# A NEWLY DISCOVERED TRANSLATION OF AT 'TASRIF: "ZAHRĀVĪ 'İLM-I CERRĀH"

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The Public Library of the Manisa Province has a fairly rich collection of medical manunscripts some of which are unique copies. Two examples that may be cited in this connection are Tarvih al-Ervah by physician and poet Ahmedî (1334(?)-1413) and the Persian translation of Beyrunî's Kitab-al-Saydala<sup>2</sup>. Another unique manuscript is an abridged translation of Zahravi's work, which I intend to introduce here briefly. The famous Muslim surgeon Abulkasım Zahravî, or more precisely, Abū 'l-Qāsim Khalaf İbn 'Abbas al-Zahravī (d. 1013) lived in Cordoba, Spain, in the rothp century and wrote Kitab al-tasrif li-man 'ajiza 'an al-ta'alif in 30 volumes of which the last one is devoted to surgery and is widelyknown<sup>3</sup>. Zahravî, a remarkable physician of lofty ideals and gifted with a power for keen observation, insisted that a surgeon should be well-informed in anatomy and that operative care and post-operative follow-up were equally essential. His work cocupies an extremely important place among all surgical works of that period and some of his techniques have retained their value up until nows. In short, Zahravî combined in himself all the virtues that makes a surgeon.

A survey of Medical history would show that surgery took the longest time to develop as a branch of medicine. It is thanks to the progress made in the field of anatomy in the 15th and 16th centuries, and the development of the basic medical sciences and finally to the discoveries al-

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<sup>1</sup> In the course of my studies in Manisa in 1973, I discovered 171 medical manuscripts, 98 of which are in Arabic, 20 in Persian and 53 in Turkish. An almost complete collection of the source books of Classic Islamic Medicine exists in the Library as well as three copies of Avicenna's Canon of Medicina.

<sup>2</sup> Tarih al-Arvah (Ahmedi) The Public Library of the Province of Manisa, Registration no.: 0.1852. Kitab al Saydala, (Beyruni), Registration no.: 1789.

<sup>3</sup> This surgical work was published in Augsburg in 1519 under the title "Liber Theoricae Nec non Praticas Alsaharavii."

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#### **ILTER UZEL**

lowing asepsis and antitepsis, (which helped prevent post operative infections) that the science of surgery has reached its present state. Needless to say, the medievel surgeon, who lacked this kind of information and technique, had little chance of success because his knowledge of anatomy was limited and most of his patients because his knowledge of anatomy was limited and most of his patients would die of inadequate care in the postperative stafe<sup>4</sup>. It follows from this that few books were written on surgery. That this was so is obvious from the very small number of surgucal works among the huddreds of medical menuscripts found in the libraries<sup>5</sup>.

Accordingly, the number of surgical works written in Turkish in the 14th and 15th centuries is very small. The entire collection consists of Sherefeddin Sabuncuoglu's (1385-1465) Cerrahiyat al-Haniya (1468), Cerrah Mesud's Hulasa<sup>6</sup> (1502), Cerrahname (1490), which was introduced by Dr. Yıldırım, the Turkish version of Alâim-i Cerrahin and a surgical summary of the latter discovered by Yıldırım again<sup>7-8</sup>. Risale-i Tag ve Hacamat ve'l Fasd, which I found among the Kılıch Ali Pasha collection in the Süleymaniye Library, is probably a compilation from Section I, of Sabuncuoglu's Cerrahiyat al-Haniye<sup>9</sup>. In the course of my studies at the library I came upon Zahravî ve 'ilm Cerrah, which is the only Turkish version available of Zahravî's work<sup>10</sup>.

<sup>4</sup> See Gurt. E.: Geschichte der Chirurgie Georg Ilms Verlag. Hildesheim, 1964.

<sup>5</sup> Of the more than 150 works I studied in Manisa only three are on surgery. One is the Turkish version of At'Tasrif, the topic of this article. The other two are translations of Alâim-i Cerrahin. The number of the Arabic versions of At-Tasrif to be found in the libraries in Istanbul is not any more than five.

<sup>6</sup> Cerrahiyet al-Haniye, Sherefeddin Sabuncuoğlu. The Fatih Millet Sect. Ali Emiri Sect. no.: 79. In addition, there are two manuscripts in Paris, Bibl. Nat. Suppl. Turc. No: 693 and Istanbul University, Faculty of Medicine, Medical History Lib. No: 35.

<sup>7</sup> N. Yıldırım, Alaim-Cerrahin üzerine yeni bilgiler. The first Congress on Turco-Islamic Sciences and Technology. Vol. 2 (5), pp. 169-181.

<sup>8</sup> N. Yıldırım, Alâim-i Cerrahîn bilinmeyen bir özeti. Medical History Studies, pp. 100-104, İstanbul, 1986.

<sup>9</sup> See Süleymaniye Kılıch Ali Pasha 714/2. Although there are no drawings and illustrations in the manuscripts, the style is exactly the same as that of Cerrahiyat al-Haniye. The transcriber must have obtained his information from this work.

<sup>10</sup> Although Sabuncuoglu's Cerrahiyat al-Haniya is an exact translation of At'Tasrif, Zahravi is mentioned as the auther quoted. Thanks to the pictures showing cases of medical intervention and Sabuncuoğlu's other contributions, the work deserves to be called an original one.

### "ZAHRĂVÎ VE 'ÎLM-I CERRĂH"

## ZAHRĀVĪ VE 'ILM-I CERRAH

The manuscript whose name appears on the title page as "Haza kitab-1 Zahravi" may be described as follows: Written on paper of Anatolian origin; size of pages:  $198 \times 48$  mm; body of written matter:  $130 \times 98$  mm; 218 leaves; section headings in red ink; nestalik script with painted vowels; illustrated in blue ink; 134 illustrations and 23 charts; bound in red marble leather; well-preserved; the title page reads: "Zahrāvī ve ilm-i cerrah. Bismillahirrahmanirrahim rabbi agfir ve an yessir" Biz makali-i aşiri ihtisar itdük... The writer says that he wrote his work in the year of (?) and the he added some explanatory illustrations. Next we hear of the importance of anatomy in medicine and find a quotation from Hippocrates: "Many are known as physicians, few are true physicians, even fewer are surgeons". Like Abulkasım's Tasrif the work is divided into three main parts:

1. Part One : Key (Cauterization, pp. 1a-38a.)

2. Part Two : Bat (Incision and perforation, pp. 38a-179b.)

3. Part Three: The setting of broken and dislocated bones (pp. 180a-220b).

The introductory and concluding sections of the book are quoted below:

Zahrāvī ve ilm-i cerrāh

Bismillahirrahmanirrahim

Rabbi agfir ve an ve yessir.

Biz makali-i āşiri ihtisār itdük. Kitab-i Zahrāvi'den kim amel-i bi'l-ye di mutezammındır. Key gibi, şak gibi bat gibi, cebir gibi. Bu kitāb munkasımdur, üç bāba Musannıf eydür amel-i bi'l-yed yokdur. Bizüm zamanımızda elbetde, hatta yakındur ki amel ilmiyle eseri kesile, bāki kalmıya. Andan kakezce desinler kütübü o (?) yılda yazdum. ilerde hatasın ikā eyledüm, hatta manasını bagladum ve fayıdasını ırāg eyledüm. Amel-i bi'lyedi etibbāda yani tabibler çokdur, gele suvarı had idügi dahi sāir alātı amel.... imdi ol ziyāde beyandadur. nice nesne āna muhtacdur. Şol sebebi kim ānun içündür, bulunmaz hüsn olmakda ve işlemekde, ol bizüm zāmānımızda yeni olur niçün ānun içün sanāat uzun olurda muhtāc olur. Riyazata ilm-i teşrihde dahi azalar menfāat bulmakda dahi vazilerde dahi

### **ILTER UZEL**

kemüklerde ve sinirlerde tamarlarda dahi ne kim bunlara benzer värise yine ancılayın. Bukrāt eydür tabiblerin adı çokdur. Evit kendüler şimdi azdır husūsā ki sanāati elde, şol kimesne kim alim-i bi't-teşrīh olmasa elile amel itmekde hatası olur. Elile amel itmek ikidür bir amel oldur ki saglıga irüşdürür ve bir amel oldur ki anun ile atāb ola, ekser marazı göresin ve fikir idesin dahi korkasın ta ki cāhil kişi sizlere yolu bula korkuda nefsinüz için hazar ile dahi rızanuz yumuşaklığı ile işleyesiz, yakın yolları dutasız kim size selâmete ilede. Dahi sarb zahmet ve sovuk zahmet dahi sizün nefislerünüzü arıda. Şol nesnekim ānunile sizlere şübbe vire dahī yaramazlık vire. Calinus eydür. Yaramaz hastaya timar itmekdür zira kim agu ider yaramaz hekim işbu makālat üç bāb üzre mebnidir.

El Bāb-1 evvel: key nardur dahi key devādur dahi hadd-i mebūmdur. Mürettebdur, karından kademedek suver-i alāt-1 hadid dahi key dahi cemi nesnekim amelde āna muhtacdur. El Bāb-1 sani: Şaktadır, dahi battadur hacamettedur dahi kan aldırmaktadur. dahi cerrahattadur dahi oklar ve demir neler çıkarmaktadur. bunun küllisi mabūdur ve suveri alettir. Elbāb-1 sālis: Cebirdedür dahi kesirdedur dahi hilligdedur ilacı veyyidedur dahi ne kim bunlara benzer varısa murettebdur baştan ta ayagadek......

#### Conclusion:

... Verem-i hāz sākin ola dahī cerhi ilāc eyle neyle sālih olursa merāhim-i muhafazdan eğer fekk-i kesīrle olsa dahī izmada şetāyā-yı mütebberriyle hādis olsa sencek dahī imtisāl eyle ne kim biz emrāzda zikr itdük dahi bahr-i ... nefsünde duhūldan basitde taraf-i gırazda bahrāyet biz sana vasfittigünümüzleyn amma cāhinden ötürü yola yāhud sākim ola senün garazından ötürü ola.

## THE LINGUISTIC FEATURES OF THE TURKISH VERSION OF AT'TASRIF AND ITS DATING

Despite the name "Zahravi's Book", which appears on the title page, I thought it more appropriate to stick to the original name of the book as it appears in the text, i.e. At' Tasrif.

As we have no information regarding the date of the Turkish version and the translator, dating might be based on the calligraphic and grammatical features of the tet and on a study of vocabulary to distinguish the centuries when certain words were more frequently used tahn

456





ولسمس والجالف للغيم كبنا غنودتقن تشبث يستعايي عايلي المنتعا رأينده كالماي يكتعرا بيكف كإتكوا الكي تالتب زينكثينات إندبانتم إيلاده متقان إينادين بتبهكينا منتدكما مترمكابيكي متفكاركمون عنك كتقيدر كخاكيه كمناكي بذكي بمزكي يمكانا ينتقمنك انتج بابد محسين أيد عنوليا ليد بعقد بغوم تسالق البتن مخفنين كوعتا يلينة الكياكيدة باوقالته النت متمكننا بخابلام مكالد وجابرتم الملام متول بالملالطب ف الدبي المكرذيان مناكلة لأراجه تت أكالمخالجة وخرف كإنككف المكديمة بمكانتك وبكي لألابع فالكمجون منف تبعكذانكم فنددارك يغم تشانون بمنافا احتناد للنك Telle Sur 1 المدون أوكرد مختاج الالد بالمشتمين تلايفن محتواضنال ううないとうにいううろううう الله متاليات المجان المستلف ليتك للمنا المستالية لماليتك المجان المجان المجان المحالية المستحال المستحال المستحال المحالية محالية لمخان مكذالة متحا وشكاكنا يكتنبونهم وللنابع المخان والمخان والمقارفة والمحارفة والمحارفة والمحالي ديوفد كان كالد بالمكالي بزار ويرا بكالمنافرة المنكر ديويندك تسكمكري أية خلا تتبخ أترتج بزل تباديه こういてい いう ろう こう しき しきん いちょう دكانيكريب سكالمنا إلمك وتخصان نتعت ومستناضة سننت بولمش فبو مؤسلادة وبخ كملكرده وبملولادة كملكنه متحالج بتلك بتنكيت بكالخليف بتلقاتيه كمين كمدك آديه بخفذر آدين كندت لمخديك ازدند خشوشا كالمستنتب

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Ş. 119







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Ş. 143





91.

122 b





Ş. 159



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Ş. 148

Humangram



Ş. 161



Ş. 162

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148 a





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Ş. 173



Ş. 174

İlter Uzel



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Ş. 181



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Ş. 189

207 b: Ribat

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during others. Although we have no other copy of this translation it is not possible to know for certain whether or not is is a transcription. Calligraphic features, there fore, cannot be our starting point.

An approximate dating should, then, be guided by the grammatical features and the sort of vocabulary used. My primary source here was Eski Türkiye Türkçesi by Prof. Dr. Faruk K. Timurtaş, where he poirts out the common grammatical features of the 15 th century works and presents a glossary of 15 th century vocabulary<sup>11</sup>. The examples quoted from the Turkish version of Zahravi's work have been selected from the vocabulary and grammatical features that also occur in other 15th century texts. Similar features and words have not been included.

## THE TURKISH VERSION OF A'T-TASRIF AND ITS GENERAL CHARACTERISTICS

Some words contain "i", which is now pronounced as "e"<sup>12</sup>. (Irişdürür, Z.T.\* p. 2, l. 6, vire, Z.T. p. 9, l. 11; ider, Z.T. p. 3, l. 2) The "e" in these words was dropped and became "i".

Some words are found to have been rounded because of the labial consonants "b, m, p"<sup>13</sup> (Kemük, Z.T. p. 2, l. 2).

The vowels in some words that were used in 15th century Turkish are round. Vowel harmony came into being in later centuries<sup>14</sup>. (Kendü, Z.T. p. 2, l. 4).

The word "ancılayın", which is obsolete in our day, occurs in *Hüsrev ve Şirin*, written in the 15th century<sup>15</sup>.

The second person plural optative suffix <sup>16</sup>, which appears in 15th century texts, in also found in certain words in Zahravî's Turkish version\*.

<sup>11</sup> Faruk Timurtaş, Eski Türkiye Türkçesi XV. Yüzyıl (Grammar, Texts, Glossary), second edition, Faculty of Letters, Istanbul University, Publications no.: 2157, published by the Faculty of Letters. Istanbul. 1981.

\* ZT: Zahravi's Turkish translation

<sup>12</sup> Op. cit., p. 22.

<sup>13</sup> Op. cit., p. 29.

<sup>14</sup> Op. cit., p. 30.

<sup>15</sup> Op. cit., p. 85.

<sup>16</sup> Op. cit., p. 128.

Below are some words that occur both in the translation and in 15th century works:

arit --- (arinma): ZT. p. 2, l. 11. dut ---- ZT. p. 2. s. 10. eydür -- (ZT. p. 1. l. 5; v. 2. s. 3; v. 3, s. 1.). imdi --- ZT. p. 1. l. 10. işle --- ZT. p. 2. l. 9. key ---- ZT. p. 1. l. 4. kimesne -- ZT. p. 4. l. 7. 8. ötürü --- ZT. p. 1. l. 9. şol --- <sup>17</sup> ZT. v. 2. l. 5.

These examples show that the work is not an abridged version written in the 17th century, as has been argued by Yıldırım; most probably it belongs to the 15th century <sup>18</sup>.

## A BRIEF COMPARISON BETWEEN THE TRANSLATION AND THE ORIGINAL

At at Tasrif is a comprehensive work, It is obvious that a detailed critical assessment of its translation is impossible in this brief study where I only aim to introduce its major characteristics. I shall simply cite a few examples to give a general idea regarding its relation to the original.

In the section on cauerisation, the diseases and their treatment are given in strict herarchical order<sup>19</sup>. The instruments used for cauterisation are also included without any amissions<sup>20</sup>.

No mention is made in the Manisa manuscript of the forceps for extracting from the lower jaw the root or remaining pieces of bone which we find in Part II, Chapter 31 of at Tasrif. The section un the extraction of the

17 Op. cit., pp. 278, 289, 291, 297, 301, 302, 306, 309, 310.

<sup>18</sup> See Yıldırım, XV. yüzyıla ait bir cerrahname. (Summary of doctoral dissertation), Istanbul, 1981.

<sup>19</sup> My source for the comparison was M. S. Spink and Lewis, ALBUCASIS On Surgery and Instrumets, Wellcome Institute, London 1973, which is a critical work with explanatory notes in English and Arabic.

<sup>20</sup> See Manisa 1844 pp. la.

458

root has also been left out <sup>21</sup>. The forceps <sup>22</sup> and files <sup>23</sup> which were used to break off or scrape supernumerary teeth and which are mentioned in Chapter 32 of the same Section are again missing from the Manisa translation.

The information which appears in Chapter 33 of At'Tasrif on the fastening of the teeth with gold wires is given in a very confusing manner<sup>24</sup>. Moreover, the instrument used in the treatment of tonsilar abscesses does not appear in the Manisa version<sup>25</sup>. The tonsillotome and the instrument used for the removal of uvular tumaurs, however, appear in the translation<sup>26</sup>.

The parts in Section 3, Chapter 86 of Zahravi's work on the cure of fistulas in osteotomy are included in the Manisa version and the instruments used in the operation are described <sup>27</sup>.

Varicotomy and the instruments used have been left out 28.

The pincers for extracting arrows and the technique employed appear in the Manisa version<sup>29</sup>.

## CONCLUSION

As can be seen, the surgical text in question is a long summary in Turkish of Abul-Kasim's work. However the translation lacks the sort of systematic division into sections and chapters that we find in the original. Moreover the illustrations of some instruments which are essential for the description of surgical techniques have been left out. What is noteworthy is that the translator used an important scientific work as his source and put it into Turkish. It can be inferred from the style that the translation was made in the 15th century. There is no doubt that a more accurate dating of the translation and the discovery of the translator's identity would lead to a better understanding the extent of surgical treatment as applied by 15th century Turkish physicians.

<sup>21</sup> Spink, p. 280 and Figure: 79, p. 287.

- <sup>22</sup> Op. cit., p. 288 and Figure: 74, p. 289.
- 23 Op. cit., s. 288, Figure: 75, p. 289.
- 24 See Manisa 1844, p. 70b and Spink, p. 292 and Figure: 76.
- 25 Spink, p. 300.
- <sup>26</sup> See Manisa 1844, p. 70a and Spink p. 300 and Figures 77 and 78.
- <sup>27</sup> Manisa 1844-155a.
- 28 Spink, p. 594; Figure: 176.
- 29 See Manisa 1844 p. 161 and Spink, p. 608 and Figure: 178.