HISTORICAL PERSPECTIVES OF THE AMERICAN ASSOCIATION FOR THORACIC SURGERY

This profile of Samuel Meltzer is the first in a series of biographical sketches of early presidents of The American Association for Thoracic Surgery. The AATS, a creation of the New York Association for Thoracic Surgery and its president, Willy Meyer, held its first annual meeting in Chicago in June 1918, the height of the United States' participation in World War I. That it could do so and at the same time have both of its first two presidents be products of a German education, one Russian born and the other German born, speaks to its supranational character. The Association has held annual meetings since 1918 except for 1942, 1943, and 1945, when the United States was totally engaged in another world conflict. In 1995 the Association held its seventy-fifth annual meeting with its seventy-fifth president in the chair. Only one man has served two terms, Willy Meyer of New York, very much in at the creation. One president died in office, Richard Sweet of Boston, his place taken in 1962 by Jim Clagett of Rochester, Minnesota. Clagett had been elected vice-president, which in this Association is also president-elect. One man, Edward D. Churchill, elected in 1943, was unable to serve owing to army commitments. He was later reelected and served in 1949.

SAMUEL J. MELTZER (1851-1920)

Samuel J. Meltzer, the first president of The American Association for Thoracic Surgery, was born in Russia in 1851. At the age of 19, in revolt against his domineering father, he emigrated to Königsberg in East Prussia to complete his preliminary education. In 1875 he entered the University of Berlin, from which he received his medical degree in 1882. Sensing even then that America offered a brighter future to Jewish physicians than did Germany, he made his way to New York as a ship's surgeon in 1883.

Over the next 20 years he developed a busy, financially rewarding medical practice in New York City, at the same time pursuing his basic interest in physiology. In Berlin he had been a student of the great physiologist Hugo Kronecker. Together they developed the Kronecker-Meltzer theory of deglutition, which held that the muscular contraction of the oropharynx was sufficient to drive a bolus of food through the esophagus without peristalsis, a conclusion later challenged by Cannon's pioneer fluoroscopic studies of swallowing. Pursuit of experimental physiologic studies in parallel with practice required enormous effort. It is not surprising, therefore, that in 1904 he welcomed the opportunity to become a physiologist, half time, at the Rockefeller Institute. Within 3 years he gave up his practice completely to work full time at that institution, and he became an acknowledged leader among physiologists in this country. His many and diverse studies helped break down the barrier between clinical practice and the physiology laboratory. His investigation of swallowing led him to the concept of inhibition and this, in turn, to the properties of magnesium salts, whose therapeutic potential was limited by their profound though brief inhibition of respiration. A satisfactory method of artificial respiration was called for beyond such complicated methods as Sauerbruch's negative-

pressure chamber or the Brauer/Robinson positive-pressure box, which enclosed the anesthetist and the patient's head.

As a solution to this problem, in 1909 Meltzer and Auer, his son-in-law, proposed insufflation of oxygen via an intratracheal tube, an idea that harks back to Vesalius. With carefully calibrated pressure and flow of the gas, adequate respiratory function could be achieved with an open chest and an inflated, quiet lung. The landmark nature of his method was early accepted in New York and with many modifications spread to the surgical world.

Though Meltzer continued to devote his life to physiologic research—he was, for example, a founder and first president of the Society for Experimental Biology and Medicine—he kept in close touch with the clinical scene in New York and with his colleague, Willy Meyer, of the German Hospital, renamed the Lenox Hill in 1917. Meyer, with his extensive surgical practice, had a special interest in the thorax. He astutely recognized the special promise of thoracic surgery if developed in company not only with chest physicians, tuberculosis specialists, and anesthesiologists, but also with basic scientists. At the organizational meeting for the AATS, therefore, with Willy Meyer, its creator and prime mover in the chair, Meltzer was nominated president of the national association. Meltzer modestly demurred, suggesting that Sam Robinson, then on leave to the army from the Mayo Clinic, be the nominee. Robinson thanked Meltzer for the honor but believed the original nomination should stand.

Meltzer's first presidential address in Chicago, June 10, 1918, was in character with the man. After a bow toward Willy Meyer, he assumed the responsibility of leading the

broadly based thoracic surgical society to its place in the sun. He acknowledged the importance of his own contribution, intratracheal insufflation, and defended its safety against strong criticism by Bevan, a prominent surgeon about to be president of the American Medical Association. Looking forward, Meltzer predicted that the key problems facing the thoracic surgeon would be physiologic. At the same time he urged that exploratory thoracotomy be given a place comparable with exploratory laparotomy as a diagnostic measure leading to appropriate surgical therapy. He then proceeded, albeit tentatively, to advocate exploratory thoracotomy as *therapy* for pulmonary tuberculosis, again analogous to exploratory

laparotomy, which he believed had been demonstrably effective in the treatment of tuberculous peritonitis.

Samuel Meltzer died in 1920, 2 years after his presidency of the AATS. In the *Dictionary of American Biography* he is identified primarily as a physiologist, yet this is the man who provided space in his laboratory for Sauerbruch's positive-pressure chamber when Willy Meyer had no place to put it. Meltzer is described as a restless individual constantly seeking outlets for his energy. Though his tongue could be sharp, he comes through as a benign intellectual giant. The acclaim for his election as first president of the AATS is justified.

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