

Dr Michael DeBakey

by **Lim Rui Jin**



INTRODUCTION

Fans of the superhero Iron Man may cry foul, but there is someone who preceded him in devising a method to save the maker's life. In an intriguing parallel to Tony Stark's fictional Arc Reactor, Dr Michael DeBakey, a pioneer of cardiology, had his life saved by the very procedure he created years ago.

Born Michel Dabaghi, the son of Lebanese immigrants in Louisiana, Dr DeBakey (7 September 1908 – 11 July 2008) was a celebrated medical educator, pioneer and inventor. His innovations included the roller-pump, which later became an integral component of the heart-lung machine, which made open-heart surgeries possible. He also pioneered the use of external heart pumps and many of his procedures were firsts in heart surgery. In an illustrious career spanning 75 years, Dr DeBakey performed thousands of operations and saved many lives around the world.¹ As a Medical Officer in the United States Army during the Second World War (WWII), he also contributed to the evolution of battlefield medicine.

Dr DeBakey's name is synonymous with cardiology—and being a truly great doctor.

In a letter sent to David Granger (the editor-in-chief of *Esquire* magazine) after an interview, Dr DeBakey wrote, "If I can ever be of service to you—either personally or professionally—please don't hesitate to ask." This aptly crystallizes the philosophy that gave him the impetus to devote his life to medicine.

EARLY LIFE

The young DeBakey's voracious appetite for knowledge and his decision to devote his life to medicine resulted in him attending medical school at Tulane University, even while he completed the last two years of his undergraduate studies.² "My life has a superb cast, but I cannot figure out the plot," wrote the author Ashleigh Brilliant, an ode to those trying to make sense of their seemingly capricious lives. However, DeBakey managed to connect the dots early in his life.

DeBakey invented the aforementioned roller-pump at the age of 23, while he was still a medical student. Moreover, he became reputed for his surgical skill and readiness to use novel solutions to solve surgical problems. As a young

doctor, DeBakey traversed Europe to refine his surgical prowess, completing fellowships in France and Germany. In 1937, Dr DeBakey returned to Tulane Medical School, where he served on the surgical faculty.

CONTRIBUTIONS TO MILITARY MEDICINE

During WWII, Dr DeBakey volunteered his services as a member of the Surgical Consultants' Division in the United States (US) Office of the Surgeon General of the Army under MG James Magee and his successor, MG Norman Kirk. As required by his duties, Dr DeBakey spent hours poring through books in the US Army Medical Library, researching military medical matters. His dismay at the near-dilapidation of the library: poor lighting and leaking roof, amongst other problems, resulted in him commenting that "the library had minuscule significance by comparison with a tank, battleship, or airplane."³

This concern eventually led him to push for the transfer of the collection from military to civilian hands. Eventually, Congress created the US National Library of Medicine and placed it under the care of the Department of Health Education and Welfare, preserving a treasure trove of knowledge.

Dr DeBakey's research during the war also resulted in the development of Mobile Army

Surgical Hospital (MASH) units. Together with other members of the surgical consultants division, COL (Dr) DeBakey recommended the creation of "auxiliary surgery groups" (ASGs). These small, mobile units effectively provided resuscitation and surgical care on the battlefield, even though the surgeons in these units were relatively inexperienced.⁴ The ASGs consisted of surgeons from a diverse range of specialties, allowing them to treat a wide variety of injuries. Notably, a major portion of three books on war surgery were written by surgeons from this group. Their contributions to thoracic surgery, for example, were extensive and their writings on the principles of physiology remain relevant today.⁵

The first active mobile surgical hospital in WWII was the second ASG, under the command of COL James Forsee. This unit supported 160,000 soldiers in North Africa and Italy during 1943. Interestingly, the ASGs were able to keep up with combat units and carried out their operations a few miles from the front line. This led to shorter evacuation times, quicker resuscitation and reduction in mortality rates.⁶ The evolution of ASGs culminated in the formation of MASH units.

In *Combat Support in Korea*, John Westover writes that the efficacy of MASH units led to vast

improvements in resuscitation and patient care.⁷ Though these units have now been replaced with newer and more mobile military hospitals, the use of MASH units provided almost instantaneous lifesaving care to battlefield casualties. Statistics show that in the Korean War (where MASH units were first deployed), there was a low 2.5 percent chance of mortality in evacuated casualties. This is in stark contrast to the 8.5 percent chance of death in the First World War.⁸ While COL DeBakey may not have been directly involved in the creation of MASH units, these achievements can be attributed to his pioneering research in the derelict hallways of the old Army Medical Library.

BREAKTHROUGHS

As the world recovered from the devastation of war, Dr DeBakey pioneered a multitude of life-saving surgeries and new discoveries. Together with his mentor, Dr Alton Oschner, he had already postulated a strong link between smoking and lung cancer in 1939.⁹

Dr DeBakey was also one of the pioneers of coronary artery bypass surgery, a procedure used to this day. While many ailments of the heart were considered death sentences in his time, Dr DeBakey's perseverance and creativity led him to develop new treatments to prevent stroke and heart attack. In 1953, for instance, Dr DeBakey became the first to perform a successful carotid

endarterectomy (a procedure to stave off stroke). He is, however, best remembered for being the first to successfully implant a ventricular assist device (VAD), a milestone in the development of artificial hearts.¹⁰

His life's work did not stop there. In the 1990s, Dr DeBakey worked with engineers from the National Aeronautics and Space Administration (NASA) to develop a heart pump small enough to be used in children. Amazingly, his passion for medicine never waned—as a nonagenarian, Dr DeBakey continued to practice medicine until the day he died. Giving us a glimpse into his great and benevolent heart, Dr DeBakey said that, “[b]eing compassionate, being concerned for your fellow man, doing everything you can to help people—that’s the kind of religion I have, and it’s a comforting religion.”¹¹

INTERNATIONAL RENOWN

Dr DeBakey was also somewhat of a Renaissance man according to Dr Philip Salem, his close friend. His sharp and astute mind enabled him to absorb what he read quickly and he was particularly interested in Middle Eastern politics and history.¹² This bestowed on him the requisite knowledge to play the roles of health policy advisor, visionary, educator and advisor to world leaders.

In autumn 1996, Boris Yeltsin was running for re-election as Russia’s first

president in the post-Soviet era. He faced a challenge much more intimidating than his political opponents: Mr. Yeltsin had suffered a series of heart attacks. Although Russian doctors felt he could not survive the coronary bypass operation he needed, Mr. Yeltsin consulted Dr DeBakey, who flew to Moscow and declared that the incumbent leader could withstand the operation.¹³ Interestingly, the operation was successfully performed by Dr Renat S. Akchurin, a Russian surgeon who had briefly trained under Dr DeBakey in the past.

The operation most likely saved his presidency (and life) and Mr. Yeltsin was re-elected. In doing so, the course of history was also changed.¹⁴ According to the *New York Times*, Mr. Yeltsin would never have had the opportunity to dig deep and select Vladimir Putin as his successor if he had not been re-elected. As such, it may be argued that Dr DeBakey played a fundamental role in world history and politics.

Dr DeBakey’s long list of accolades include more than fifty honorary degrees from universities around the world.¹⁵ He also worked ceaselessly to improve healthcare in both the US and internationally, volunteering his services as a consultant on the US National Heart, Lung, and Blood Advisory Council (NHLBI) amongst other appointments.

Yet, what is most impressive about Dr DeBakey was his altruism and willingness to devote nearly all his life to the betterment of mankind. The Lebanese poet Gibran Khalil Gibran wrote, “You give little when you give of your possessions. It is when you give of yourself that you truly give.” Dr DeBakey truly epitomized this spirit.

LEGACY

The elderly man on the operating table was both patient and pioneer. In 2006, at the ripe old age of ninety-seven, Dr DeBakey became the oldest surviving patient of a surgery he had pioneered.¹⁶ The successful repair of the torn inner lining of his aorta enabled him to recover fully and continue practicing medicine until his death from natural causes two years later. He represents the zenith of life-long learning and practicing—something we can all learn from. 🌟

ENDNOTES

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