

## History of Contemporary Medicine in Iran

# An Early Medical Photograph in the History of Modern Surgery in Tabriz-Iran, 1919

Ahmadreza Afshar MD<sup>1</sup>**Abstract**

This article presents one of the earliest clinical photographs in the history of surgery in Iran. The picture was taken around 1919 (1297 of the Iranian solar calendar) in Tabriz, Iran. It shows the post-operative care of two amputees by the surgical team, the surgical instruments and the method of applied anesthesia. The patients were Iranian Gendarmerie soldiers who lost their limbs to frostbite. The surgeries were performed by Dr. Ali Roshdi in Gendarmerie Hospital in Tabriz. This photograph cleverly demonstrates the coconscious endeavor of the surgical team to treat and save lives of patients in about a century ago in Tabriz, Iran.

**Key words:** Amputation, medical photography

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Clinical photography is a specialized branch of medical photography that has been used for documentation of the clinical presentation of patients with medical problems and diseases. The disease or problem is the main subject of a clinical photography. The first photograph devices were brought to Iran during the reign of Mohammad Shah Qajar (1808–1848) from Russia and England. Although the first photograph was recorded in 1842 in Iran,<sup>1</sup> Figure 1 may be considered as one of the earliest clinical photographs and documentations in the history of medicine, surgery and anesthesiology of Iran.

The picture (Figure 1) was taken around 1919 (1297 of the Iranian solar calendar) in Tabriz, long before the teaching and practicing of modern medicine in Iran<sup>2</sup> and the Dar al-Fonun School foundation in 1851, which was the first modern institute for higher education in Iran. In due course, after the Dar al-Fonun establishment, the School of Medicine at Tehran University was founded in 1934<sup>3</sup> and Tabriz Medical Faculty was established in 1947. The picture demonstrates a surgical team and the post-operative care of two patients; one with an above elbow amputation and the other with a below knee amputation. It also demonstrates some surgical instruments in that time and the method of applied anesthesia.

Before the introduction of modern surgery, major traumas and injuries to the head, neck, chest and abdomen were healed by themselves or resulted in the victims' death.<sup>4</sup> However, major limb injuries might have been treated by amputation. Modern orthopedic surgery, as an independent specialty of general surgery, was introduced in the 1950s to the general public in Iran.<sup>5</sup> Before that time; patients with orthopedic problems were managed by general surgeons. The first general surgeon in Tabriz, whose attitude shifted toward the orthopedic operations, was Dr.

Buyuk Shadeghan. In 1967, Dr. Ahad Dilmaghani, an American trained orthopedic surgeon, established an independent ward for the orthopedic patients in Tabriz University. The Department of Orthopedics in Tabriz University has begun to train orthopedic surgeons since 1971 (According to personal communication with Dr. Mohammad-Ali Dilmaghani).<sup>6</sup>

Based on the information provided by the Northwest Branch of the National Library and Archives of the Islamic Republic of Iran in Tabriz, the surgeries in the Figure 1 were performed by Dr. Ali Roshdie in Gendarmerie Hospital in Tabriz. These were probably the earliest surgeries with modern techniques in Tabriz. The two patients were Iranian Gendarmerie soldiers who lost their limbs to frostbite in Jolfa, East Azarbaijan Province.

Mirza Ali Roshdie (Dr. Roshdie) was born in Tabriz. He was the younger brother of Mirza Hassan Roshdie (1851–1944). The Roshdie brothers were outstanding individuals in the cultural history of Azarbaijan and Iran (Figure 2). Mirza Ali established a modern school in Tabriz known as Roshdieh and Mirza Hassan introduced modern teaching methods which are still in use (Personal communication with Dr. Homeira Roshdi).<sup>7</sup>

Another feature of this photograph is the method of applied anesthesia. Diethyl ether was introduced to the general public in 1846. A year later, chloroform was introduced as an anesthetic agent. Modern anesthesiology, as an independent specialty, was recognized from the 1950s onward in Iran. In the picture, the second person from right holds a mask containing an inhalation agent against the patient's nose and mouth, while the first person from right moistens a dressing from a bottle. It seems that the patients were anesthetized by inhalation of chloroform. In that time, the surgeons were in charge of anesthesia for their patients and the anesthetic nurses and technicians learned their skills empirically.

In the picture, the surgical team wore a uniform of white garments. It should be noted that head covers were used from the 1940s onward and surgical masks were used from the 1920s onward. Rubber surgical gloves were used from 1894 onward; however, it is not clear whether the surgical team had access to

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**Figure 1.** The picture shows the post-operative views of an above elbow amputee and a below knee amputee, the surgical team, instruments and the method of applied anesthesia. The second standing person from left (black arrow) is Dr. Ali Roshdie (The photo was adopted with the permission from the Northwest Branch of the National Library and Archives of the I.R. Iran in Tabriz).

surgical gloves or not. The picture shows healed stumps of the successful amputees in that pre-antibiotics and lack of strict anti-septic surgery of the time.

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**Figure 2.** Dr. Ali Roshdie (left) and Mirza Hassan Roshdie (right) in 1943 (Courtesy Dr. Homeira Roshdi).

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