

## From Our History of Vaccination and Contagious Diseases

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## Portraits from Our Medical History: Dr. Tevfik Salim Sağlam

Tıp Tarihimizden Portreler: Dr. Tevfik Salim Sağlam

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"I have refrained from mentioning names in my writings as much as possible in order not to offend anyone's modesty and not to be unfair to anyone, because this great work is their collective work. For this reason, I dedicate my book to their cherished memories, to the Unknown Medical Officer of the Third Army."

Dr. Tevfik Salim Sağlam

Born on May 27, 1882 in İstanbul, Mr. Tevfik Salim's father was Mr. Mehmet Salim (Principal Clerk of the Grand Viziership) and his mother was Mrs. Nevber. He began his educational journey at the age of five at the Sultanahmet Üçler School.1 Then, in 1891, he enrolled in the Soğukçeşme Military Junior High School. After successfully graduating from Junior High School, he told his father that he wanted to become a physician, but his aunt was in favor of first asking Chief Astrologer Mustafa, who was an oracle in the palace. Dr. Tevfik Salim wrote about this incident in his book "How I Studied" (3):

"Mr. Mustafa, Namık Kemal's father. The head oracle is the late Mr. Mustafa, an astrologer. He is also a distant relative of my aunt. He was a very respected person. We would go and kiss his hand on holidays. I would inform him of the day and time of my birth, he would deduce my birth chart according to scientific results, and

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Figure 1. Tevfik Salim Sağlam (1).

if it was suitable, I would become a physician, if not, I would give up. This was what my aunt wanted. My father never believed in superstition and was angry with those who did. I loved my aunt very much, but I made my decision in advance. "You can ask, but

We can liken it to the neighborhood school in the Ottoman Empire. Here, the students were taught the alphabet. The main purpose of this school was to teach religious worship to children. With the Tanzimat Edict, "worldly studies started to be emphasized" in addition to religious teaching (2).

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©Copyright 2024 by Pediatric Infectious Diseases and Immunization Society. Available Online Date: 13.09.2024 Available online at www.cocukenfeksiyon.org even if it turns out otherwise, I will still become a physician," I said, and enrolled in school. Mr. Mustafa read my fortune: "Let the child go, no matter what profession he wants to enter, he will definitely reach the highest level of it," and gave the birth chart to my aunt. Time justified his judgment, but it did not convince me of astrology".

He conveyed it to us in this way. In his memoirs, he explains that it was actually his dream to study law "... when I finished school, I wanted to enter the Mahmudiye Rüstiye in Aksaray and then continue on to law school." When he was young, his friend from the Üçler School, (Dr.) Saim Ali (Dilemre)<sup>2</sup> (1880-1954) mocked him as "he will be a cuckoo" and tempted him to study Military Medicine (4). As a result of this sweet story, he continued his education at the Military Medical School in 1895. Due to his interest in French, he graduated 13<sup>th</sup> in his class.<sup>3</sup> In 1898, he continued his education at Mekteb-i Tibbiye-i Şahane, which, in his own words, was "under the rule of terror" 4 (3).

The students were against Sultan Abdülhamit and if any of their friends were subject to Sultan Abdülhamit and had any sleuths, they would immediately excommunicate them among themselves (3). Even though he was under the "rule of terror", when we look at his life until the Balkan Wars and the First World War, he accumulated many good memories. For example, as he wrote in his book "How I Studied" after the "yacht horn" sounded, he attended a Karagöz and Hacivat show by a friend in the restroom (3). Another good memory is watching the performance of his friend who was an encomiast after the yacht horn (3). When he graduated in 1903, he started his internship at Gülhane<sup>5</sup>, which was established in İstanbul, with the rank of medical captain. Students graduating from the Military Tibbiyeyi Şahane had to do an internship here for one year. Dr. Tevfik Salim Sağlam said of Gülhane, "I found the ideal clinic that I longed for in my dreams in Gülhane." When he completed his residency training in 1906, he continued to stay at Gülhane and became a polyclinic assistant under Süleyman Numan<sup>6</sup> (1868-1925), a doctor of internal medicine. When Haydarpasa Medical Faculty<sup>7</sup> was established in 1909, he transferred there and continued to work under Dr. Süleyman Numan. He worked here as the chief of the laboratory until the Balkan War (7).

#### Balkan Wars (1912-1913)

When the Balkan War started in 1912, Mr. Tevfik Salim was assigned to the 2<sup>nd</sup> Mobile Hospital of the Thessaloniki Brigade, but when he arrived in Thessaloniki on the morning of October 20, he learned that his duty station had changed (7). His new duty station was at the İştip Redif Brigade. On October 22, he set off for Ioannina. When he arrived in Köprülü, he reached Manastir, spending some nights in stables due to the army's retreat. When he was left to the enemy forces in Bitola, he took the 116.54 liras in the safe of the hospital where he was working at the time with him to deliver it when he returned to Istanbul (7). Together with his companions, they decided that the safest route back to Istanbul was through the city of Niş.8 When they arrived in Niš, they were arrested as a result of a mistake. When they were released, they set off for İstanbul (7). On December 11, 1912, after his arrival in İstanbul, he worked at Taşkışla Hospital until the 2<sup>nd</sup> Balkan War (7). The hospital was built by the British architect William James Smith and its main purpose was to serve as a hospital for the Mekteb-i Tıbbiye-i Şahane.

When the Balkan War resumed (January 30, 1913), he was appointed as the physician of the Karaburun Sanitary Department after meeting with Besim Pasha, who was the Head of Health Affairs at the Ministry of War at the time. He was then assigned to the Yassıviran Range Hospital. Here, he diagnosed measles due to measles-like rashes on a patient's body, but when he and Dr. Süreyya Ali re-examined the patient, they diagnosed the disease as typhus (7). This diagnosis was important because typhus was often confused with diseases such as measles and malaria due to its symptoms. After the end of the war, his new post was the Turkish Healing Home Association9, which was established in April 1913 in Weisbaden, Germany, with the appointment of Wieting Pasha (7).

### World War I (1914-1918) and Vaccination in the Third Army

At the outbreak of the First World War, Dr. Tevfik Salim was appointed as a consultant (advisor) to the 1st Corps Sanitary and Hygiene Advisor in İstanbul. Then, on August 29, 1914,

<sup>&</sup>lt;sup>2</sup> He was born in 1880. After graduating from İstanbul Faculty of Medicine, he was sent to Giessen University in Germany for specialty training. Upon his return, he worked as a faculty member at İstanbul Faculty of Medicine. He was promoted to professor. He worked as a morgue manager for fifteen years. Between 1935 and 1939, he was an MP for Erzurum and between 1939 and 1943 for Rize. In 1945, he published the book "Medicine Language Terms". In 1954, he passed away.

<sup>&</sup>lt;sup>3</sup> Since Ottoman Medicine was under the influence of French Medicine, there was a widespread view that "a physician who does not speak French cannot be a physician". Dr. Tevfik Salim and his friends were also interested in French within the framework of this view (3).

<sup>4&</sup>quot;The Military Medical School, which I entered with timid steps, was then under the rule of terror" (3).

<sup>&</sup>lt;sup>5</sup> Sultan Abdülhamit called Prof. Dr. Rieder and Prof. Dr. Deycke from Germany to improve Turkish Medicine. In 1889, they founded Gülhane (4).

<sup>&</sup>lt;sup>6</sup> He was born in 1868 in Thessaloniki. In 1891, after graduating from Mekteb-i Tibbiye-i Şahane, one of his provincial duty stations was Eskişehir. He fought against the cholera epidemic in Eskişehir. After a while, he went to Germany and continued his education. After returning to the Ottoman Empire, he worked as an internal medicine doctor at Gülhane while also teaching internal medicine. He died in 1925 after an operation for lung cancer (5).

<sup>&</sup>lt;sup>7</sup> In 1909, the military and civilian medical schools are merged in the medical school building in Haydarpaşa and named Haydarpaşa Faculty of Medicine. Cemil Pasha (Topuzlu) was elected as the head of the faculty, i.e. the dean (6).

<sup>&</sup>lt;sup>9</sup>The aim of this association, founded in Germany, was to treat Ottoman soldiers who were wounded during the First World War (7).

he was transferred to the 5<sup>th</sup> Corps in Maltepe. On January 17, 1915, he was appointed as the chief physician of the Second Army, which included the 5<sup>th</sup> Corps and the 2<sup>nd</sup> Corps in Edirne, but his duty there did not last long. He was summoned by the Ministry of War and on March 14, 1915, he was appointed as the Chief Medical Officer of the Third Army. When Dr. Tevfik Salim started his duty, there was a major typhus epidemic in the Third Army. Col. Aziz Samih İlter<sup>10</sup> (1877-1948) wrote about this epidemic in his memoirs (8):

"Typhus and febrile fever, which has widened its circulation up to the army commander, are killing many men. Long and deep trenches were dug north of Hasankale. Every day carts were constantly carrying dead bodies into them. (...) This disease, which is transmitted by lice but has no known cure, is finding victims everywhere. There were no infectious diseases specialist. left in Erzurum. Twenty-four doctors were lying sick. Our doctors were acting very sacrificially. They were willingly risking their lives without hesitation".

No matter how much the soldiers in the army were vaccinated against "emraz-ı sariye (infectious diseases)" diseases, no vaccine or treatment had yet been found for typhus, which was transmitted by lice, as Mr. Aziz Samih İlter wrote. There were several reasons for the spread of this disease in the Second Army. The first reason was the lack of any train route or sea route to the Caucasus Front. The closest route from Rumelia was through the Southeastern Anatolia region on the line of the "Baghdad Railway". There were also no motorized vehicles in the Ottoman Empire for the movement of troops from here onwards. Transportation to the Caucasus Front by sea was limited as a result of the pressure exerted by Russia in the Black Sea. What was left was a long march (9). Because it was very difficult to find beasts of burden, and the animals left over from the horses used by the commanders were needed

for supplies and ammunition. The memoirs of this long journey show us that the soldiers came into contact with a large number of civilians. 12 It is possible to imagine soldiers staying in "village rooms" 13 and soldiers staying in peasants' houses. This contact could be an indication that lice spread faster from person to person. Thus, the spread of typhus disease increased considerably. It should also be kept in mind that the Caucasus Front was opened in the winter months and typhus disease in Anatolia increased in the winter months. We can immediately think of the etuve and portable incubators that were used during this period to ensure hygiene in the fight against lice and to prevent the spread of the disease. Clothes were cleaned with steam in the oven and this way the spread of lice was prevented (12).14 The machines could not be brought to the front due to the mountainous terrain. As a result, the 3<sup>rd</sup> Army was completely ambushed and caught unawares by the "typhus" epidemic. When the situation unfolded in this way, Dr. Reşat Riza<sup>15</sup> (1877-1941), as a result of his studies on the typhus vaccine, suggested inactivating<sup>16</sup> it at 58-60 degrees (13,14). This study and suggestion enabled the first typhus vaccine in the world to be prepared by Dr. Tevfik Salim in Hasankale on March 28, 1915 (7). This vaccine was initially administered to five doctors and nine officers. The vaccine was prepared by inactivating the blood taken from the patient at the most severe stage of the disease. At this point, we should also mention the wrong and different productions of the vaccine. First, Dr. Hamit Osman, who worked at the Erzincan Range Hospital, prepared the vaccine by taking blood from patients in the "nekahet (convalescence)" period and administered it without inactivating it (15). As a result, many people became ill and some of them died. After Mr. Hamit Osman was dismissed from his post, Dr. Hamdi Suat<sup>17</sup> (1873-1936) was appointed in his place. Although Dr. Hamdi Suat obeyed Dr. Tevfik Salim's order, he inactivated the vaccine at -16 degrees Celsius for 24-48 hours in

<sup>&</sup>lt;sup>10</sup> He was born in 1877 in Erzincan. He graduated from Kuleli Military High School, War School and War Academy in 1901 with the rank of Staff Captain. During the First World War, he served as Chief of Staff of the Cavalry Corps, Deputy Division Commander and Director of the Army Operations Branch, respectively. He passed away in 1948 in Ankara

<sup>&</sup>lt;sup>11</sup> Diseases that were considered to be "diseases of the jaundice" during the First World War: Lekeli humma (spotted fever), humma-i racia (relapsing), kara humma (fever), typhus, pare typhus, cholera, dysentery, smallpox, kuṣpalazı (diptheria), measles, scarlet fever, localized inflammation. Of these diseases, smallpox had a vaccine and diptheria had a serum, but vaccines such as typhus had not yet been discovered.

<sup>&</sup>lt;sup>12</sup> For a review, see. (10).

<sup>&</sup>lt;sup>13</sup> "Village rooms, which are explained in the sense of the place where villagers gather for various meetings and the place prepared for guests to stay in the village, are accepted as architectural structures formed by the people and dwellings that cover an important place in sociocultural history." For detailed information, see. (11).

<sup>&</sup>lt;sup>14</sup> The soldiers had different solutions. They made a pile with their clothes and covered it with soil. Then they would drill holes and wait for the lice to escape out of these holes (12).

<sup>&</sup>lt;sup>15</sup> He was born in 1877 in İstanbul. He graduated from Mekteb-i Tıbbiye-i Şahane in 1899. After his graduation, he did an internship at Gülhane Practice School and Seririyati Hospital and then was appointed as Prof. Dr. Deycke's assistant and stayed at Gülhane. During his assistantship, he had the opportunity to work in areas such as internal medicine and skin clinics, pathological anatomy. In 1907, he left Gülhane and worked at the Robert Koch Institute of Infectious Diseases in Berlin. He took part in the Balkan Wars with Dr. Süleyman Numan. In 1914, he became the Director of the Directorate of Hygiene at the Sanitation Directorate. After 1918, he started to work as a freelance physician. He passed away on March 19, 1941. For detailed information, see. (13)

<sup>&</sup>lt;sup>16</sup> "Dr. Reşat Rıza's work on typhus vaccine was also respected among his colleagues, especially Dr. Tevfik (Sağlam), Dr. Abdülkadir (Noyan) and Bacteriologist Server Kamil (Tokgöz), who were going to fight against infectious diseases at the front, visited Dr. Reşat Rıza and learned about typhus vaccine before moving to their duty areas." See. (14).

<sup>&</sup>lt;sup>17</sup> Dr. Hamdi Suat (Aknar) was born in Harput in 1873. In 1899, he graduated from Mekteb-i Tibbiye-i Şahane and then went to Germany. He studied histology, anatomy and pathology in Germany. In 1933, he was appointed as chief of the pathology laboratory at Vakıf Gureba Hospital. He passed away in 1936. For detailed information, see. (16).

Erzurum, where he was initially stationed, and was successful (16,17). We can think that inactivating it in the cold was to produce vaccines more easily in the climate of the region where he was working. As a matter of fact, Dr. Reşat Rıza was in a warmer region when he made his idea. Despite these developments, since bacteria could not be produced in the laboratory environment in those years, it was necessary to use different mechanisms that could be used instead of the incubator or instead of the incubator, as a precaution against disease and epidemic. At first, bread ovens were used for this purpose, but since some of the clothes were wasted, a steam chest was later used. Dr. Tevfik Salim wrote in his "Project on the Struggle" against Infectious Diseases to be carried out in the Third Army Region in 1333" that the production of a misting chest was worth only five money and that it was important to build one in every hospital in every village center. At the same time, a cleaning house was built for the disinfection needs of the hospitals, and it was aimed to prevent an epidemic that could occur inside the hospital by ensuring that the incoming patients were first rid of lice<sup>18</sup>. In addition, the issue of migration brought about by the failures on the Caucasus Front should also be addressed within the vaccination issue. As the Third Army retreated step by step, the people of the region were migrating towards the Central Black Sea and Anatolia. For this reason, medical tents<sup>19</sup> and range hospitals were established at specified intervals. The vaccination records of each caravan arriving at these tents were checked and anyone who could not prove that they had the necessary vaccinations was vaccinated (18).20 Mr. Tevfik Salim also requested the establishment of bacteriology laboratories in cities such as Sivas, Erzincan for vaccine production.<sup>21</sup>

## Tevfik Salim and the Doctors' Communication in the Armv

Doctors communicating with each other before going to their duty stations behind the front line is very important in the fight against epidemics. Just as commanders were making op-

erational plans, doctors with microscopes and syringes in their hands were discussing what they could do to help the army survive. In addition, maintaining communication during the war was also of great importance. For example, when the first diagnosis of typhus was made during the Balkan War, General Dr. Abdüsselam, the Inspector General of the Eastern Army, confirmed the diagnosis and stated that he had seen many cases of typhus in Yemen, which shows the importance of this issue (20). Therefore, it was inevitable to examine Mr. Tevfik Salim's communication with his colleagues while writing his biography. In addition, the fact that he was aware of every development on the Caucasus Front due to his position requires us to associate him with the medical staff of the 3<sup>rd</sup> Army.

When Tevfik Salim was appointed as the Third Army Medical Inspector<sup>22</sup>, he met with Mayer<sup>23</sup>, the deputy field medical inspector general and Dr. Reşat Rıza before going to the front. The main reason for his meeting with Mayer was the general situation of the Third Army medical service. He wanted to know where and which hospitals were located and how many patients were there (20). As a result of his meeting with Dr. Reşat Rıza, Mr. Reşat gave him his opinion on the typhus vaccine and how it could be done (20). In addition, Mr. Tevfik Salim explained the information about the vaccine to the doctors one by one. Although he did not mention it in his memoirs, he realized Mr. Hamit Osman's mistake and telegraphed him to do it in the procedures he had determined (7).

Due to his duty, Mr. Tevfik Salim could not stay in one place for any period of time and went to inspect the hospitals. While inspecting the hospitals, it is obvious that his communication with the doctors and medical staff on duty would have an important place for the medical service. Because he explained how the typhus vaccine would be prepared and how the order in the hospital would be through one-to-one communication. Another point that can be mentioned is that doctors share with their colleagues or the army how they

<sup>18</sup> For existing and newly established hospitals, Dr. Tevfik Salim requested that a cleaning department be built for incoming patients. The reason for this was to prevent epidemics that could occur as a result of lice-borne diseases by having the patients cleaned before they were taken to their rooms. See. (7).

<sup>19</sup> They were established from the front line to the first range hospital and between range hospitals, at an average distance of 15-20 kilometers. There were also three main migration routes where medical stations were established. The first route was Giresun, Ordu, Samsun, Merzifon, the second was Karahisar, Koyunhisar, Niksar and Tokat, and the third was Suşehri, Zara, Sivas, Kayseri and Niğde (7).

<sup>&</sup>lt;sup>20</sup> Cholera and smallpox vaccinations were routinely administered to recruits. Vaccinations were renewed in the units located in the region where epidemics broke out. Civilians who had to leave their homes due to occupations and hunger were also tried to be protected with vaccines. From 1917 onwards, the task of combating epidemics among civilians was assigned to the army. In this period, 44.8% of the region's population was vaccinated against smallpox. Since the vaccines sent from Istanbul were not sufficient, vaccine production laboratories were established in Erzurum, and after the occupation of Erzurum, in Sivas and Merzifon. Sivas laboratory alone prepared smallpox vaccine for 1.169.810 people. These works, which were carried out under very difficult conditions during wartime, constitute one of the proud pages of our medical history (18).

<sup>&</sup>lt;sup>21</sup> In his project, Dr. Tevfik Salim wrote that there should be one bacteriology laboratory in each provincial center and stated that the number of existing laboratories was eighteen. In addition, as a result of Sivas's distance from İstanbul, he requested that a bacteriology laboratory be established in Sivas and that the necessary vaccine supply be undertaken by this laboratory. See. (19).

<sup>22</sup> The duty of the Medical Inspectorate: Day-by-day reporting of the health situation of the army on the front line, and writing to the chief medical officer of recruitment about the needs of the hospitals to be established and the military personnel. See. (21).

<sup>23</sup> Prof. Dr. Mayer: Bavarian staff doctor. Between 1913 and 1916, he served as a lieutenant colonel at the Military Medical Faculty in Munich. In peace, he served in the Medical Department of the Turkish Ministry of Defense, and during the First World War, he served as the Deputy Turkish Medical Inspectorate and Chief Physician of the 5th Turkish Army. After his return from Türkiye, he served as chief physician in the 1st Bavarian Corps. He died in 1936 when he was a lieutenant colonel (21).

overcame the difficulties they encountered behind the front lines. The most concrete example of this is Dr. Ahmet Fikri.<sup>24</sup>

Mr. Tevfik Salim in his memoirs stated the following;

"It was Dr. Ahmet Fikri, the Sivas range district surgeon, who made the biggest and most decisive revolution in the issue of disinfection in the Third Army. In 1916, this friend of ours had described a practical type of oven and proposed the use of this device, which he called the steam chest, in the army in a petition he submitted to the Chief of the Army Medical Department."

He describes the situation as follows (20). The breakage of the etuve machine, which could not be used due to difficulties, and Mr. Tevfik Salim's report to Guse, the Chief of the Army Staff, that the etuve machine that came from repair when he arrived in Erzurum was also broken, can best explain the importance of the machine designed by Mr. Ahmet Fikri. In this way, even though there was a level of communication that we cannot reach now, Mr. Tevfik Salim mentioned the lack of communication in his project written in 1917. As a precaution against this deficiency, he states that in the event of the occurrence of any one of the diseases of infectious diseases, medical officers and doctors should go to the nearest telegraph office and inform their superiors (7).

# War of Independence and Republican Period (1919-1923/1963)

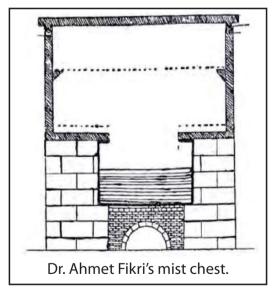
After the war, he returned to İstanbul with the order of Süleyman Numan Pasha dated November 4, 1918 and started to work as Rumelia and Istanbul Medical Inspectorate (7). Afterwards, he started teaching at the Faculty of Medicine. On October 19, 1921, he crossed to Anatolia via Inebolu and joined the War of Independence. When the project he prepared for the War of Independence was not accepted, he started to work as an internal medicine doctor at Sarı Kışla Regional Hospital in the Ankara (7). In 1923, he was appointed Chief of the Internal Diseases at İzmir Hospital and in the same year, he was appointed professor of Internal Medicine Clinic at Gülhane Hospital and at the same time became the chief physician. In 1926, he was elected as a member of the Turkish Codex<sup>26</sup> with the approval of Mustafa Kemal. In 1927, he was promoted to the rank of General and was appointed as the Chief of Medical Directorate of Armies of the Ministry of National Defense. In 1945, he played a major role in the establishment of Ankara Medical Faculty. In 1953, he contributed to the fight against tuberculosis with UNICEF and

the Turkish National Tuberculosis Control Association, and in 1955 he was appointed as the chairman of Turkey's first National Committee for Public Health Education under UNESCO. In 1959, he was elected president of the International Tuberculosis Association, of which he was a member (7). In 1972, Dr. Tevfik Salim Sağlam, who passed away in 1963, was awarded the TÜBİTAK Service Award for his contributions to Turkish medicine.

#### **Annex**



Suppl 1. Mobile etuve machine (24).

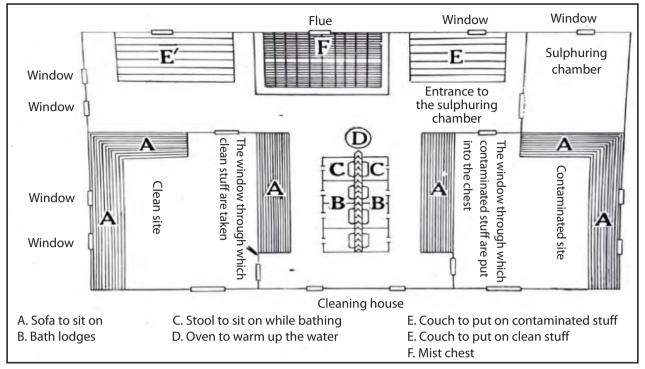


**Suppl 2.** The mist chest, which started to be used instead of an etuve during the typhus epidemic (20).

<sup>&</sup>lt;sup>24</sup> Ahmet Fikri Tüzer was born in 1878 in Şumnu. He graduated from the Military Medical School in 1905. In 1911, he was appointed as a teacher of wisdom at Kuleli Military İdadi (High School). During the 1<sup>st</sup> World War, he served in Erzurum Central-Regional Hospital. After the proclamation of the Republic, he participated in the elections for the 3<sup>rd</sup> term and became an MP. In 1942, he was appointed as the Minister of Internal Affairs. He passed away on August 17<sup>th</sup> of the same year as a result of a heart attack (22).

<sup>&</sup>lt;sup>25</sup> He was born in Germany. On April 23, 1914, he was promoted to lieutenant colonel and on the same date he joined the Ottoman Army and was appointed Chief of Staff of the 3<sup>rd</sup> Army. On December 22, 1914, he was appointed Deputy Chief of Staff of the 3<sup>rd</sup> Army. However, Hafiz Hakki Pasha dismissed Guse and replaced him with Kara Vasif. On July 19, 1917, he was appointed Chief of Staff of the Caucasus Army Group. On January 1, 1918, upon the dissolution of the Caucasus Army Group, he was assigned to the General Headquarters. On November 1, 1918, he left Türkiye (23).

<sup>&</sup>lt;sup>26</sup> Dr. Neşet Ömer, Dr. Akil Muhtar, Dr. Refik, Dr. İbrahim Ethem, Pharmacist Dr. Ziya, Mr. Mehmet Halit, Mr. Sıtkı, Pharmacy owner Hasan Rauf and Pharmacist Mustafa Nail were also elected members of this commission.



Suppl 3. Cleaning house-hamam used during the typhus epidemic (20).

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