Şerefeddin Sabuncuoğlu: A Pioneer Surgeon of the Ottoman Era

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Sharaf al-Din (Şerefeddin) Sabuncuoğlu (1385-c.1468) was an innovative surgeon and a prominent illustrator who lived in the Ottoman Empire during the 15th century. His medical treatise, Kitâb al-Jarrâhiyyât al-Khaniyya (Kitâbu’l-Cerrâhiyyetî’l-Hânîyye) [Book of Imperial Surgery; 1465], is the first illustrated surgical textbook written in Turkish. His book also provides comprehensive information about ancient Greek and Asian knowledge of medicine, including topics on gynecology, neurology, obstetrics, ophthalmology, orthopedics, pediatrics, urology, and vascular surgery, as well as Sabuncuoğlu’s own contributions to the field of surgery. Despite not being well recognized in his era, his methods were revolutionary for his time, and many remain valid even today. This review seeks to highlight Şerefeddin Sabuncuoğlu’s medical treatise from a historical perspective and to shed light on its influence on modern surgery.

**Keywords:** 15th century, cauterization, history of medicine, medical illustration, surgery, Turkey

**INTRODUCTION**

Surgery has been an important part of medical history. In ancient China, Egypt, Greece, Rome, and India, physician scholars developed different methods for treating wounds, reducing fractures, and stopping hemorrhages. Even during Europe’s “Dark Ages” between the 7th and 13th centuries, and thereafter, the Arabs and the Turks continued to practice medicine and surgery with numerous innovations and improvements (1, 2). One of the best examples raised from Anatolia (Asia Minor) at this period was Sharaf al-Din Sabuncuoğlu (Tr: Şerefeddin Sabuncuoğlu), an innovative surgeon and a great illustrator who lived in the Ottoman Empire during the 15th century (1–17).

Sabuncuoğlu’s medical treatise, Kitâb al-Jarrâhiyyât al-Khaniyya (Tr. Kitâbü’l-Cerrâhiyyetî’l-Hânîyye) [Book of Imperial Surgery; 1465], is the first illustrated surgical textbook written in Turkish. This book also contains comprehensive information about ancient Greek and Asian knowledge of medicine, including topics on gynecology, neurology, obstetrics, ophthalmology, orthopedics, pediatrics, urology, and vascular surgery, as well as Sabuncuoğlu’s own contributions to the field of surgery. Despite not being well recognized in his era, his methods were revolutionary for his time, and many remain valid even today. This review seeks to highlight Şerefeddin Sabuncuoğlu’s medical treatise from a historical perspective and to shed light on its influence on modern surgery.

**Şerefeddin Sabuncuoğlu and the Jarrâhiyyât al-Khaniyya**

Sharaf al-Din Sabuncuoğlu (1385-c.1468) was born in the wealthy provincial city of Amasya, in northern Anatolia. He was an influential surgeon and illustrator who served 14 years as a chief physician in the hospital (dar al-Shifa’) of Amasya in 1465 (5–8, 18, 19). He spoke Arabic, Persian, and Greek and studied Hippocrates, Galen of Pergamon, and Abû al-Qâsim al-Zahrâwî (Albucasis). Sabuncuoğlu authored three books: Tarjama-i Akrabadin (Tr: Terceme-i Akрабâdîn, Translation of Pharmacopoeia), Muyarrabnâmâ (Tr: Mücerrebname, Book of Experiences), and Jarrâhiyyât al-Khaniyya (Tr: Cerrâhiyyeti’l-Hânîyye, Imperial Surgery) (4, 6, 12, 14). For a long time, Arabic and Persian served as the **lingua franca** among the scholars in Anatolia, at least until the fall of the Seljuk State, at which time Mehmet I of Karaman (Tr: Karamanoğlu Mehmed Bey) made Turkish the official language. Thus, beginning in the 14th century, medical books were written in Turkish, though few of them remain (1, 3, 4).

One of the most important books of the period is the Jarrâhiyyât al-Khaniyya, Sabuncuoğlu’s first medical treatise. He included his own color illustrations of surgical techniques and medical tools. The book was written with Arabic letters in the old Oghuz Turkish and dedicated to Sultan Mehmed II, commonly known as the “Conqueror” (Tr: Fatih). The book was forgotten until 1927 when the Turkish writer and historian of literature, Ali Canip Yöntem (1887–1967), rediscovered it. At first, it was believed to be a good translation of the Kitâb al-Tasrif (The Method of Medicine) by Arab physician Abû al-Qâsim al-Zahrâwî. However, a careful analysis revealed 137 different observations and recommendations made by Sabuncuoğlu, making Jarrâhiyyât al-Khaniyya the first illustrated medical treatise of the Turkish literature (1, 2, 4–7, 9, 12–14, 18).
To our knowledge, three handwritten copies of the *Jarrāhiyyāt al-Khaniyya* (Fig. 1) (2, 5, 9, 10, 13–17, 20). To understand and learn from the book, Mujarrabnāma, the section about mental illnesses, circumcision, and cauterization, he performed surgical treatments, including gynecological, neurological, ophthalmological, orthopedic, otorhinolaryngological, pediatric, plastic, urological, thoracic and vascular procedures. Neurosurgical conditions described in his book include craniospinal trauma, dislocations, headache, hemiplegia, hydrocephalus, low back pain, and sciatica (3, 12–14).

**Şerefeddin Sabuncuoğlu’s Contributions to Surgery**

In the *Jarrāhiyyāt al-Khaniyya*, Sabuncuoğlu describes surgical treatments, including gynecological, neurological, ophthalmological, orthopedic, otorhinolaryngological, pediatric, plastic, urological, thoracic and vascular procedures. Neurosurgical conditions described in his book include craniospinal trauma, dislocations, headache, hemiplegia, hydrocephalus, low back pain, and sciatica (3, 12–14).

He also had an interest in proctology, presenting in his treatise surgical management of hemorrhoids, anal fissures, perianal abscesses, and fistulas. As a pioneer surgeon, he recommended the chest-knee position for his patients, which still is regarded as an appropriate preoperative position. Furthermore, he advised using wine and olive oil as an antiseptic to prevent surgical infections plus a mixture of mandrake root and almond oil for general anesthesia (1, 13).

In addition to his general surgical knowledge, Sabuncuoğlu also could be recognized as an empirical scientist. He describes many of his own observations in the *Jarrāhiyyāt al-Khaniyya*. In his other book, Mujarrabnāma, he explains that many novel surgical methods described in the book were initially practiced on animals before applying them to his patients. He also made a major contribution to surgery by describing complications of his surgical treatments. A strict judge of his own techniques, he performed surgical treatments on himself before documenting and illustrating them in his textbook (4, 11, 13, 14).

Sabuncuoğlu also describes various kinds of pain, including sciatica, headache, toothache, cold pain, back pain, eye pain, and throat pain. He recommends alleviating these pain conditions using medicines made from specific herbs and their products. These medicines could be administered as an ointment, cream, taffy, plaster, oral preparation, or lotion (14). In cases where this *materia medica* (medical material) did not reduce pain sufficiently, Sabuncuoğlu used cauterization, a technique of applying a hot, metal tool to surgery by describing complications of his surgical treatments.

**Figure 1. Miniature painting depicting hermaphroditism, Supplement Turc 693, National Library of France**

**Figure 2. Miniature painting depicting Castration procedure, Supplement Turc 693, National Library of France**
bodies. He describes a delicate, silver tube inserted into the bladder for urinary bladder stone removal (6, 19) (Fig. 4). Sabuncuoğlu used this tube method for other diseases, specifically in abdominal and otorhinolaryngological procedures (18). Despite not being fully recognized in his own era, the writings and innovations of Şerefeddin Sabuncuoğlu, including the first color-illustrated medical treatise in Turkish, place him among the pioneer surgeons of the 15th century.

CONCLUSION

This article describes the crucial contributions of Şerefeddin Sabuncuoğlu to the field of surgical medicine. Sabuncuoğlu’s medical textbook Jarrāḥīyyāt al-Khanīyya is a comprehensive encyclopedia of ancient Greek and Central Asian medical knowledge, as well as his own innovative techniques and treatments. Today, Sabuncuoğlu is recognized as a pioneer surgeon and great medical illustrator of the Ottoman period.

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