Wilfred Gordon Bigelow (1914-2005)

Dr Wilfred Gordon Bigelow passed away on March 27, 2005, in Toronto, at age 91. He was president of The American Association for Thoracic Surgery in 1974-1975.

Dr Bigelow was born in Brandon, Manitoba, Canada. After graduation from medical school at the University of Toronto, he was a surgical resident at Toronto General Hospital from 1938 to 1941. From 1941 to 1945, he served as a captain in the Royal Canadian Army Corps during World War II, first with the Field Transfusion Unit and then as a battle surgeon with the Sixth Canadian Clearing Station in Belgium, a front-line facility. In 1945, he returned to Toronto to complete his surgical residency. In 1946, his chief offered him a position as a vascular surgeon and suggested that he should spend a year with Dr Alfred Blalock at Johns Hopkins Hospital. It was during his fellowship with Dr Blalock that he conceived the idea of using systemic hypothermia as a means of protecting the brain and body during open heart operations. In 1947 he returned to Toronto, quickly established a research program in hypothermia, and studied its effects on the brain and other organs. In 1949, he performed the first open heart operation with hypothermia in a dog. This work was presented at the annual meeting of the American Surgical Association in Colorado in 1950. That landmark article stimulated a massive amount of research in hypothermia worldwide. Using only systemic hypothermia, Dr John Lewis performed the first open heart operation in a human in 1952.

Another crucial observation arose from Dr Bigelow's research laboratory. In 1949, during an experiment on hypothermia, the heart stopped but responded with an effective contraction when poked with forceps. It was then found that an electrical impulse had the same effect. Thus, the concept of an electrical pacemaker was born.

Dr Bigelow is the father of cardiovascular surgery in Canada. He developed one of the most academically productive units in the world at the University of Toronto. He trained numerous surgeons who developed new open heart programs elsewhere in Canada, the United States, and other countries.

Dr Bigelow received 25 major national and international awards during his life, including the Order of Canada and the Medical Hall of Fame. He was married to Ruth and had 4 children: a daughter, Pixie Bigelow Currie, and 3 sons, John, Daniel, and William. Ruth died in 2000.

Dr Bigelow left a legacy in cardiac surgery, and we will miss him always.

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