

HERBAL MEDICINE ΒΟΤΑΝΟΛΟΓΙΚΗ ΘΕΡΑΠΕΙΑ

Herbal prescriptions for the treatment of kidney diseases in the Byzantine era

This article focuses on nephrology diseases and illnesses as well as on their treatment with herbal formulations, as used in the Byzantine era and recorded in medical texts. The medical texts investigated concern the Byzantine period from the 4th to the 15th century. Various texts written in this period contributed to the evolution of medical science in both the West and East. These texts are divided in two categories: those focusing on the observation of urine (Uroscopy) with a diagnosis of kidney diseases, and those on the treatment of kidneys diseases. Our primary source material was the medical collections of Oribasius, Aetius of Amida, Alexander of Tralles, Paul of Aegina, Symeon Seth, Nikolaos Myrepsos and Ioannis Actuarius, who report nephrological diseases and herbs to manage them. In these texts, we searched for those medical prescriptions related to kidney disease and we notice the plants containing them. These studies confirmed the ongoing research and methodological approach to urine testing. Combination of herbs is also recommended for the treatment of dysuria, strangury, lithiasis and nephropathy. This research leads us to the conclusion that the content of these texts provides a detailed view of the properties of the herbs that were able to effectively manage kidney diseases and also of the level of knowledge that existed during the Byzantine era.

1. INTRODUCTION

Many medical and pharmaceutical text collections written during the Byzantine era contributed to the evolution of medical science. These are divided in two categories: those focusing on the observation of the Urine (Uroscopy) with a diagnosis of kidney diseases, and those on the treatment of kidneys diseases. This paper discusses the latter category.

2. MATERIAL AND METHOD

The texts are attributed to well-known writers such as Oribasius, Aetius of Amida, Alexander of Tralles, Symeon Seth, Nikolaos Myrepsos and Ioannis Actuarius. Others are considered fake, and in reality anonymous, such as Pseudo-Galen, Pseudo-Oribasius. Other anonymous texts have not yet been published and are awaiting researchers to publish them.

3. RESULTS

3.1. Oribasius

During the early Byzantine years, Oribasius, physician to

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E. Valiakos

Laboratory of Pharmacology, Medical School, University of Thessaly, Larissa, Greece

Φυτικά φάρμακα για τη θεραπεία ασθενειών των νεφρών κατά τη βυζαντινή εποχή

Περίληψη στο τέλος του άρθρου

Key words

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Emperor Julian,¹ wrote two collections of works based on the work of earlier physicians. First, a collection of fragments by Galen which, however, is missing; second, a large medical collection, consisting of 72 texts (Medical Collections, *Iatrike Syntage*), based on expert medical writers of the ancient world of which only 25 survive.² In this collection, Oribasius references, among others, medications that treat kidney diseases³ such as dysuria, stranguria and lithiasis. Kidney disease is recorded 30 times. These recommend the ingestion of purslane and bent decoction and preparations containing, among other ingredients, parsley, *nardostachys* and pepper. For lithiasis, he recommends the following recipes: the first consists of crocus, myrrh, camel-hay, *casia*, *nardostachys*, *costus*; the second of cucumber, celery, carrot, or water parsnip, as well as balsam-tree fruit, stones from sponges, pennyroyal, marshmallow, and in another one only Paul's betony. Oribasius always refers in his text collection to dysuria and stranguria jointly, and although he discerns one condition from the other, he recommends the same treatment for both. There is only one case of dysuria, that due to bladder infection, for which he specifically recommends oxymel (=vinegar with honey) or olive oil. Similarly, in only one case, where Oribasius provides a detailed medical analysis of stranguria, he proposes an aro-

matic concoction consisting of theriacs and cicada, adding a little nardus. In another chapter of his text, he proposes ingesting sainfoins leaves with wine to cure stranguria, while elsewhere he recommends a complex drug obtained from saxifragus, Pauls betony, parsley, nardostachys, dog mercury, rhubarb, hedge-mustard, pepper, honey and wine. In another section of the same text, he opts for curing stranguria by a fennel decoction.⁴

3.2. Aetius of Amida

Aetius of Amida lived in the mid-5th to mid-6th century AD. He was a Byzantine Greek physician and medical writer. In his work *Biblia iatrika ekkedeka*,⁵ meaning "16 Medical books", he includes not only his own medical viewpoints, but also the viewpoints and theories of other physicians. He deals with the diagnosis, prognosis, aetiology and treatment of diseases as well as with simple herbs, mineral waters, sediments, urine, bleeding, brain diseases, ear nerves and much more. For the treatment of kidney disease, Aetius refers to several of Oribasius' recipes, but also of other earlier physicians' such as Asklepiad, Philagrius, Archigenes and many others, and urges patients to use these recipes for healing. In these, for the treatment of kidney disease he recommends mostly purslane and bentgrass. He additionally reports recipes of patches or beverages or conditum, a type of spiced Byzantine wine; in some, the basic ingredient is wax, in others oxymel and in others various herbs including: *Centaurium*, globularia, rue, leek, agaric, cassia, iris, hysop, pennyroyal and squill. For lithotripsy, he mostly uses saxifrages, betony, parsley, matgrass, hedge mustard and pepper. According to Aetius, the above ingredients are most appropriate for kidney disease and lithotripsy. For lithiasis, Aetius recommends ingesting safflower, while in another recipe he recommends a decoction of fenugreek, mallow, flax or of artemisia, or of rosemary, parsley and matgrass.

Aetius also describes stranguria and he notes its symptoms as well as its treatment during pregnancy.⁶ He recommends ingesting theriacs with vinehoney, diuretic foods, or aromatic decoctions. In one recipe, he recommends ingesting dried hedgehogs' offal with wine. In another, he recommends taking psomogaros, a yet unknown ingredient, with rue leaves together with some wine, while the field eryngo is said to be most suitable for stranguria. He also notes a conditum from Oribasius and the troche of Heras,⁷ an ancient physician. He also recommends the use of a decoction made of marjoram or rue and in another recipe⁸ a medicament consisting of garlic, oil, nitrum, terebinth, cedar or olibanum and sorrel. Aetius describes dysuria along with stranguria. For their treatment, he recommends tak-

ing parsley with rue oil or simply drinking amber, summer squash, bamboos, liquorice, a mixture of opium poppy accompanied with pepper trees or lentisk, or another mixture of opium poppy, starch, egg and purslane. We have found only a few prescriptions for the treatment of dysuria. Interestingly, Aetius is the only physician to report a dysuria prescription from the ancient physician Andromachos.⁵

3.3. Alexander of Tralles

Alexander of Tralles, another distinguished Byzantine physician, lived in the 6th century AD.⁹ In his 12th volume of *Therapeutics*,¹⁰ there are few but extensive reports, describing recipes to manage kidney disease, how kidney stones are created, and the medicinal herbs recommended to treat kidney diseases, such as fennel, anise, nardus, celery, toothpick-plant, casia and others. Referring to kidney disease, he defines how the physician distinguishes colics from kidney pain. Alexander diagnoses stranguria and he recommends houndstooth. He also recommends wine and absinthe for stranguria in case of frigidity. In case of dysuria, Alexander describes the disease, and recommends taking althaea, linum, nettles, in another recipe ingesting artemisia with garlic; while in another taking stone pine, figs and starch.

3.4. Paul of Aegina

Paul of Aegina lived in the 7th century AD. He wrote a 7-volume medical encyclopaedia entitled *Epitome of Medicine*.¹¹ Thanks to its accuracy and completeness, this work, containing all medical knowledge up to his time was considered a leading reference work.¹² Paul makes a few references to kidney disease, all of which in the seventh book. He recommends the use of pennyroyal, or alkanet which although containing bitterroot, has the greatest benefit for the kidneys. He also recommends a conditum formulation. In the most extensive prescription, Paul adds 19 different herbs, including lithosperm, anise, ammi, cucumber, althaea, spignel, white pepper and others. The addition of animal ingredients such as cicada, blood sing and fish rack should not surprise us. These, blended with honey, are optimal medicine. In another report on kidney disease, he recommends taking ingredient from various plants, such as tribulum, saxiphragus, sinon, Asparagus, Pentaphyllum. In another recipe, he recommends the use of swill of Barley grains and fishes and oak followed by nutrition necessary to treat stranguria. Elsewhere, in the same book, he mentions that oenanth remedies stranguria, while purslane is equally effective. When a patient suffers from stranguria, he benefits from taking purslane root with

asparagus. Other herbs and plants that cure stranguria are sainfoins and pseudobunion. Like Alexander, Paul of Aegina describes the kidneys and cystic disorders. Paulus, however, is the first author to quote, explain and interpret lithiasis. For lithiasis, he recommends taking carpesium or a mixture of oxymel to which saxifragus, betony, bentgrass, maidenhair fern, nardostachys, etc. have been added. In his work, dysuria is reported in parallel with stranguria. Halvana and helichrysum can be ingested with wine, as can cumin, vitex and garlic. Finally, there is a recipe from Archigenes, according to which the sufferer should take medication consisting of opium poppy together with a decoction made of lentisk or sugarcane, or glycyrrhiza. He also notes that ingesting smoked caelifera benefits dysuria.

3.5. Symeon Seth

Symeon Seth,¹³ was an 11th-century Byzantine doctor. He used various medicinal herbs to create the right composition for the treatment of lithiasis. Among these, he preferred semidalis, namely semolina, as the most appropriate treatment. He mentions that according to the Indian people, garlic is used to treat stranguria, as is goose tongue. He recommends taking a potion of oil from rue, while in another recipe he reports that celery is equally effective in healing dysuria.

3.6. Nikolaos Myrepsos

Nikolaos Myrepsos wrote the extensive Dynameron, a collection of medical prescriptions, in the mid-13th century AD. In this, he reports over 155 recipes for kidney disease, 110 recipes for dysuria and stranguria, and 58 recipes for bladder stones. In total, he reports over 320 medical prescriptions for kidney diseases. This book, containing approximately 3,000 recipes, was published for the first time in April 2019 in a commented edition.¹⁴ This edition

makes Dynameron a unique source, with countless references waiting for researchers to read and investigate. The 320 recipes on kidney diseases¹⁵ are scattered throughout the text and include patches, kidney tracheas and antidotes for kidney clearance, lithiasis, stranguria and dysuria, ointments for dysuria and stranguria and beverages for bladder stones. Many different herbs are recommended for the treatment of kidney disease.¹⁶ However, the most common ones are pumpkin seed, sweet and bitter fennel, Juniper berry, lovage root, olive leaf, knotgrass herb, blackcurrant, nettle and agnus castus fruit.¹⁷

3.7. Ioannis Actuarius

As mentioned in one of his works, Ioannis Actuarius lived in the late thirteenth century AD. His work on Diagnosis¹⁸ presents findings of dysuria and provides conclusions that provide physicians with unique information for better understanding the condition and guiding its management and treatment. He makes only one reference to stranguria as an observation of women's uterine diseases.

4. DISCUSSION AND CONCLUSIONS

The above show that Byzantine authors had a plethora of recipes of plant origin for kidney diseases; constantly focusing on these and based mainly on their empirical knowledge. By attempting to cross-link that information with current knowledge and research results, we find that the plants mentioned by the Byzantines are the most effective for kidney disease. This is also confirmed by the European Medicines Agency,¹⁹ which considers these plants the most effective in treating kidney disease. We can thus conclude that Byzantine medical knowledge can still be useful and should continue to be thoroughly studied and used anew, as happened during the Renaissance.

ΠΕΡΙΛΗΨΗ

Φυτικά φάρμακα για τη θεραπεία ασθενειών των νεφρών κατά τη βυζαντινή εποχή

Η. ΒΑΛΙΑΚΟΣ

Εργαστήριο Φαρμακολογίας, Ιατρική Σχολή, Πανεπιστήμιο Θεσσαλίας, Λάρισα

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Το άρθρο εστιάζει στις νεφρολογικές παθήσεις και ασθένειες καθώς και στη θεραπεία φυτικών σκευασμάτων που χρησιμοποιήθηκαν στην ύστερη βυζαντινή εποχή και καταγράφονται σε ιατρικά κείμενα. Τα ιατρικά κείμενα που έχουν ερευνηθεί αναφέρονται στη βυζαντινή περίοδο από τον 4ο έως τον 15ο αιώνα. Σ' αυτή την περίοδο γράφθηκαν κείμενα που συνέβαλαν στην εξέλιξη της ιατρικής επιστήμης. Από αυτά ξεχώρισαν ιδιαίτερα τα κείμενα για τα ούρα, που μελετήθηκαν επισταμένα από τους γιατρούς. Αυτά τα βιβλία χωρίζονται σε δύο κατηγορίες: τα βιβλία που

επικεντρώνονται στην παρατήρηση των ούρων (την ουροσκοπία) με σκοπό τη διάγνωση των νεφρικών νόσων και τα βιβλία που αναφέρονται στη θεραπεία των ασθενειών των νεφρών. Το πρωταρχικό μας υλικό ήταν οι ιατρικές συλλογές του Ορειβάσιου, του Αετίου, του Αλέξανδρου από τις Τράλλεις, του Παύλου του Αιγινήτη, του Συμεών Σηθ, του Νικολάου Μυρεψού και του Ιωάννη Ακτουάριου, οι οποίοι αναφέρουν νεφρολογικές ασθένειες και βότανα που τις αντιμετωπίζουν. Στα κείμενα αυτά αναζητήθηκαν εκείνες οι ιατροφαρμακευτικές συνταγές οι οποίες σχετίζονται με τις νεφρολογικές παθήσεις και καταγράφηκαν τα φυτά που αυτές περιέχουν. Από τις συνταγές αυτές επιβεβαιώθηκε η σημερινή έρευνα και μεθοδολογική προσέγγιση της εξέτασης των ούρων. Στις συνταγές της βυζαντινής εποχής υπάρχουν συνδυασμοί βοτάνων για τη θεραπεία της δυσουρίας, της στραγγουρίας, της λιθίασης και της νεφροπάθειας. Η έρευνα αυτή, μας οδηγεί στο συμπέρασμα ότι το περιεχόμενο αυτών των βιβλίων προσφέρει μια λεπτομερή εικόνα της νεφρολογίας και των ιδιοτήτων των βοτάνων που ήταν σε θέση να αντιμετωπίσουν αποτελεσματικά τις νεφροπάθειες και το επίπεδο της γνώσης που υπήρχε κατά τη βυζαντινή εποχή.

Λέξεις ευρητηρίου: Βυζαντινή εποχή, Ιατρικά κείμενα, Νεφρολογικές παθήσεις, Φυτικά φάρμακα

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Corresponding author:

E. Valiakos, 38 Polykleitou street, 413 35 Larissa, Greece
e-mail: valiakos@uth.gr