



## Pioneering Modern Surgery in Iran - The Legacy of Professor Yahya Adl

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**Background:** Professor Yahya Adl, widely regarded as the father of modern surgery in Iran, was a pioneering figure in the development of surgical practices and medical education in the country. He was the first to perform complex surgeries, including cardiac, thoracic, and spinal procedures, in the country. His innovative approaches led to the creation of specialized surgical departments, including the first trauma unit and blood bank in Iran. Throughout his career, he was dedicated to training the next generation of surgeons, establishing "Maktab-e-Adl" (the Adl School) which became a prominent educational center. Professor Adl's influence extended beyond the operating room, as he also advocated for public health reforms and served the underprivileged. His legacy as an educator, innovator, and humanitarian remains deeply embedded in the fabric of Iranian medical history.

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Professor Yahya Adl, one of the prominent figures in the history of Iranian medicine, is known as the father of modern surgery in Iran. (Figure 1) With his exceptional skills in surgery, he not only introduced surgical science to Iran but also pioneered many modern techniques in the field. Professor Yahya Adl, who left a profound impact on Iranian medicine and surgery, is now regarded as a symbol of innovation and progress in Iranian medical history.

Yahya Khan Adl was born in 1908 in Tabriz, Iran. The Adl family was one of the most prominent in the city, with Yahya Khan's father being a renowned jurist who served as the head of the judiciary in the Azerbaijan region for some time. Yahya Adl began his early education in Tabriz and later continued his

secondary education in Kermanshah after his father moved there. In 1924, when Yahya was 16 years old, his father sent him to Paris for further education. Yahya initially studied mathematics and philosophy, but later switched to medicine and entered the Paris Medical School. He was one of the first Iranians to become a resident at a hospital in Paris. During his studies, he worked in prestigious hospitals such as Pitié de Salpêtrière and Cochin, completing his surgical training. Professor Adl completed his schooling at a well-known private school in Paris, and then he entered the prestigious École Polytechnique. However, at the advice of his uncle, Habib Adl, who was involved in radiology in Tehran, he switched to medicine. His uncle encouraged him to choose a free profession, as at the



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time, only two free professions existed in Iran: law and medicine. Thus, Yahya left École Polytechnique and entered the Paris Medical School in 1928. In 1931, he passed the "extern" exam in Paris, and in 1934, he was accepted into the "intern" program, working as an intern in Parisian hospitals. Over the course of 4 years,

he worked with Professor Grégory, a famous French surgeon, and impressed him with his skills. As a result, Professor Grégory appointed him as the head of his clinic. Professor Adl's thesis on the treatment of tuberculosis adenopathy was approved in 1937, earning him a silver medal from the University of Paris. (1, 2)



**Fig 1.** Professor Yahya Adl



**Fig 2.** Professor Yahya Adl with colleagues in Paris

In 1939, Professor Adl returned to Iran. At that time, the Iranian government had invited Dr. Oberlen, a French pathologist, to establish the country's first modern medical school. Professor Adl was appointed

as the head of the Department of Surgery at this medical school and also became the chief of surgery at Sina Hospital (Avicenna Hospital) in Tehran. **(Figure 3) (1, 3)**



**Fig 3.** The Beginning of Professor Yahya Adl's Work at Sina Hospital

Professor Adl was a master surgeon and the first person to perform complex surgeries, such as heart, thoracic, and spinal surgeries, in Iran. He was also the first person in Iran to treat thigh fractures with open fixation instead of prolonged bed rest and traction. (4)

Additionally, one of his major contributions was the establishment of a blood bank in Iran, which revolutionized healthcare services and the introduction of modern general anesthesia. (2) In 1950, Professor Adl launched the emergency department at Sina Hospital, which later became one of the most active emergency units in Iran. **(Figure 4)**

Professor Adl not only revolutionized surgery in Iran but also played a pivotal role in training future generations of surgeons.

He established a systematic residency program in surgery, the first of its kind in the country, which trained many of Iran's future surgeons. Each year, four residents were accepted into his program, and he trained five new interns every year. (5) During the summers of the 1920s and 1930s, while many would consider it a time for rest, Professor Adl viewed it as an opportunity to learn new global surgical techniques.

Every year, his students and assistants eagerly awaited his return from Europe with new techniques and a wealth of new equipment, all purchased at his own expense. His work was not only limited to surgical techniques but also extended to anesthesia methods, post-surgical care, and new medical equipment. Professor Adl's legacy includes the development of specialized departments in surgery at Sina Hospital, including the establishment of the emergency trauma unit in 1950, which became a national model. He is also credited with introducing advanced surgical techniques, training hundreds of surgeons, and creating the first blood bank in Iran. (5, 6)

After 40 years of teaching and service in various roles, including managing the surgical department and being a member of the Medical Faculty's Committee, Professor Adl retired in 1979. However, his scientific and humanitarian legacy continues to impact the medical field. His contributions to modern surgery in Iran, his revolutionary work in medical education, and his dedication to serving the poor have earned him the title of "The Father of Modern Surgery in Iran." (1, 5)



**Fig 4.** Sina Hospital during its early establishment



**Fig. 5** Yahya Adl: The Father of Modern Surgery in Iran

Finally, after 96 years of a life dedicated to service, Professor Adl, the founder of modern surgery in Iran and a diligent educator in this field, passed away on February 3, 2003 at Mehr Hospital in Tehran. May his soul rest in peace, and his memory be cherished.

### **Conflicts of interest**

The author does not have any conflicts of interest.

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