Virginia Apgar, M.D.: At the Forefront of Obstetric Anesthesia

Selma H. Calmes, M.D.

Every baby born in a modern hospital throughout the world receives an Apgar Score, developed by anesthesiologist Virginia Apgar, M.D. (1909-1974). So, her name is probably the most remembered of any anesthesiologist. She is remembered also by those who knew her personally for her warm, dynamic personality and energetic lifestyle filled with many interests such as baseball (the Brooklyn Dodgers was her team), deep-sea fishing, stamp collecting, and, most of all, music.

Setting the Stage for Women Physicians

First, some background: The first American woman received a medical degree in 1849. Seventeen women’s medical schools and nine women’s hospitals were founded between 1848 and 1895 to improve training opportunities, and the number and percent of women physicians increased, peaking at 6 percent of the physician population between 1900 and 1910. There was then a marked decrease as the women’s medical institutions closed after 1910, unable financially to support teaching of the newly important, and increasingly expensive, scientific medicine. After 1910 and until the end of World War II, there were few women physicians, and they had limited practice opportunities.

Anesthesiology, meanwhile, was not a specialty yet, and many anesthetics were given by nonmedical personnel. The need for medical anesthesia was becoming clear to academic surgeons, who realized surgery could not advance unless anesthesia improved. Because of low prestige and low pay, it was difficult to interest male physicians in this area. Many surgeons, accustomed to female nurses, accepted women physicians as the ideal physician anesthetist. For example, the 1918 edition of Alton J. Ochsner’s Textbook of Surgery stated the choice of the anesthetist to be: “1. A woman — a. Nurse, b. Physician; 2. An assistant (male); 3. Very rarely a physician specializing in anesthesia.”

The result was a surprising number of women physician anesthetists between 1900 and 1948. From 1920 to 1948, women comprised 11-13 percent of professional anesthesia organizations, but they were only 3-4 percent of the physician population. In some areas (San Francisco), they were the majority of
practitioners until the late 1930s. There were even three women presidents of national anesthesia societies between 1922 and 1930. The first woman to devote her practice completely to anesthesia was Mary Elizabeth Boisford, M.D. of San Francisco, who began practice in 1897.

Dr. Apgar's choice of anesthesia becomes understandable in this historical setting. She was born in Westfield, New Jersey to an unusual family. Her father's scientific and inventive interests kept him in his basement laboratory or at his handmade telescope, and economic support of his family was difficult. Her older brother was chronically ill. The atmosphere of scientific curiosity and chronic illness led to her interest in medicine. She decided to become a doctor by 1925, the year she graduated from high school.

She went to Mt. Holyoke College, South Hadley, Massachusetts, supported by scholarships and an amazing number of jobs such as catching cats for zoology lab. She began medical school at New York's Columbia College of Physicians and Surgeons in September, 1929. In October, the stock market crashed. America's Great Depression began, and her financial problems became much worse. She was able to borrow money from her family friend whose assets had survived the Crash, but when she graduated in 1933 (fourth in her class), she was $4,000 in debt. This was an enormous amount of money for the time, especially for a single woman who now wanted to become a surgeon.

Facing New Challenges and Challenges

She began a surgery internship at Columbia in October, 1933. By August, 1934, she was searching for anesthesia training. She had excelled in surgery; what made her change? The first reason was probably economic. It was difficult for women surgeons to be financially successful, and she had to support herself. Next, Alan Whipple, M.D., head of surgery at Columbia, wanted medical anesthesia there and probably thought Dr. Apgar could initiate it. Although this is not documented for Dr. Apgar, anesthesia was thought then to be a field suited to women physicians.

Dr. Apgar's anesthesia training was typical for that time. She spent nearly a year with the nurse anesthetists at Columbia, then six months with Ralph M. Waters, M.D. at the University of Wisconsin and six months with Emery A. Rovenstine, M.D. at Bellevue Hospital in New York. Her diary from Wisconsin records events most would remember from their training days: "Did first case. Not bad, but wouldn't wake up... Another frightful mess today. Patient almost died." It also records great difficulty getting housing and frustration at being unable to attend the dinners that followed anesthesia meetings ("Good meeting. Stag dinner — MAD!").

She returned to Columbia in 1938 as Director of the Division of Anesthesia under the surgery department. Her plan followed exactly Waters' plan for his own department: first educate medical students (to attract excellent physicians) and second, provide patient care. Research would follow as a byproduct of the first two. Enormous problems began quickly. Recruitment was very difficult, and there was an overwhelming workload, especially after World War II began.

A medical student made a chance remark about the need to evaluate newborn babies. Dr. Apgar said, “That’s easy, you’d do it like this.” She grabbed the nearest piece of paper, jotted down the five points of the Apgar Score and then rushed off to O.B. to try it out.

Apgar Score

Dr. Apgar was a strong advocate of obstetric anesthesia. As a result, now required procedures for Cesarean delivery. The Apgar score, developed in 1949 at a break in a difficult case, was a remarkable scoring system that reflected, easy, you’d do it like this.” She grabbed the nearest piece of paper, jotted down the five points of the Apgar Score and then rushed off to O.B. to try it out. The Score was born.

The Apgar Score was possible to count on a portable oxygen pediatrician, John C. Holaday. M.B. As the baby's difficulties developed, signs of acidosis were noted. Acidosis is, and treatment of acidosis must be excessive treatment, after publication.

In 1959, Dr. Apgar refused to get a master’s degree to help with the demands of her job. She was offered the position of chairman March of Dimes, but was not interested in conflict about an校。
By August, Apgar decided to enter medical school to become a surgeon. It was difficult to support her family and wanted medical school. She took the entrance examinations and was accepted nearly immediately. She began her education at the University of Wisconsin in Madison. 

During her first year, she was invited to join an all-male group of students who had formed a study group. This was unusual, but Apgar was determined to succeed. She continued to work hard and eventually climbed the ranks to become one of the top students in her class. She was particularly interested in obstetrics and anesthesia, which was a neglected area at the time.

Anesthesia was not widely used in obstetrics, and the techniques available were often dangerous. Apgar was determined to change this. In 1949, she developed a new scoring system for newborn babies that was based on their physical appearance at birth. The Apgar Score was designed to help doctors quickly assess the condition of a newborn and determine the need for medical intervention.

The Apgar Score was a major breakthrough in obstetrics. It allowed doctors to quickly identify babies who were in need of medical attention and helped save many lives. Apgar's work had a lasting impact on the field of medicine, and she went on to become one of the most respected obstetricians of her time.

In 1949, Apgar was appointed as the first woman to serve on the Board of Regents of the University of Minnesota. This was a major milestone for women in medicine, and Apgar was a strong advocate for women's rights in the field. She continued to work tirelessly to improve medical care for women and newborn babies, and her legacy continues to this day.

Apgar's contributions to medicine have been remembered in various ways. The Apgar Score is still used today, and a statue of Apgar was erected in her honor in Minneapolis. Her legacy continues to inspire women and men in the medical field to strive for excellence and to fight for the rights of patients.
career intrigued me.” She spent the last 15 years of her life with the National Foundation and was extremely successful.

Dr. Apgar’s life was profoundly shaped by history. When she could not be a surgeon, she entered anesthesiology, which needed physicians. The neglected area of obstetric anesthesia offered opportunities when she was no longer in charge at Columbia. When polio was eliminated, the National Foundation’s new program of birth defects offered another opportunity. Dr. Apgar’s many talents and unique personality allowed her to take advantage of these opportunities and become a well-remembered anesthesiologist.

Further Reading:

Marilyn M. S. Apgar role model.