Historical perspectives of The American Association for Thoracic Surgery: Frank S. Dolley (1884-1961)

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Frank Stephen Dolley, the 24th president of The American Association for Thoracic Surgery (AATS), was born July 26, 1884, to Frank Curtis Dolley and Katherine Laurette Hayden Dolley in Falmouth, Maine (Figure 1).^{1,2} After graduating high school he attended Pomona College in Claremont, California, where he was active in theater arts and received a Bachelor of Arts degree in 1907. Notably, Pomona College was established in 1887 with a goal of emulating small Congregationalist-founded colleges in New England such as Dartmouth, Middlebury, Harvard, and Bowdoin.³ In effect, Dolley ventured to southern California but remained grounded in ideals much like those in his native Northeast.³

MEDICAL TRAINING

Dolley returned to Maine to attend Bowdoin Medical School and received his medical degree in 1911 as one of a class of 13 students. Established as the Medical School of Maine in 1820, Bowdoin Medical School graduated more than 2000 doctors until its closure in 1921.⁴ Unlike many Bowdoin graduates who practiced in small towns in Maine, Dolley went to New York City for 3 additional years of training as a surgical resident—initially at Roosevelt Hospital (under Dr George Emerson Brewer) and later at Presbyterian Hospital.^{4,5}

Upon completion of general surgery training in 1914, Dolley relocated to San Francisco as an assistant in surgery to Stanley Stillman at Lane Hospital of Stanford University and to study the pathology of osteomyelitis.^{6,7} After several months at Lane Hospital, he moved to South San Francisco and purchased the medical facility and practice of the late Harry Plymire.⁵ He subsequently formed a corporation for a new hospital that was completed in 1918. The hospital comprised 42 beds and 3 operating rooms, and Dolley was head of the board of directors. In 1926, Dolley sold his interest in the hospital and embarked on additional training in thoracic surgery.^{5,6}

The 1920s and 1930s were a new epoch in thoracic surgery marked by a number of developments: John Alexander

FIGURE 1. Frank S. Dolley, MD. Richard H. Meade was the 35th president of The American Association of Thoracic Surgery. Courtesy of The American Association for Thoracic Surgery Archives, National Library of Medicine, Washington, DC.

(17th AATS president) popularized anterior thoracoplasty in treating tuberculosis, pulmonary resection for infection and cancer was realized by Howard Lilienthal (fifth AATS president), and Harold Brunn (21st AATS president) and Evarts Graham (10th AATS president) performed the first successful 1-stage pneumonectomy for lung cancer.⁸⁻¹⁰ In 1925, attracted by the challenge of a career in thoracic surgery, Dolley began a 1-year fellowship in respiratory physiology with Professors Henderson and Haggard at Yale University studying pulmonary vascular responses in animal models.^{1,11,12} During this period, Dolley regularly corresponded with Graham, who remained his mentor throughout the rest of Graham's life.^{1,11,13} From 1926 to 1927, Dolley traveled to Germany, spending time with Ferdinand Sauerbruch—observing clinical cases in Munich—and esteemed pathologist Max Borst—to study human anatomy.¹¹ In Germany at the same time was Edward “Pete” Churchill (28th AATS president), whom Dolley befriended and the 2 “...enjoyed very much practicing our German.”¹¹ Dolley further observed during that time that “physiology offers a gold mine of things which can be applied to clinical problems.”¹¹

In 1927, Dolley returned to the United States to train as a voluntary assistant on the chest service with Graham at Washington University in St Louis.^{1,11,13} Along with clinical training, Dolley and another voluntary assistant, E. Robert Wiese, studied the lymphatic drainage of the chest and found that lymphatic flow was severely impeded by the presence of pneumothorax.¹⁴ After a year in St Louis, Dolley traveled north to spend approximately

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1 year in thoracic surgery training with Alexander at the University of Michigan.

DISTINGUISHED CAREER

During fall 1928, Dolley returned to California and settled in Los Angeles, where he was the first surgeon on the West Coast and the second in the country to confine his practice to the specialty of thoracic surgery.^{1,11,15} In 1929 he established the thoracic surgical service at Olive View Sanatorium, a 1000-bed facility for Los Angeles County renowned as the first tuberculosis sanatorium in the country to have a separate thoracic surgery building with 54 beds.^{1,7,16} The same year, Dolley established the first thoracic surgical residency training program in the West.^{1,7} Along with thoracoplasties for tuberculosis, Dolley's practice was notable for the treatment of lung abscess, chronic empyema, and mediastinal abscesses.¹⁶ As a clinical professor of surgery, Dolley taught at Olive View, Los Angeles County Hospital, and White Memorial Medical Center as well as serving on the faculty of the College of Medical Evangelists.¹ His practice and teaching were later augmented by John C. Jones (45th AATS president) and Lyman Brewer, III (54th AATS president).⁷ Shortly after joining Dolley's practice, Brewer enlisted in the Army Medical Corps in 1942.^{17,18} At the beginning of World War II, Dolley and Brewer made a series of educational motion pictures for the National Research Council, such as *Chest Injuries: Debridement of Bullet Wound of Chest Wall* and *Complications of Chest Injuries (Pleural Infection): Open Draining of Empyema (Non-Tuberculous)*, which were widely used in teaching U.S. Army surgeons in the management of thoracic wounds.^{1,19,20} During the war, elective surgery was discontinued at the Olive View facility; only emergency and minor surgical procedures were performed.²¹ Dolley continued to treat patients in his busy private practice; elective surgery at Olive View was resumed in December 1945.

Dolley contributed substantively to the scientific literature across the spectrum of thoracic surgical topics, including surgical and medical treatment of tuberculosis, intrathoracic tumors, traumatic wounds of the chest and heart, lung cancer, and esophageal disorders and carcinoma. In 1939, Dolley and colleagues²² published the article, "The diagnosis and the effects of ligation of the patent ductus arteriosus: A report of eleven cases." Dolley and Jones had performed 11 procedures less than 2 years after the initial procedure performed by Robert Gross.²³ The authors reported,

It is clear that technically a patent ductus can be ligated with comparative ease, although the results will depend upon the skill and experience of the surgeon.... If the operation will prevent congestive failure, it would seem wise to do it before the heart is greatly hypertrophied or decompensation has

developed. If the operation will prevent the development of bacterial endarteritis, it would seem to offer the greatest advantage if done early in life, before the intima is damaged in such a way as to favor the establishment of this fatal infection....²²

In 1940 at the annual meeting of the Pacific Coast Surgical Association, Dolley (with Jones as coauthor) presented the surgical indications and the operation for patent ductus arteriosus in a motion picture filmed in Technicolor at the Children's Hospital, Los Angeles.^{7,24}

During his career, Dolley served as chief of the thoracic surgical service at California Hospital, the Los Angeles County General Hospital, the Good Hope Clinic, and Olive View Sanatorium, and as consulting chest surgeon of the San Fernando Veterans Hospital. Dolley was also president of the American Trudeau Society from 1935 to 1937, as it was transitioning from the American Sanatorium Association.¹ The American Trudeau Society was renamed the American Thoracic Society in 1960. As his close colleague Brewer recounted, Dolley was a master surgeon and "...had a special empathy and was much loved by his patients. As a pioneer in thoracic surgery, he inspired young men to take postgraduate training in this field of surgery and have the courage to practice this specialty on a full time basis."¹

OTHER PASSIONS

Beyond his medical interests, Dolley was a collector and student of the history of the western United States. Housed at the Huntington Library in Southern California, the Dolley collection consists of research materials for his study of the lower Colorado River, especially in relation to steam navigation.²⁵ Prominent are 2 manuscripts written by Dolley: one was a history of navigation on the lower Colorado River with a brief discussion of Spanish explorations of the Delta region and the other was the region's 19th century history, paying particular attention to steamboat design and pilots. Also in the collection are many original letters, research notebooks, and discussions of the Chemehuevi, Cocopah, and Yuma Indians.²⁵ Another of Dolley's passions was culinary in nature. According to Brewer, Dolley

...decided for Thanksgiving to fatten several turkeys with a special diet of walnuts soaked in sherry. He believed that this fare would give the meat an unusually delicious flavor. The turkeys gobbled up the "delicious" walnuts for several months with gusto and then, just before Thanksgiving, suddenly they expired. Post mortem examination showed that they had died of cirrhosis of the liver.¹

Dolley was married to Sarah Helena McCormick and the pair had 2 children. After a brief illness, Dolley died February 25, 1961.¹ Mrs Dolley died in 1971.

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