

Fragments on “Diseases of the Kidneys, Urinary Tract, and Others” quoted from Archigenes in Rhazes’ *Kitāb al-Hāwī fī al-Ṭibb/Liber Continens*

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Abstract

Objective: *Kitāb al-Hāwī fī al-Ṭibb*, also known as *Liber Continens*, is one of the most renowned and influential works of the Eastern and Western world written during the medieval times. Written by Abū Bakr Muḥammad b. Zakariyyā al-Rāzī (AD 865-925), who is known as Rhazes in the Western world, *Kitāb al-Hāwī fī al-Ṭibb* has great importance for the history of medicine. Indeed, it contains many valuable quotations from other ancient authors whose works could not endure the present day and Rhazes’ own comments on them. The purpose of this study is to present the fragments of Rhazes’ *Kitāb al-Hāwī fī al-Ṭibb* with quotes from the different works of Archigenes of Apamea, a famous physician living in Rome at the time of emperor Trajan (AD 98-117), in English. The quotes and comments deal with diseases of the kidney, urinary tract, and other related topics.

Materials and Methods: The tenth book of *Kitāb al-Hāwī* entitled *fī amrāḍ al-kulā wa majārī al-bawl wa ghayrihā* is on diseases of the kidneys, urinary tract, and others. First, quotations from Archigenes were identified in Arabic and Latin texts of *al-Hāwī*. Then, these fragments were compared with each other and translated into English.

Results: The fragments from Archigenes contains subjects such as kidney pain, hematuria, kidney stones, diabetes, and probable gonorrhea.

Conclusion: The fragments recorded in *Kitāb al-Hāwī/Liber Continens* on diseases of the urogenital system and written by Archigenes of Apamea are discussed and brought to English literature, to the best of our knowledge, for the first time, through this limited study.

Keywords: Archigenes, Rhazes, *Liber Continens*, nephrology, urology, history of medicine

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INTRODUCTION

Abū Bakr Muḥammad b. Zakariyyā al-Rāzī (AD 865-925) (Figure 1) (1), known as Rhazes in the West, is one of the most significant physicians and philosophers of the Medieval Ages and the Golden Age of Islam. He is said to have written more than 200 works, mostly on medicine (2). One of his most important treatises is *Kitāb al-Hāwī fī al-Ṭibb*, a posthumous work compiled by his pupils from Rhazes’ own notes (3). This book is composed of extracted ideas from many other authors alongside Rhazes’ comments on them. It was translated into Latin

by Faraj ibn Salem (Farraguth) in AD 1279 and printed at Brescia in AD 1486 (4). *Kitāb al-Hāwī fī al-Ṭibb* influenced both Eastern and Western medicine. Moreover, it is also of great importance for medical history, most particularly because it contains quotations from the works of some authors whose texts have not endured the current times (4). One such author is Archigenes, a significant physician of the Greco-Roman period (5).

Archigenes of Apamea was a student of Claudius Agathinus of Sparta, the founder of the Eclectic (or Episynthetic)



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ic) school of medicine. Archigenes flourished in Rome during the reign of the emperor Trajan (AD 98-117) and died at the age of 63 (6, 7). As an eclecticist, he closely followed Hippocrates' idea of dyscrasia where hot, cold, moist, and dry are the causes of dis-

ease (6). Archigenes distinguished four stages in the course of the disease: ἀρχή (archē: beginning), ἀκμή (akmē: culminating point), παρακμή (parakmē: decline), and ἀνεις (anesis: decay). He also classified fevers into some categories: κατόξεις (katoxeis: acute), ὀξεῖς (oxeis: severe), χρόνιοι (chronioi: chronic), and βραχυχρόνιοι (brachychronioi: of brief duration) (7). Archigenes was influenced by pneumatists, and he wrote an important treatise on pulse (6). His theory was the most detailed one of the ancient times (7), and some of the terms he created are still used today, such as double hammer pulse (6).

Gurtl (8) says Archigenes' writings have been preserved only as fragments in the works of Caelius Aurelianus, Galen, Oribasius, and Aetius. The fragments are partly pharmacological in content but also contain pathological content such as the following: *Περὶ τόπων πεπονθότων* (*Peri topōn peponthotōn*) on the diseases of individual organs, three books; *Περὶ τῶν ἐν τοῖς νόσοις καιρῶν* (*Peri tōn en tois nosois kairōn*) on the periods of disease, two books; and *Περὶ τῶν χρονίων παθολογικῶν* (*Peri tōn chroniōn pathognōmicōn*) on the indicators for the stages of chronic diseases.

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Figure 1. Rhazes (al-Rāzī) (AD 865-925) (1)

Main Points

- Abū Bakr Muḥammad b. Zakariyyā al-Rāzī's (Rhazes') *Kitāb al-Ḥawī/Liber Continens* has great importance for the history of medicine because it contains many valuable quotations from other ancient authors whose works could not endure the present day and Rhazes' own comments on them.
- *Kitāb al-Ḥawī fi al-Ṭibb* has quotes on kidney pain, hematuria, kidney stones, diabetes, and probable gonorrhea from the different works of Archigenes of Apamea, a famous physician of the Greco-Roman period.
- To the best of our knowledge, the fragments of Archigenes on diseases of the urogenital system recorded in *Kitāb al-Ḥawī/Liber Continens* are discussed through this limited study for the first time in English language.



Figure 2. *Liber Continens* in Latin, printed in Venice, Italy, in 1529 (11)

Sezgin (5) says the works of Archigenes seem to have spread to the Arabs in the 9th century, but the earliest Arabian physicians probably only knew him through the citations in their sources. Sezgin (5) lists the Arabic names of works belonging to Archigenes as follows:

- ✓ *Kitāb al-Adwā' al-muzmina* (περί χρονίων παθογνωμικών? [*Peri chroniōn pathognōmicōn*]) quoted in *al-Hāwī* I, VI;
- ✓ *Kitāb al-Asqām (al-Amrād) al-muzmina* (?=θεραπευτικά των οξέων και χρονίων παθών [*Therapeutica tōn oxēōn kai chroniōn pathōn*]) on chronic diseases, quoted in *al-Hāwī* VI, VII, VIII, X;
- ✓ *Kitāb fī l-Qay' bi l-kharbaq*, on treatment with hellebore as an emetic, quoted in *al-Hāwī* VI;
- ✓ *Awjā' al-kulā*, on kidney pains, quoted in *al-Hāwī* X;
- ✓ *Kitāb al-Kunnash*, according to Al-Ya'qūbī, it includes "the definition of the body";
- ✓ Archigenes' works may also include *Kitāb Ṭabī'at al-insān*, reported by Ibn Abī Uṣaybi'a, I; *Kitāb al-Asqām al-arḥām wa 'ilājihā*, reported by Ibn Abī Uṣaybi'a, I; and *Kitāb fī al-niqrīs*, on gout, reported by Ibn Abī Uṣaybi'a, I.

MATERIALS AND METHODS

The 10th book of *al-Hāwī*, titled as *fī amrād al-kulā wa majārī al-bawl wa ghayrihā* (9)/*de dispositionibus renum et vesice et aliquāliter veretri tractans continet tractatus tres* (10) and *de dispositionibus ani vulve testiculorum et veretri et de ruptura tractans amplectitur tractatus tres* (10) (Latin edition, 1509, Book 23 and 24 [10]; Latin edition, 1529, Book 10 and 11 [Figure 2] [11]), deals with diseases related to the kidneys, urinary tract, and others. First, the quotations from Archigenes were identified in this book using both the Arabic and Latin texts (Table 1), then these fragments were compared with each other and translated into English using the Arabic text.

RESULTS

There are actually six quotations from Archigenes in the tenth book of *al-Hāwī*. Five of them are related to the urinary system, and the last is related to the genitals. Rhazes refers to Archigenes in the tenth book of *al-Hāwī* as "Arkāghānīs" and "Arjī-jānīs" or in Latin text as "Archagenisius," "Archaganisius," and "Arcagenisius." Moreover, in one chapter of *al-Hāwī*, Rhazes mentioned Archigenes' two works, thereby informing us that they were translated to Arabic. The first of them is *Awjā' al-kulā*, and the other is *al-Amrād al-muzmina*.

Table 1. Rhazes' quotations from Archigenes on urogenital subjects in Arabic and Latin languages in *Kitāb al-Hāwī fī al-Ṭibb/Liber Continens* (9, 10)

Rhazes- <i>Liber Continens</i>	Abū Bakr Muḥammad b. Zakariyyā al-Rāzī - <i>Kitāb al-Hāwī fī al-Ṭibb</i> أبو بكر محمد بن زكريا الرازي — كتاب الحاوي في الطب
"Archagenisius dixit: nocet dolori renum iter superabundans equitatio, aqua frigida, cibaria grossa et vinum forte." (10, f.248v)	أركاغانيس في أوجاع الكلى: إنه يضرها المشي الكثير والكوب والماء البارد والأطعمة الغليظة والشراب الصريف، قال: والعدس المقشر ينقي الكلى (9, p.48-9).
"Archagenisius dixit: si accidit mictus sanguinis ex percussione super dorsum: erit de vena de renibus." (10, f.239v)	أركاغانيس: إن حدث بول الدم من ضربة على الظهر فذلك لأن عرقاً في الكلى تصدع، فافصده أولاً وضمد الظهر بأدوية مبردة قوية كأضمدة المعدة (9, p.64).
"Archagenisius dixit: si accidit mictus sanguinis ex percussione super dorsum: minue patientem in primo: et emplastra eum super dorsum cum medicis infri(gi)datis et confortativis: sic sunt empl(astr)a stomachi." (10, f.241v)	أركاغانيس في الأمراض المزمنة: العقارب متى أكلت مشوية فتت الحصى وذلك يدل على أنه لا ينبغي أن يستقصى حرقها. قال: وأجنحة الإوز إذا أحرقت وسقي رمادها فتت الحصى. قال: واللوز المر يفت الحصى والفريون يفتها والصمغ المر يفتتها ودمعته قضبان الكرم وبول الخنزير وأصل الكبر والرازيانج وحب الخروع ولسان الحمل والفراشيون وأصل العوسج والناخعة وهذا أجمع يفت الحصى (9, p.137).
"Diasco. dixit: calamus aromaticus provocat urinam modice." (10, f.264r)	أرجحانيس: قصب الذريرة يدر البول (9, p.174).
"Archaganisius alias agarisius de dyaria urinae: mitiganda est ei sitis: emplastrandus stomachus cum empl(astr)is frigidis: et attrahantur humiditates ad exterius cum medicinis calidis potentibus et arena calida et balneo et aqua cum sale." (10, f.247r)	أركاغانيس في ذرب البول؛ قال يسكن عطشه وتضمد معدته بأضمدة باردة وتجذب رطوباته إلى خارج بالأدوية الحارة القوية والرمال الحار والحمام وبماء الثلج (9, p.207).
"Archagenisius in libro ipsius de morbis cronicis ad fluxum spermatis: patiens frequenter debet uti cibariis grossis ad corroborandum corpus: quoniam corroborato corpore ipsius cessabit morbus: et ventosa fiat postea in loco dorsi et lumbis: et fricentur loca ventosae cum sale post finem: deinde fiant medicinae rubricativae in quibus libet quinque diebus super lumbos." (10, f.266v)	أركاغانيس في كتابه في الأمراض المزمنة؛ لسيلان المني: ألزموه الأطعمة الغليظة وقبوا بدنه فإذا قوي بدنه انقطع عنه ذلك وحجموه بعد في الكاهل والقطن ودلكوا موضع الحجاماة بالملح بعد الفراغ ثم استعملوا الأدوية المحمرة في كل «خمس» أيام على القطن (9, p.272-3).

Quotation 1 is an excerpt from *Awjā' al-kulā*. It is found in a Latin text without a book title.

Archigenes on Kidney Pains: excessive walking, riding a horse, cold water, rough foods and undiluted wine are harmful. He said that peeled lentils clean the kidneys [The last sentence does not appear in Latin text, but only in Arabic] (9, p48-9; 10, f.248v).

Quotation 2 explains the cause and the treatment of hematuria, occurring after a blow to the back.

Archigenes: if hematuria occurs because of the blow on the back, its cause is a ruptured blood vessel in the kidneys. In that case, first take blood and then bandage the back with strong cooling and invigorative medicaments like bandages of stomach (9, p64; 10, f.239v,241v).

Quotation 3 was found in *al-Amrāḍ al-muzmina*. It gives a short list of medicaments, which break the kidney stones into pieces.

Archigenes on Chronic Diseases: when scorpions are eaten roasted, they break the kidney stones into pieces and this fact signifies that scorpions should not be burned out. He said that when the wings of goose are burned and then given to [the patient] to drink, they break the kidney stone into pieces. He said that bitter almond breaks the kidney stone into pieces. Gum euphorbium breaks the kidney stone into pieces. Gum of myrrh breaks the kidney stone into pieces. Tear drops of twigs of grapevine, urine of boar, root of caper, fennel, seed of castor-oil plant, the greater plantain, horehound, root of boxthorn, ajowan seed, all of them break the kidney stone into pieces (9, p137; 10, f.260v).

Quotation 4 is very brief and explains that sweet flag (*Calamus aromaticus*) is diuretic. However, this text appears in Latin as a quotation from Dioscorides (10, f.264r): "*Archigenes: sweet flag promotes the discharge of urine*" (9, p174).

Quotation 5 is related to diabetes, which was called urinary diarrhoea by Rufus of Ephesus (12) in that era and accepted as a kidney disease.

On urinary diarrhoea Archigenes said that a patient's thirst is slaked and his stomach is bandaged with cold plasters and his humidities are drawn out by warm-strong medicaments, warm sand, bathing, and snow water [salty water] (9, p207; 10, f.247r).

Quotation 6 is from *al-Amrāḍ al-muzmina* of Archigenes and mentions a treatment method for probable gonorrhea.

On the flowing of sperm Archigenes [said] in his book, Chronic Diseases: The patient should use rough foods in order to corroborate the body. Because if his body is corroborated, the disease will cease. And then cupping should be done to the dorsal and lumbar region and after that the place of cupping should be

rubbed with salt, then rubefacient medicines should be used on the lumbar region every five days (9, p272-3; 10, f.266v).

DISCUSSION AND CONCLUSION

Here, we determined that there are a few quotations from Archigenes related to kidney diseases in Rhazes' *al-Hāwī*. However, the most important feature discovered was the names of the two books belonging to Archigenes. One of these books reveals Archigenes has a treatise dealing with kidney pains, whereas the second shows he accepted kidney stones as a chronic disease.

Methods of treatment in these quotations, such as phlebotomy, the use of cooling medicaments or bandages, or the use of warm strong medicaments to extract humidity, can be considered as evidence of Archigenes' commitment to Hippocratic views.

Although Galen mentioned Archigenes in many sections of his book *On Affected Parts* (13), he did not mention him in sections where he gave other information on kidney and bladder diseases. However, Archigenes was quoted extensively in the chapters related to diabetes, hematuria, nephrolithiasis, enuresis, and diet in the eleventh book of *Tetrabiblon* of Aetius of Amida (14). Although some information overlaps with the articles related to Aetius' writings on kidney and bladder diseases, to the best of our knowledge, there is no English translation of these chapters.

In addition, to the best of our knowledge, the fragments of Archigenes on diseases of the urogenital system recorded in *Kitāb al-Hāwī/Liber Continens* are discussed through this limited study for the first time in English language.

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