

From the Pages of History

Standing on the shoulders of Denton Cooley

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On November 16th 2016, cardiac surgery lost the last of its pioneering surgeons. Denton Cooley (Fig 1) who was present at the 'dawn of cardiac surgery'. This was when Dr. Alfred Blalock performed the "blue baby" operation. He strode like a colossus through the meteoric rise of cardiac surgery. He was at the forefront of every new development, stringing together a number of firsts and adding to the cardiac and vascular surgical literature. He has been described by one cardiologist as being the most productive cardiac surgeon as well as the most skilled technician and innovator¹.

Denton Cooley was born in a privileged family. He always excelled in sports and was a star varsity basketball player. He did his surgical training at the Johns Hopkins under the foremost cardiac surgical instructor of that time, Alfred Blalock. His career was interrupted by army service as captain in Austria, where he performed many obstetric and even neurosurgical procedures. He further completed his training with Russel Brock who was leading cardiothoracic innovations in Europe. He returned to Houston as faculty in Baylor Medical School².

There are several interesting anecdotes to Denton Cooley's early career that gives us an insight into the kind of surgeon that he was to become. When training with Brock he was asked if he could do a bronchoscopy; he answered in the affirmative even though he had not done one. He confided in the bronchoscopy room technician, his fears on doing his first case. The technician said to him "Hold the bronchoscope steady, Dr. Cooley, and I will thread the patient onto it", following which he did three bronchoscopies that day. Oswald Tubbs of the Tubbs dilator fame had tuberculosis and had to undergo lung surgery by Dr. Brock. He asked Cooley to crush his phrenic nerve before completing the operation and promised to let him run his unit till he recovered (Crushing the phrenic nerve



Fig 1 : Dr.Denton A.Cooley

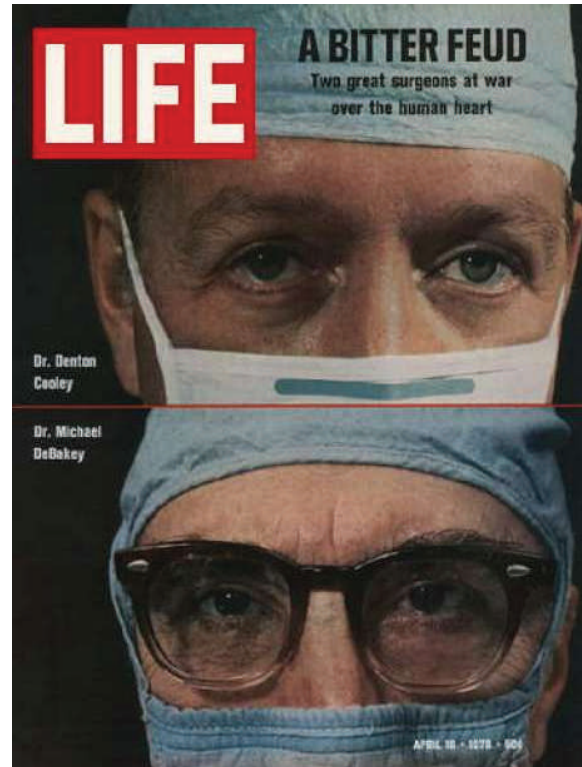


Fig 2 : Dr.Denton A.Cooley & Dr.Michael DeBakey

allows the diaphragm to rise and cover dead space, Lord Brock did not believe in this procedure). After Brock left the operating room, Cooley promptly crushed the phrenic nerve. Cooley took over Dr. Tubbs' unit and doubled the number of surgeries being performed².

Cooley joined the faculty of Baylor and thus began one of the most enterprising partnerships with Michael DeBakey. This remains to be one of the most talked about feuds in medical history (Fig 2). The early part of the partnership resulted in numerous groundbreaking surgical firsts especially in Aortic surgery³. The presence of two great egos in the same team gradually became untenable. Due to various reasons Cooley increasingly operated at the St. Luke's and the Texas Children's Hospital. Very soon he had the largest pediatric series with the highest success rate. After Christian Barnard performed his first transplant, Cooley sent him a telegram saying "Congratulations on your first transplant, I will be reporting my first hundred soon". Cooley performed 17 transplants in one year. The controversial implantation of the first total artificial heart without DeBakey's knowledge, led to the complete breakdown of relationship between the two surgeons whose feud lasted decades before they reconciled. This was shortly before DeBakey's death. Cooley believed the historic rivalry enhanced their reputations and served both their careers well².

Cooley believed that his greatest legacies were the founding of the Texas Heart Institute and starting non-blood priming for cardiac surgery. Cooley was widely accepted as a surgical genius. Christian Barnard wrote of him in his memoir "It was the most beautiful surgery I have ever seen. Every movement had a purpose and achieved its aim. Where most surgeons would take three hours, he could do it in an hour. It went forward like a broad river, never in obvious haste but never turning back. No one in the world, I knew, could equal it". Texas Heart Institute completed 1,00,000 procedures in 2001, significantly more than any place in the world. Cooley has authored or coauthored more than 1400 scientific articles, authored eight textbooks and has 33 firsts to his name. He was also an inventor with several patents, valves, grafts and oxygenators were some of them^{2,4,5}.

His advice to being a successful surgeon is a few lines from a poem by Henry Wadsworth Longfellow².

*The heights by great men reached and kept,
Were not attained by sudden flight.
But they, while their companions slept,
Were toiling upward in the night.*

On the entrance to Texas Heart Institute is inscribed Cooley's favorite poem³.

A Bag of Tools

*Isn't it strange
That princes and kings
And clowns that caper
In sawdust rings,
And common people
Like you and me
Are builders for eternity?*

*Each is given a bag of tools,
A shapeless mass
A book of rules;
And each must make
Ere life has flown
A stumbling block
Or a stepping stone*

- R L Sharpe.

"If I have seen further, it is by standing on the shoulders of Giants"

- Isaac Newton

In conclusion, Denton Cooley was one of the greatest cardiac surgeons ever; this was recognized by his peers as well as by his adversaries. This article was written in the hope that the reader is as inspired by him as I still am.

References

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