Ansel Marion Caine, M.D.

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Dr. Ansel Marion Caine (1882–1961) (fig. 1) rose to national prominence as a founding father of organized anesthesiology in the early 20th century. During the course of his career, he served as a leader of many organizations that have become the bedrock of the anesthesia community. He was Honorary President of the International Anesthesia Research Society in 1948 and served as a member of the American Society of Anesthesiologists Board of Directors from 1936 to 1945. A founding member of the Anesthetist Travel Club in 1929, Dr. Caine was instrumental in creating the charter of the Louisiana Society of Anesthesiologists and became its president in 1948. As an inventor, Dr. Caine was recognized nationally as a pioneer in oxygen therapy and is credited as being the first to warm ether vapors for delivery to patients. In his role as an educator, Dr. Caine was the major source of anesthesiology trainees for private practice in the Gulf South before the formation of the Department of Anesthesiology at Charity Hospital in New Orleans in the early 1940s. His contributions to our specialty in the areas of leadership (table 1), invention, and education are numerous, but he is often forgotten in our recorded history.

Early Years

Ansel Marion Caine was born on March 3, 1882, in Perry County, Alabama, in the town of Safford. This region is affectionately referred to as “Loosenville,” because everything that happened there was said to be a “loosing proposition.” Dr. Caine was raised on a farm as the youngest of eight children born to John Thomas Caine and the former Drury Ann Holmes. Although there is little record of his childhood, his upbringing in rural Alabama as the son of a farmer no doubt contributed to his strong drive, work ethic, and firm religious convictions later in life.

Ansel Caine attended high school at South Alabama Baptist Institute in Thomasville and graduated in 1900. He then attended college in a more urban setting in Birmingham, Alabama. After graduating from Howard College (now Samford University) in 1902, Dr. Caine enrolled at the Louisville College of Medicine in Kentucky (Ansel M. Caine, M.D., application for board certification, The American Board of Anesthesiology, 1938). There is no record of what attracted Ansel Caine to the study of medicine, although family members believe his interest grew from a natural curiosity about how things worked and his obvious love for science. He attended Louisville from 1903 through 1904 and then transferred to Tulane University School of Medicine in New Orleans, graduating in 1907 (fig. 2) (letter from Pat Trahan, Stenographer of the Dean’s Office, Tulane University School of Medicine, New Orleans, Louisiana, to Curtis W. Caine, M.D., Brandon, Mississippi, May 29, 1959). Dr. Caine began a love for New Orleans that grew during his years at Tulane, and the city would be his home for the remainder of his life.

After completing medical school, Ansel Caine was an intern at the Touro Infirmary in New Orleans from April 1907 through July 1909. His interest in anesthesiology developed during this time. Upon completing his internship in 1909, Ansel Caine became the first full-time practicing anesthesiologist in the city of New Orleans, working as a staff physician at the Tulane Infirmary (Ansel Caine, M.D., Death Notice, Touro Infirmary, New Orleans, Louisiana, 1961). Previously in New Orleans, as in much of the United States, anesthesia was administered primarily by surgical interns or operating room nurses. The story of Ansel Caine taking the reins over the anesthesia care at Touro is detailed by Isidore Cohn, M.D., in Rudolph Matas: A Biography. Rudolph Matas (former Chairman, Department of Surgery, Tulane University School of Medicine; 1860–1957), a world-renowned surgeon from New Orleans, had used his son-in-law, Lucien Landry, M.D., to administer anesthetics for the previous 2 yr. As the story goes, Dr. Landry wanted to practice surgery full time and rebelled against his father-in-law by calling Dr. Caine to serve as the anesthetist for the next scheduled operation in the middle of a busy day. By the time Matas became aware of the switch, the next patient had already been anesthetized, and it was too late for Dr. Matas to overrule his son-in-law’s decision. Thus began the career of Dr. Ansel Caine at Touro, while Dr. Landry was finally accepted as a junior associate in the surgical practice of Dr. Matas.
Although Ansel Caine preferred the doctor–patient relationship fostered by working alone, he quickly realized that demands of the call schedule would necessitate additional help. A partnership was formed in the early 1910s between Dr. Caine and Dr. Wilmer Baker, whom he had trained. Conducting business under the name “Caine and Baker” (also referred to as “the firm”), they were later joined by Dr. Merrill Beck, who had transferred from obstetrics and gynecology to anesthesia, and a woman, Dr. Lillie Dismukes. The group practiced exclusively at Touro Infirmary and the Southern Baptist Hospital, where Caine became the first Chief of Anesthesia when it opened in 1926 (letter from Raymond C. Wilson, Administrator of Southern Baptist Hospital, New Orleans, Louisiana, to Curtis W. Caine, M.D., Brandon, Mississippi, June 4, 1959). This partnership would last until 1945, when Dr. Baker and others left the group and formed a separate group practice. An association was formed that same year between Dr. Caine and Dr. Thomas Campbell of St. Louis, whom he had recruited to New Orleans because of a lack of “sufficient anesthesiologists” in the area to meet the growing need. Dr. Campbell was granted full partnership after 4 yr, sharing all earnings and equipment with Dr. Caine. They were joined in 1952 by Dr. Frank Leo Faust, who left the group that had been formed by Dr. Baker. The new partnership was called Caine, Campbell and Faust (letter from Ansel M. Caine, M.D. [deceased], formerly Assistant Professor of Surgery, Tulane University School of Medicine, to Thomas Campbell, M.D. [deceased], St. Louis, Missouri, June 10, 1959). Dr. Caine was never happy about the need to form partnerships. Always of independent mind, he did not fully embrace the compromises necessary to make a group practice function.³ Ansel Caine always held the view that anesthesia care should be about a patient and a single physician.‡

Education

Although Ansel Caine would practice medicine primarily in private hospitals, a passion for teaching developed early in his career. On May 8, 1911, he was appointed to the staff of Tulane University School of Medicine as Assistant Clinical Instructor. Dr. Caine would instruct
scores of anesthesiology residents in New Orleans over the years. Ansel Caine achieved the rank of Assistant Professor of Surgery at Tulane in 1931 and continued to teach there through 1947 (letter from Pat Trahan, Stenographer of the Dean’s Office, Tulane University School of Medicine, to Curtis W. Caine, M.D., Brandon, Mississippi, May 29, 1959). Dr. Caine and his partner Wilmer Baker both taught residents at Charity Hospital before the charter of an anesthesiology department at the hospital in the 1940s. Dr. C. B. Odom, who was in charge of surgical affairs at Charity Hospital, had until that time been staffing the anesthesia locations primarily with nurse anesthetists. In 1941, as the anesthesia requirements for the hospital grew to 40 sites daily, Dr. Odom saw the need to create a formal Department of Anesthesia and sought a physician anesthetist to lead the department. The position of Chief Anesthetist of Charity Hospital was initially offered to Drs. Caine and Baker, but they declined. The next offer was made to Dr. Douglass Batten, a second-year resident at Bellevue Hospital in New York who happened to be vacationing in New Orleans at the time and had visited Charity Hospital. Dr. Batten also declined the position, saying he was not interested in “institutional work.” He did, however, suggest the name of someone who would be interested, Dr. John Adriani (1907–1988). Dr. Adriani, who like Dr. Batten had trained at Bellevue under the legendary Dr. Emery Rovenstine (1895–1960), was appointed as Director of Anesthesia at Charity. Dr. Caine was named Chief Visiting Anesthetist, and a close relationship between these two leaders kindled. In fact, Dr. Caine personally supplemented Dr. Adriani’s salary in these early years, being of the opinion that the work he was doing for anesthesiology in New Orleans (and around the state) made him a valuable asset. In 1955, Dr. Adriani, by then an established leader in his own right, had to write to Dr. Caine requesting that he “stop sending me those checks” (letter from John Adriani, M.D. [deceased], formerly Chief Anesthetist of Charity Hospital, New Orleans, Louisiana, to Ansel M. Caine, M.D., October 5, 1955).

Dr. Caine was also involved in the education of anesthesiologists for military service. In 1940, Ralph Waters (1887–1979) asked Dr. Caine to set up a school of anesthesia in New Orleans for medical officers in the Army and Navy. The requirement was for two separate courses, one of 6 weeks’ and another of 6 months’ duration, to cover fundamentals of anesthesiology and to provide intensive individual clinical instruction (fig. 3) (telegram from Ralph Waters, M.D. [deceased], former Professor of Anesthesiology, University of Wisconsin, Madison, Wisconsin, to Ansel M. Caine, M.D., October 6, 1940). How many of these medical officers were trained is unclear. However, records do exist of the Chief of Anesthesiology at Lackland Air Force Base in San Antonio, Texas, writing Dr. Caine to verify the training of one of his captains as late as 1956 (letter from Arthur B. Tarrow, Lt. Colonel, United States Air Force [deceased], former Chief of Anesthesiology, Lackland Air Force Base, San Antonio, Texas, to Ansel M. Caine, M.D., January 20, 1956). Dr. Caine found training others in anesthesiology to be one of the more rewarding aspects of his job and would continue teaching for the duration of his career.

The Travel Club

Dr. Caine’s status as a leader in the field of anesthesiology in the early 20th century was acknowledged in his invitation to the first ever meeting of the Anesthetists Travel Club (ATC) in 1929 (fig. 4). The ATC, formed by Dr. John Lundy (1894–1973) of the Mayo Clinic in Rochester, Minnesota, was an invitation-only meeting of physicians from throughout the United States and Canada to discuss the specialty of anesthesia. Through the 1930s, few nationwide anesthesia specialty societies were in existence (e.g., the New York Society of Anesthetists did...
Dr. Caine was inquisitive by nature, and his accomplishments are reflective of his passion for invention. The two major inventions credited to Dr. Caine are the oxygen tent and a device that was the first of its kind used to warm and humidify ether vapors. Although oxygen tents were in use before Dr. Caine, he is considered a pioneer in oxygen therapy largely because his improvements to the tent made it the first version widely accepted by patients and practitioners. The advantages of keeping patients and practitioners warm and moist were especially appreciated during the cold and wet conditions.

Inventions and Publications

Dr. Caine's tent, as reported in the July-August 1931 issue of Current Researches in Anesthesia and Analgesia, was one of the best-attended meetings in the history of the ATC. The 1935 ATC meeting in New Orleans opened with clinical demonstrations at Touro Infirmary and Southern Baptist Hospital on day 1. Dinner that evening was hosted by a group of surgeons. Day 2 consisted of observing work at the Louisiana State University Medical Center. A reception at Dr. Wilmer Baker’s home rounded out the day, and the evening was left open for New Year’s Eve celebrations. The group attended the Sugar Bowl on New Years Day, 1936. Sitting on the 50-yard line (at a cost of $3.50 per ticket!), ATC members observed Texas Christian University defeat Louisiana State University 3-2 in what were described as chilly and wet conditions.

Dr. Caine quickly struck up friendships with the other ATC members, especially Dr. John Lundy, from whom he and his partner, Dr. Wilmer Baker, learned the art of regional anesthesia. Drs. Caine and Baker hosted the sixth meeting of the ATC in New Orleans in 1935. Although described as a more casual meeting than some of the previous events, exhaustive planning went into it, and in exchanges leading up to the meeting, Dr. Caine admitted to Lundy that “Cold shivers kinda run down my spine when I think of what we have to show and to whom.” Ideas for a thionembutal demonstration by Dr. Lundy, as well as a demonstration of one-lung ventilation by Dr. Waters, were planned. Always one to support his southern colleagues, Dr. Caine invited as a guest member to the ATC in New Orleans Dr. Thomas Collier from Atlanta. One major lapse in the planning of the 1935 ATC meeting in New Orleans was an omission of a key name in the list of invitees sent to Dr. Caine by Dr. Lundy. It was not until a month before the conference on November 15 that Dr. Lundy realized that the now legendary head of anesthesia at Bellevue in New York, Dr. Emory Rovenstine, had been left off the original invitation list. Dr. Caine was quite embarrassed about the lapse but luckily did not have to take blame for it because Dr. Lundy had seen Dr. Rovenstine in New York and informed him that it was his fault: “I explained very carefully to him when I saw him in New York that it was all my fault and that I regretted it very much. I told him his name had been written in longhand on my list and I became suspicious that it had not been typed on the original list. He was happy to have the invitation. He said that he would probably not be able to go as one of his assistants is to be married . . .”

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ANSEL MARION CAINE, M.D.

Fig. 6. Caine Apparatus diagram from US patent 1,094,301. April 21, 1914.

cooling (using a cooling unit from a General Electric ice box) and the removal of carbon dioxide by pumping the air through an absorbent with sodium hydroxide. The goal of therapy with the tent was to administer 40% oxygen, which was achieved by filling the tent with oxygen and then fixing a gauge to administer oxygen at 6 l/min thereafter. The oxygen concentration could then be titrated as needed based on the patient’s skin color. Other improvements to Dr. Caine’s oxygen tent included construction from lotus cloth (which was translucent) as opposed to the opaque (and warmer) oilcloth tents, and a “celluloid” window (previously, the tents were windowless and dark). Dr. Caine felt strongly that oxygen should no longer be a last resort therapy as it had been through the 1920s. He reported in Current Researches in Anesthesia and Analgesia in 1931 that his “. . . results are sometimes spectacular. If there is sufficient functioning lung tissue, there is almost immediate relief of cyanosis and dyspnea.”

Dr. Caine filed a patent application in 1912 for an “Apparatus for Administering Anesthetics.” The major innovation of the Caine Apparatus is that it was the first device of its kind to warm the vapors used to administer ether. The device consisted of a heating vessel that contained “a granular heat retaining substance” (sodium acetate), which could be warmed by placing it in boiling water for 10–15 min. The anesthetic vapors would then travel through this heating chamber via a spiral tube before being delivered to the patient. Dr. Caine reported that his device would allow “Continuous and uniform anesthesia with less salivary and bronchial secretion, and less irritation to the bronchi than is now possible.” The patent for this device was granted to Dr. Caine in 1914 (fig. 6).16

Although his scholarly output was not as large as some of his travel club colleagues, Dr. Caine had a substantial bibliography.17 Manuscripts by Dr. Caine published in local medical journals dealt with a variety of topics. A favorite subject of Dr. Caine included anesthesia for otorhinolaryngology surgery as seen in “Anesthesia for Throat Surgery,” published in the New Orleans Medical and Surgical Journal in 1910, as well as “Gas Anesthesia in Oral, Laryngeal, Lung and Ocular Surgery,” published in the same journal in 1930.18,19 In the former, he describes what he believes to be the optimum anesthetic technique for tonsillectomy: “With nitrous oxide it is very difficult and often impossible to abolish the throat reflexes sufficiently for the surgeon to do justice to himself and to his patient . . . That leaves us ether as the agent to discuss. As you all know ether is a relatively safe anesthetic agent . . . For ideal work it is necessary that the operator be uninterrupted in his work from the beginning of the operation to its completion.” Dr. Caine goes on to describe his use of a “mongrel” apparatus to successfully administer ether for tonsillectomy in more than 150 cases. Dr. Caine published in nationally recognized journals as well, including “Ethylene and Relaxation” in Current Researches in Anesthesia and Analgesia and several publications in the American Journal of Surgery relating to the use of nitrous oxide.20,21,22

Another topic especially important to Dr. Caine was the relationship between an anesthesiologist and a surgeon. In “Relations That Should Exist between Surgeon and Anesthetist,” published in 1913 in the New Orleans Medical and Surgical Journal, Caine stressed the importance of mutual confidence between the surgeon and anesthetist: “Confidence is essential. This confidence should be mutual, and without this feeling neither can do his best work.”

Family and Religion

Dr. Caine married Pearl Jacobs, a registered nurse, in 1909, during the final year of his internship. He had six children and was by all accounts a devout parent and husband (fig. 7). Pearl had uncontrolled hypertension as detailed in letters from Dr. Caine to Dr. Lundy, written in 1935, when Pearl was only 47 yr old: “She suffers from marked headaches that are hard to relieve . . . Her pressure, while not one of those excessive highs, is high 170-180/110-115 usually . . . When excited . . . 250/130.”23 Pearl died a premature death in 1948 from complications related to her hypertension. Ansel Caine married his second wife, the former Mary Borum, in 1949. They would remain together until his death in 1961.

Raised in a Baptist home in rural Alabama, Dr. Ansel Caine remained devoutly religious throughout his life. He joined the First Baptist Church of New Orleans upon his arrival there in 1905 and was ordained a deacon in 1912. His roles in the church included senior Bible deacon, teaching men’s Bible class, and he was said to be...
In 1955, he was awarded a Certificate of Merit by the First Baptist Church in New Orleans for "...42 yr of faithful service...in the Sunday School" (Certificate of Merit, First Baptist Church, New Orleans, Louisiana, April 14, 1955).

Heroics

Ansel Caine's skills as an anesthesiologist are detailed in the story of Dr. Alton Ochsner's (former Chairman, Department of Surgery, Tulane University School of Medicine; 1896–1981) operation on Tomas Gabriel Duque, the former president of the Republic of Panama in 1943. Duque had fallen ill with a "thyroid heart" and insisted on being operated on by the world-famous surgeon, Dr. Alton Ochsner. Dr. Ochsner was concerned about the skills of the Panamanian anesthesiologists and arranged for Ansel Caine to make the trip with him to Panama. Dr. Ochsner had been warned by his associate, Dr. Edgar Burns, about what he called "the Latin temper" and told him that they would likely be "liquidated" if Duque had a bad outcome. The two were given absolute top travel priorities by the White House and arrived in Panama on a February evening (the night before Mardi Gras was to be celebrated in New Orleans). Upon their arrival, Duque was so sick that the operation for the next day was canceled. Realizing he would not improve without the surgery, Ochsner operated on the second day, and despite a rocky postoperative course, Duque recovered. Dr. Ochsner was forever grateful to Dr. Caine for his help on this complex case.26

A pioneer in the use of oxygen, Ansel Caine was called upon in March of 1930 to assist in the care of David Thompson, the millionaire president of the Inland Steel Corporation. Mr. Thompson was near death with pneumonia in Miami when the call came over the wires of a New York brokerage house for assistance in delivering oxygen therapy. Instead of flying a plane from New York, much time would be saved if the oxygen could be flown in from New Orleans. Word was sent via wire to H. and B. Beer, brokers in New Orleans, where Frank Merrill, crack mail pilot of the Transcontinental Air Transport Flying Service, was hired to fly Dr. Caine down to Miami (fig. 8) (Transcontinental Air Transport Flying Service Invoice, St. Louis, Missouri, March 22, 1930). A Curtis Robin plane was chartered, and the flight left without delay. Severe weather necessitated landing in Tallahassee, Florida, where an automobile transported them to Miami ("Physician Flies to Aid Stricken Steel Official," unlabeled newspaper article, 1930). Despite a spectacular effort, Dr. Caine arrived too late to be of service because Mr. Thompson had died by the time of his arrival in Miami. At his funeral in New Castle, Pennsylvania, Inland Steel Assistant Vice President Clarence Randall remarked that "it was the constant wonder of us all that men to whom he was a perfect stranger would undertake and carry through in the ordinary course of duty the things which you and that pilot did." Ansel Caine was later reimbursed by the very grateful Inland Steel Company for travel and work missed to the tune of $3,929, a hefty sum in 1930 (letter from Clarence Randall [deceased], Assistant Vice President, Inland Steel Company, Chicago, Illinois, to Ansel Caine, M.D.).

Death and Legacy

Dr. Ansel Caine died on September 26, 1961, at 8:25 AM at Southern Baptist Hospital in New Orleans of complications from agranulocytosis (Death Certificate of Ansel Marion Caine, September 26, 1961, Southern Baptist Hospital). The funeral services were held at the House of Bultman on St. Charles Avenue, and religious services followed at the First Baptist Church. The mark left by Dr.
Caine on the medical profession is evident in the notices of his passing in the major journals and specialty society publications of the time. Perhaps more important to Dr. Caine would have been the recognition received in his obituary in the First Baptist Church bulletin as “a conscientious tither, soul-winner, and one of the ablest Bible students any church ever had.”25

Dr. Ansel Caine was the founding father of the first three-generation family of anesthesiologists in the United States. Ansel Caine’s son, Dr. Curtis Caine, and his grandson, Curtis Caine, Jr., would follow. Ansel Caine’s son, Dr. Curtis Caine, Sr., retired from the practice of anesthesiology after 60 yr in Jackson, Mississippi, in October 2004. Although Dr. Ansel Caine’s legacy is often overlooked, he should be remembered for his impressive contributions to anesthesiology in the areas of leadership, education, and invention. Always a man of strong faith, perhaps it was the humility and lack of self-promotion imparted by his rural upbringing that has left his name in relative obscurity.

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