and on dialysis. His mother, Susan, is being tested, so she can donate one of her kidneys. As to what caused the infection, Dr. Badiwala and Dr. Feindel say it was just bad luck. ▽