

## Şerefeddin Sabuncuoğlu's drawings of gynecologic instruments

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**Abstract:** The purpose of our study was to determine the contribution of Şerefeddin Sabuncuoğlu's achievement to bring gynecology to the modern knowledge level. The gynecological tools in the achievement of Şerefeddin Sabuncuoğlu, who is the late period representative of classical medical paradigm, are examined in connection with the achievement of Zahravi, which belongs to the classical medical literature. It was determined that in the long time interval from Zahravi to Sabuncuoğlu a limited advancement occurred in medical knowledge, and that the differences between the achievements of the 2 doctors are important for reflecting the development between the 2 periods.

**Key words:** History of medicine, Şerefeddin Sabuncuoğlu, Cerrahiyyetu'l Haniyye

### Şerefeddin Sabuncuoğlu'nun jinekoobstetrik alet çizimleri

**Özet:** Çalışmamız günümüzde bir uzmanlık dalı olan kadın hastalıkları ve doğum hekimliğinin çağdaş bilgi düzeyine erişimine Sabuncuoğlu'nun eserinin etkisini belirleme amacını taşımaktadır. Klasik tıp paradigmasının geç dönem temsilcisi Sabuncuoğlu'nun eserinde bulunan kadın hastalıkları ve doğumla ilgili kullanılan aletler klasik tıp literatürüne ait Zahravi'nin eseriyle bağlantılı olarak irdelenmiştir. Zahravi'nin döneminden Sabuncuoğlu'nun dönemine kadar geçen uzun dönemde tıbbi özgü bilgi birikiminde sınırlı bir artış olduğu, her iki hekimin eserleri arasındaki farkların, dönemleri arasındaki ilerlemeyi yansıtmak açısından önemli olduğu belirlenmiştir.

**Anahtar sözcükler:** Tıp tarihi, Şerefeddin Sabuncuoğlu, Cerrahiyyetu'l Haniyye

### Introduction

Gynecology and obstetrics, which are among the main specialty programs of modern medicine, had progressed distinctly in the early steps of medical evolution, and they had been united under the same specialties (1,2). Medicine works to protect health as well as to diagnose and treat diseases (1,2). Although the scope of medicine is very wide and becoming even wider now, some physiological and pathological processes of human body were not studied under medical issues in the past (3,4). That was true for pregnancy and delivery until recently (2-6). As long as these processes proceeded normally, medical doctors did not intervene, the pregnancy was not subject to monitoring, and the midwife's help in delivery consisted only of supervision of the delivery, cutting of the cord between the mother and the baby, and wrapping the baby (3,5).

Therapeutic practices have been carried out by medical-internal way with giving prepared drugs via oral, parenteral, or a different way or surgical-external processes performed with different

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instruments, mainly scalpels and cauteries through the ages (7-10). The instruments have been utilized in both main categories (3,4,9,11). For medical treatments, instruments such as mortar, spatula, mixing table, tablet mold, balance, spoon, and filter have been utilized related to the drugs in the forms of powder, poultice, tablet, and solution prepared from herbal and animal materials or minerals (7,9,11,12). In surgical treatments, surgical instruments designed and produced for cutting, drilling, cauterization, exploring, wound care, and suturing processes have been used (4,8,11,13,14).

Historically, the use of the instruments containing metals started in Anatolia (8). The instruments used in ancient times were generally made of cheaper materials such as iron, steel, copper, lead, tin, or tin (8). Although some of these instruments have been preserved, most of them have disappeared because of oxidation (8,15). Studying of historical medical works makes it possible to determine which of the antique instruments found were what kind of medical tool (8,10,15). For this reason, medical writings including the drawings of medical instruments are particularly valuable (13,14,16). The first work presenting surgical instruments with drawings is the book by Zahravi (936-1013) named at Tasrif (the Method of Medicine) (13,17).

In the current study we have reviewed the drawings of the surgical instruments used for gynecological-obstetrical procedures mentioned in the works of an important author in surgery from Islamic medicine, Şerefeddin Sabuncuoğlu's (1385-1468) book, Cerrahiyyetu'l Haniyye (Imperial Surgery) (14).

The main references of this article are the edition of Spink and Lewis of at Tasrif containing the original Arabic copy and English translation of the text (13) and İlter Uzel's comprehensive work on Cerrahiyyetu'l Haniyye (14). In these references, there are drawings of Zahravi that appeared in the prints of Huntington and Marsh of at Tasrif and drawings of Sabuncuoğlu appeared in the prints of Paris and Millet of Cerrahiyyetu'l Haniyye (13,14). At Tasrif and Cerrahiyyetu'l Haniyye are the books containing the drawings of the topics explained, the procedures, and the instruments mentioned (14). Sabuncuoğlu's book can be described as an extended translation of Zahravi's work in aspect of the contents. Having a need to develop further a perfect text and being able

to do this in an era when there was a valid tradition of repeating the master's saying without any changes indicate Sabuncuoğlu's surgical knowledge besides his elevated level of scientific courage (14).

Sabuncuoğlu adopted the systematic in the Zahravi's work and placed 10 chapters about women's diseases and childbirth in Cerrahiyyetu'l Haniyye. One of them is the 39<sup>th</sup> section placed in the first volume which includes cauterization in uterine diseases and does not contain drawings. Nine sections placed in the second chapter are listed as follows:

70<sup>th</sup> Section is about hermaphroditism and contains one miniature painting.

71<sup>st</sup> Section is about clitoridectomy

72<sup>nd</sup> Section is about the treatment of the children with vaginal occlusion or atresia. In the Paris print, there is a miniature painting and an incision drawing..

73<sup>rd</sup> Section is about the treatment of the vaginal and vulval lesions (genital warts and pustules). In the Paris print, there is a miniature painting.

74<sup>th</sup> Section is about extirpation of fibrous tissue in vagina. There is a drawing of speculum in the prints of Paris and Millet.

75<sup>th</sup> Section is about abnormal delivery.

76<sup>th</sup> Section is about the removal of the dead fetus.

77<sup>th</sup> Section is about the removal of the fetus that died in the maternal uterus. There are a miniature painting showing the use of speculum and 7 surgical instruments in the Paris print and a miniature painting and 8 surgical instruments in the Millet print.

78<sup>th</sup> Section is about the removal of the placenta (13,14). There is a miniature painting showing the use of fumigation instrument and a drawing of a surgical instrument in the Paris print, and a miniature painting of a surgical instrument in the Millet print (14).

### **The drawings of gynecological-obstetric instruments in Sabuncuoğlu's work**

In this section, we will mention the drawings showing the instruments used in the procedures related to women's diseases and childbirth placed in the Paris and Millet prints of Cerrahiyyetu'l Haniyye (13,14).

**Speculum // Levleb // Miftah-ul ferc**

The use of the speculum was mentioned in both works under the topics of carcinoma, fibroma, cervical erosion or inflammation, Bartholin abscess (Figure 1) (14).

The speculum drawn but not described in detail by Zahravi is long and has a curved handle. A probe inserted into the instrument is noticed in the Huntington drawing (13). Sabuncuoğlu did not draw the speculum with a probe, but he mentioned inserting a probe into the speculum; additionally, he noted that the patient should sit on a bifurcated bench during the operation, and drew a miniature painting of the procedure (Figure 2) (14). The single screw speculum was not clearly mentioned in any of the Sabuncuoğlu and Zahravi's works. However, there are drawings of the instrument in Zahravi's work (13).

**Thruster // Midfa**

It is an instrument used for the removal of the fetus that died in the maternal uterus. Zahravi and Sabuncuoğlu's works briefly mentioned it, but they did not explain how to use it (Figure 3) (14).

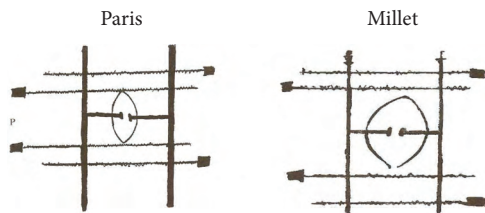


Figure 1. Speculum // Levleb // Miftah-ul ferc.

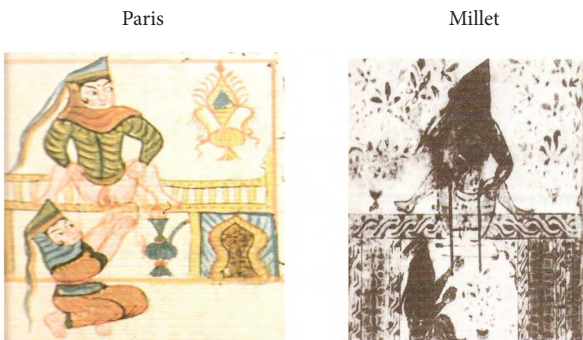


Figure 2. Use of speculum.

**Mışdah // Cephalotribe**

It was used after intrauterine death of the baby in the case delivery could not happen because of excessive size of fetus or tightness of pelvic organs. It has a grainy opening, is a good clamp for the head, and creates an acceptable pressure and removes the fetus. Although this instrument seems similar to forceps, being used for easing a living birth is out of the question (Figure 4) (14).

**Mışdah // Cephalotribe**

Although it has the same name and indications as the instrument mentioned above, it is different from that one in structure and function. It is an instrument utilized to comminute the body of the dead fetus (Figure 5) (14).

**Midwife's hand hook // Crochet // Şinnare**

It is a straight, long, strong, and sharp pointed hook. It was used to grab and remove the dead fetus (Figure 6) (14).

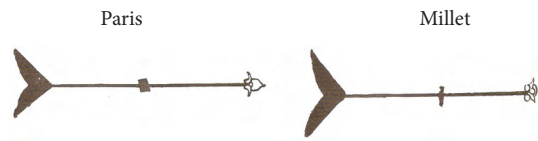


Figure 3. Thruster // Midfa.

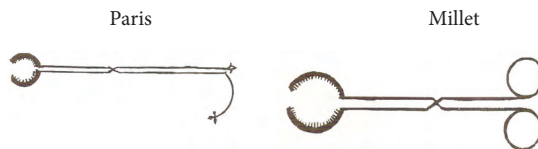


Figure 4. Mişdah// Sefalotrib.



Figure 5. Mişdah.

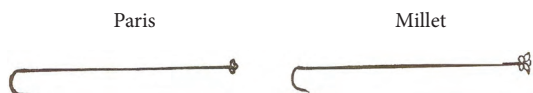


Figure 6. Midwife's hand hook // Kroşe // Şinnare.



Figure 9. Double pointed scalpel // Mibza.

### **Double heated hook**

It is another instrument used to remove the dead fetus (Figure 7) (14).

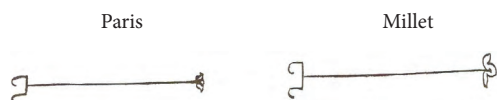


Figure 7. Double heated hook.

### **Single point (spine pointed) scalpel // Mibza şevki**

It was used for simple procedures such as draining the cerebrospinal fluid of fetus caught and died during delivery because of hydrocephalus and perforating amniotic sac in case the water did not break. The midwife held the instrument between her fingers. The drawings in Zahravi and Sabuncuoğlu's works are quite different, but the statements are similar (Figure 8) (14).



Figure 8. Single point scalpel// Mibza // Mibza şevki.

### **Double pointed scalpel// Mibza**

It was used to comminute intrauterine dead fetus (Figure 9) (14).

### **Mibhar // Instrument of Fumigation**

It was used for fumigation to open the opening of the uterus presumed to be closed, when delivery of

placenta or menstruation did not happen. During the use of it, the drug opening the external cervical os and water was put into a pot with a cover with a centered hole, boiled, and one tip of a straw was inserted through the hole in the cover of the pot and the other tip was placed into the vagina of the woman (Figure 10) (14).



Figure 10. Mibhar //instrument of Fumigation.

### **Discussion**

Zahravi's at Tasrif and Sabuncuoğlu's Cerrahiyyetu'l Haniyye books are the works prepared as guides for the people dealing with medicine and surgery. As the reader was supposed to be familiar with medicine and medical instruments, the drawings of the instruments in these works were not concerned to be as clear and detailed as for people who would never use them. In both works, what kind of instruments could be used for surgical procedures in patients having gynecological problems was defined. Between the periods in which Zahravi and Sabuncuoğlu lived, the knowledge on surgery was not remarkably enhanced. In this respect, Sabuncuoğlu's work has a great importance since it has a further level of expression including the contents and miniature drawings.

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