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The Iatriki Biblos (Book of Medicine) by Nikolaos Ieropais. A 17th-century manuscript examined from a medical viewpoint

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The *Iatriki Biblos* (Book of Medicine) by Nikolaos Ieropais. A 17th-century manuscript examined from a medical viewpoint

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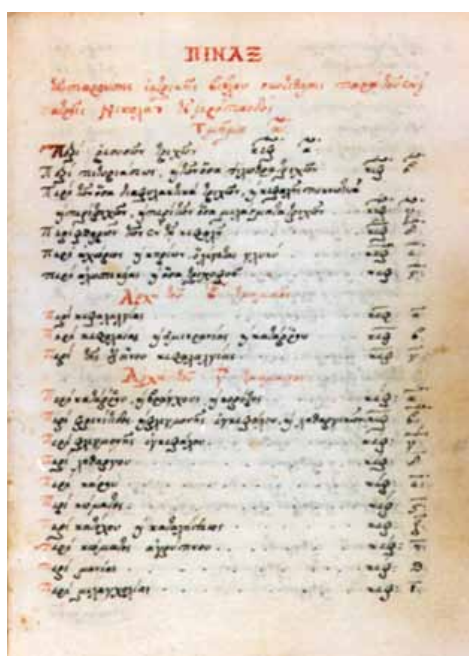


Figure 1. The first page from the Contents section of *Iatriki Biblos* (Book of Medicine) by Nikolaos Ieropais, Olympiotissa Monastery, cod.56, f. x

Abstract

The “*Iatriki Biblos*” (“Book of Medicine”) is part of codex no. 46, hosted at the library of the Olympiotissa Monastery in Ellassona, Greece. It is a medical manual that includes many diseases in the form of ailment groups, recording their aetiology, signs and symptoms on which diagnosis and the relevant therapy is based. This treatise constitutes a compendium of many Greek, Arab, Italian or French medical authors’ works. We have examined the “*Biblos*” from a medical viewpoint to find supporting evidence of:

- a. The scientific rigor of the text and its correlation with any possible theoretical basis regarding the signs and symptoms described. Although the classification system used today is different, it was possible to identify specific diseases based on the recorded signs and symptoms. Special attention was paid to the Greek terminology, because many terms are used to this day, with the same or different meanings.

- b. The influence of ancient medical authorities and the prevailing medical knowledge of Ieropais' time.
 c. The usefulness or otherwise of the listed iamata (medicaments). We studied the active substances of the proposed plants, animal tissues and minerals, with the aim of ascertaining whether they had any positive or negative effect on the described symptoms.

We discuss the problematic nature of such an investigation, as many essential details concerning their action as medicaments are absent.

In conclusion, the 17th-century Greek doctor Nikolaos Ieropais adhered to the principles of natural philosophy in medicine of his time. His references to western Renaissance doctors of the 16th century add no new knowledge. The proposed therapies have a slight general and rarely a targeted effect.

Key words: *Nikolaos Ieropais, iatrosophia, disease semiology and aetiology, 17th century greek medicine*

Introduction

The *Iatriki Biblos* by the Greek physician Nikolaos Ieropais is a 17th-century medical treatise. The manuscript we studied is part of codex 46, dated 1757, now hosted at the Olympiotissa Monastery in Elassona, Greece. The manuscript was transcribed and studied from a palaeographic and philological aspect by the philologist-palaeographer Mr. Agamemnon Tselikas^a; and this article is a prepublication of the interdisciplinary final publication of the entire work. As for an appropriate assessment of a medical text its examination from a medical perspective is also required, we undertook the present study which is divided in six sections.

1. The author

Nikolaos Ieropais was born in Velisdoni (modern Tridentro) in Agrafa, Greece, (the author is also referred to as Velisdonitis or Agrafiotis) in 1629/30^b. Nikolaos is believed to have worked and thrived as a doctor during the second half of the 17th century AD. He appears to have studied the Greek language and poetry in Karpenisi as a student of the prominent teacher Evgenios Giannoulis in the mid-17th century, possibly between 1648-1650,^c while also pursuing studies in medicine. Consequently, he studied philosophy and medicine close to the erudite hieromonk Ezekiel Stephakis,^d who was abbot of the Kaissariani Monastery in Athens, in 1675.^e In general, the available biographical data are limited. Even though he describes living

in France and Spain in the work under examination (section 3, chapter 15 “On epilepsy”), and in Rome in another of his works^f, there is no documented evidence that he studied in the West. Letters written by the doctor-philosopher and hieromonk Anastasios Gordios prove that Ieropais spent some time in Larissa working as a doctor, while the last known reference to him is as “court physician” of the Sultan in 1703.^g

2. Material and method

a. The text

«Βίβλος ιατρική συντεθεισα παρά του έν ιατροίς Νικολάου του Ίερόπαιδος» (A Book of Medicine by the physician Nikolaos Ieropais).

According to the author's statement, the *Book of Medicine* includes, as far as possible, all diseases, as a set of ailments, recording their aetiology, signs and symptoms, on which diagnosis and the relevant treatment is based.

Regarding the above, as he mentions in the preamble, he selects extracts mainly from:

- a) *Opusculum de Simplicium Medica mentorum Facultatibus* by Pietro Andrea Mattioli (1501-1577), a famous physician and botanist, who translated Dioscorides' *De materia medica*, correcting some incorrect data and adding new information. His book *Commentarii in sex libros Pedacii Dioscoridis Anazarbei de Medicamateria*, Venice 1554, enjoyed numerous editions and achieved widespread circulation, with thousands of copies having been disseminated.^h
- b) On diet and food, taken from a book on diseases by the Belgian doctor Gualterus Bruele (ValterBruel or

a Tselikas A., Ilioudis G., *Treatise on Physiology and Pathology* (in Greek), University of Thessaly, Larissa 1996, p.13-15

b Tselikas A., Ilioudis G., *Νικολάου Ίερόπαιδος έξ Αγράφων, Έκδόσεις μερικαι εις αρχάριον ιατρών*, University of Thessaly, Larissa 1997, p. ix

c Tselikas A., Ilioudis G., *Νικολάου Ίερόπαιδος έξ Αγράφων, Έκδόσεις μερικαι εις αρχάριον ιατρών*, [Some guidelines to a beginner in medicine, by Nikolaos Ieropais from Arafaf] University of Thessaly, Larissa 1997, p.ix

d Tselikas A., Ilioudis G., *ibid*, p. xi

e Kambouroglou D., *History of Athens* (in Greek), Estia 1890, v.2, p.121

f Tselikas A., Ilioudis G., *op. cit. note 1*, p.23

g Tselikas A., Ilioudis G., *op. cit note 2*, p.xii

h Saunders Murphy H., *Reforming Medicine in Sixteenth Century Nuremberg*, Dissertation, University of California, Berkeley 2012, p. 89

Walter Bruele). His book *Praxis Medicinae, theorica et empirica familiarissima* enjoyed 10 editions from 1579 to 1648.^a

- c) Jacobus Ollerius “for the rest”, the prolific French doctor Jacques Houllier (Jacobus Hollerius) (1498 or 1504 - 1562).
 - d) Oribasius (c. 320 – c. 400 AD) for “the symptoms of the ailments”.
 - e) Dioscorides (40 -90 A.D.) “for the simple remedies”.
- Many other Greek, Arab and Jewish medical writers are also mentioned, from whom he presents extracts. Almost all of them are physicians of late antiquity, such as Pliny the Elder [1st century BC] or Byzantine times, such as Alexander Trallianus [6th century AD], John Damascene [7th-8th century AD], Nicolaus Myrepsus [13th century AD] etc. Many extracts refer to Arab physicians, such as Ibn Zuhr [1094-1162] and Abû Bakr Muhammad ibn Zakariya al-Razi [854-925], as the author had acquired knowledge of the Arabic language in Athens and Larissa.^b Finally, there are several references that lack clarity as to the referenced author, where a sole name is mentioned without adequate specification, such as Apollonius (of Tyana? of Citium? Mephites?).

The names of Galen, Hippocrates and Erasistratus are mentioned only rarely, but their teachings permeate the entire text.

In addition to the above, there are many unattributed excerpts, for which no specific source of origin is mentioned.

b. The method

The text has been studied in terms of:

- The specific medical-philosophical theory to which it belongs and which supports the medical practice.
- The description of the “diseases” and whether there was any basis in the described medical observations in terms of signs and symptomatology.
- The degree of effectiveness, or otherwise, of the proposed therapeutic intervention.
- The possible reflections of certain medical advances, which, in general, had only become known to limited scientific circles in 17th-century Europe.
- The use of non-scientific traditional practices.

3. Results

Allowing for the constraints that hinder the interpretation of older texts, our results were classified in:

a Available from: <https://thesaurus.cerl.org/cgi-bin/record>

b Tselikas A., Ilioudis G., op.cit note 2, p.xi

a. Disease semiology and aetiology

1. Although the texts seem steeped in the Christian faith in various instances, with frequent invocations to divine Grace to help with healing, there is no theocratic view in the aetiology of diseases.
2. At no point is the Hippocratic theory of the four humours, namely blood, phlegm, yellow bile, and black bile, which define the eucrasia or dyscrasia of human bodies, abandoned. This theory was part of the natural philosophy of the four elements that were considered to govern the universe i.e., fire, air, water and earth, while all of them are combined with each other and are part of the four basic properties of physical bodies, the hot, the cold, the wet and the dry.
3. Each and every disease is defined as a set of symptoms that dependent on a type of imbalance caused either by extreme excess or by deficiency of any of the basic humours.
4. The signs and the consequent treatment of diseases are in accordance with the aetiology mentioned and therefore a logical conceptual system is followed. These often describe the disease adequately enough to allow it to be identified, although its name may not coincide with that used in modern medicine. Regarding infectious diseases, the association between human pathology, natural philosophy and Hippocratic theories emerges as pre-eminent.^c

Example

In section 5, chapter 16, “On the swelling of the lachrymal duct” there is a description of a swelling of the eyelid close to the “large corner of the eye”, which appears to be a description of dacryocystitis with empyema and fistula. Sometimes not only the symptoms of the disease but also the terminology coincide fully with that of modern medicine and the description leaves no room for doubt.

Example

The description of molar pregnancy (Section 21, chapter 14, “on molar pregnancies”).

6. Often the described semiology concerns more than one disease.

Example

Section 11, chapter 2, “On consumption” contains a description of a set of symptoms which correspond to a number of different diseases apart from tuberculosis, such as carcinoma, empyema,

c Hippocrates *Aëre, aquis et locis*, C. G. Kühn, Leipzig 1825, vol. I, pp. 523-25

bronchiectasis with cross-contamination or mycosal infections.

7. The nomenclature of symptoms or diseases is sometimes maintained in modern medicine, but the incomplete description does not clarify the diagnosis.

Example

In section 18 (dedicated to the kidneys and the urinary bladder), chapter 17, “On diabetes”, the author writes: “*Those who have diabetes urinate after drinking. It is also known as diarrhoea and dipsakos*”. The polyuria and polydipsia described here are symptoms common to both diabetes mellitus and diabetes insipidus. The term “diabetes” used by modern medicine is always accompanied by a specification of its type.

8. Apart from the above-described elements, which are in keeping with the prevalent natural philosophy of the period, the text also has numerous references to how astrology and the casting of nativities affect disease prognosis.

Example

Section 28 “On fevers and infectious diseases”, chapter 51 “On various issues”.

According to the description there, the severity of the pestilence is determined by the position of particular constellations. Saturn, Mars and the Sun are referred to as villainous constellations. Mercury and Venus are considered of medium gravity, while the Moon and Jupiter accompany plagues with good prognosis. Furthermore, there are also references to the casting of nativities i.e., the prognosis for the ailment is related to the constellation under which the patient was born.

b. Treatment

Given the often-incomplete description of the drug used, the relevant conclusions are mostly indicative. The text often offers a clear reference to the excerpts’ source, but Ieropais does not compare and contrast compendia of various authors. His own involvement is clearly stated in only a few passages, writing that the prescribed remedy is “recommended” or that “many were saved”. For each disease, the text generally reports a plethora of remedies not only by the various medical writers, but also by each of them individually. The list of cures sometimes occupies many pages and it is characteristic that the more difficult to explain and difficult or incurable the disease, the more cures are listed.

Example

Section 3, chapter 15 “on epilepsy” and section 20, chapter 11 “On the French disease, that is syphilis”, both have extensive entries.

1. In most cases, the administered remedies, while possibly not helpful, do not cause substantial harm, since the secondary metabolites and the active ingredients of the herbs are phenols, flavonoids, tannins, terpenoids, saponins, etc., which are produced by each plant as necessary elements for its metabolism and/or defence. Terpenoids in particular, which are the largest and most widespread group of secondary plant metabolites,^a appear to have a similar positive effect on living organisms other than plants.
2. Some harmful therapeutic instructions, which could burden the patient and/or lead to his death, are highlighted.

Examples

Phlebotomy, let alone arteriotomy, as well as the frequent use of laxatives, emetics and diuretics, serve the humoral theory, but could cause great damage to the patient’s health.

3. There are also dangerous remedies, such as many of the recommended metals.

Example

Section 2, chapter 2, “On migraine” nasal insufflation of copper sulphate, an herbicide and fungicide known as a “blue vitriol of copper”.

4. There are several remedies that show targeted action in the reported condition. We find these, of course, in the midst of a multitude of other remedies, which for the most part can have either helpful or no relevant action.

Examples

Section 2, chapter 1 “On headaches”.

The recommended “squill” (sea onion) contains the bufadienolides scillaren A and B (cardiac glycosides), which have cardiotoxic as well as diuretic effects that help ease headaches in cases of high blood pressure.^b Treatments for the majority of the ailments described, whether prescribed by all the above-mentioned medical writers or in the uncited

a Heras B. de las, Rodriguez B., Bosca L., Villar A.M., Terpenoids: Sources, Structure Elucidation and Therapeutic Potential in Inflammation, *Current Topics in Medicinal Chemistry*, 2003, 3, p. 53-67

b Souleles Ch. *Pharmacognosy*, Pegasus, Thessaloniki 2000, pp. 315-16, 341-44; Tesseromati Ch., *plants with pharmacological properties*, Spanos, Athens 2016, pp. 92-3, 168-70

sections and regardless of origin, all tend to conform to the same therapeutic idea regarding the cleansing of unwholesomeness. A number of cures which modern medicine would view as outlandish, to say the least, such as deer horns, snails, sea scorpions, ants etc. seem to originate in folk medicine or from charlatans. However, some of them contained some unexpected positive therapeutic value, the extent of which cannot be clarified.

Example

In Section 11, chapter 2 “On consumption”, the cure Dioscorides recommends is “*fresh-water crustaceans*”, while Mattioli recommends “*the flesh of snails*”. These curious animal remedies are clearly helpful to the relevant treatment, due to the zinc content in their flesh, which plays an important role in antioxidant processes and acts as an adjuvant in the healing of ulcers^a, as do the glycolic acid and allantoin^b of snail flesh. A number of the recommended remedies are also used in modern medicine, whether by processing of natural products to extract their active ingredient in pure form or by creating these ingredients or their derivatives in synthesised form.^c

Example

Section 11, chapter 1 “On reduction of blood” contains numerous recommendations for knot weed. This herb contains flavonoids, such as rutin, from which oxerutin is synthesised, which brings about a reduction in capillary permeability and stimulation of the vascular wall, resulting in a reduction of oedema in venous insufficiency. It is used in the preparation of medicines for varicose veins.

5. In addition to the above, the text also recommends incantations, often in combination with amulets to achieve or improve the therapeutic effect.

Examples

Section 17, chapter 1 “On colics”

“Take an iron hoop, fashion it into an octagon and on it inscribe either “begone, begone bile” or “sit outside, lark” and write the nature at the top. This hoop must be fashioned on the 17th or the 21st day of the lunar cycle.

a Lin P.H., Sermersheim M., Li H., Lee P., Steinberg S., Ma J., Zinc in Wound Healing Modulation, *Nutrients* 2018, 10(1) p.16

b Araújo L., Grabe-Guimarães A., Mosqueira V., Carneiro C., Silva-Barcellos N., Profile of wound healing process induced by allantoin, *Acta Cir Bras*, 2010, 25(5), p. 460-6

c Newman D., Cragg G., Snader K., Natural Products as Sources of New Drugs over the Period 1981-2002, *J. Nat. Proc.* 2003, 66(7) p. 1022-37

In Thrace they would remove the heart of a lark and tie it, still beating, to their left thigh.

Section 3, Chapter 15 “On epilepsy”.

“Take a linen cloth from a ship that had put out to sea and long since become shipwrecked and, having wrapped it around the right arm, maintain it there for seven weeks and you shall be cured”.

4. Discussion

The text of the *Iatriki Biblos* conforms to the standards of the period in which it was written, and brings together passages from ancient medical treatises, primarily of late antiquity, and western medical texts as well as elements of astrology and folk superstition.^d The juxtaposition of semiology and therapeutics from a wide range of both Greek and Western writers, and to a lesser extent of Jews and Arabs, demonstrates that this 17th century Greek doctor had access to the corresponding sources of medical knowledge, which he had studied and utilised. It remains unknown whether he possessed access to the original texts or to secondary sources, such as other medical textbooks and remedies. It is obvious, however, that he could read texts in Latin and in Arabic with ease, apart from Greek.

The studying of Western texts in parallel with the older Greek texts offered him no additional approaches to newer medical data or theories. Already from the 16th century new observations by anatomists, notably Andreas Vesalius (*De Humani Corporis Fabrica*, Basel, 1543) and in the 17th century William Harvey's description of the Physiology of blood circulation (*Exercitatio Anatomica de Motu Cordis et Sanguinis in Animalibus*, Frankfurt, 1628) began to chip away at Galen's validity. In any case, despite the significant observations and discoveries in anatomy and physiology of the 16th and 17th century, European doctors rarely strayed from established medical thought.^e Moreover, Greece, still under Ottoman rule, would not experience modern Western scientific achievements or the philosophical discussions of the Enlightenment until the mid-18th century when, according to Neophytos Vamvas, “*Observation, Experience and Reason must all come together to explain most natural phenomena*”.^f

The questions that the physicians and other scientists of the pre-experimental era were called upon to answer had a sufficient and complete explanation

d Karas G., *Oi thetikés episthímes stón éllhnikó kháro*, Daedalus Publications, Athens 1991, p.273

e Siraisi N., *History, Medicine and the Traditions of Renaissance Learning*, The University of Michigan Press 2010, p. 262-63

f Neophytos Vamvas, «Φυσική Διατριβή εις την άπάντησιν του σοφου Βενιαμίν», in Karas G. op. cit note 19, p. 97

for their time through Aristotle's natural philosophy, which was assigned to organise the humans' place within the unknown universe. Within the limits of this framework, we can now approach and understand them. Furthermore, it is true that only once this approach was judged to be insufficient was it abandoned, under the weight of questions on the origin of ailments, heredity, and the spread and transmission of infectious diseases etc.^a

While the sections of the text have been directly copied from other works, in our view, the fact itself that he selected this particular material and included it in his work constitutes a clear personal contribution. It must be noted, however, that this selective inclusion also somewhat distorts the original texts for readers (whether medical professionals or not), given that they are only able to learn and/or understand the texts of the quoted medical writers through the lens Nikolaos Ieropais himself provides. The intertextual research of anonymous nostrums and medical texts, such as the present one, could offer much to the declassification of many nostrums as texts of simple empirical folk medicine. The study of the remedies recommended by the various writers shows, as discussed above, that while there are references to dosages, crucial information, such as the type of plant and its origin, the section that must be used, when it must be harvested and in what sunlight conditions, all of which play a role in the effect of its active ingredient, is largely absent.^b These issues are only made more complex by the likelihood of further metabolism in the human body of the active substances in the secondary metabolites of the plant under examination due to biological or other factors, not to mention possible multifaceted interactions between them. Another point of difficulty is the omission in many cases of instructions for the preparation of the remedy, or of its degree of absorption/rejection relative to how it is administered. We must thus exercise caution in our observations.

The modern age has seen an increasing number of relevant scientific papers identifying the chemical composition and activity of an herb, primarily in vitro and/or in experimental laboratory animals. It is also true that many of these papers exhibit a certain "tendency" to establish a national origin for some traditional

medicine or other. However, most of the papers studied adhere to scientific standards. The plethora of remedies drawn from each of the writers quoted in the *Iatriki Biblos* indicates a degree of uncertainty. This likely stems from their relatively limited effectiveness, given that their active substances were not taken in purified form, while in certain cases a single herb may even have had conflicting substances. In any case, the fact that the remedies were compiled to such an exhaustive extent also shows, in our view, a possibility for medical practitioners of the period, who consulted this work, to experiment for themselves, attempt to improve them according to their personal judgement, or modify them depending on available materials.

With the above limitations and reservations in mind, we could tentatively posit that, in general terms, most of the examined remedies would have had a more or less positive effect, and would range from untargeted to completely targeted. In the latter case, however, it is impossible to discern the extent of their efficacy, while in rare cases, they revealed clearly harmful effects. Naturally, the suggested therapies were the result of centuries of experience and observation, handed down to the present through successive generations of doctors. In a medical profession in which therapeutic interventions were limited, it was only natural for numerous apotropaic elements to be maintained, either in the form of an expected homeopathic reaction of the remedy for the patient or in that of incantations and amulets, occasionally combined with elements of nativity casting and astrology.

5. Conclusion

The *Iatriki Biblos* of Nikolaos Ieropais is a genuinely scientific medical work of its time. The term "scientific" must not be viewed in the modern sense as scientific knowledge, given the lack of experimental control and falsifiability. Despite this, the treatise of Nikolaos Ieropais must be considered a vital contribution to the established medical knowledge of his time and demonstrates the doctor's prominent scientific and social status. The described therapy, nevertheless, still exhibits certain positive aspects. The evolution of medicine is a perpetual cognitive process, despite the abandonment of previous theories under the weight of new scientific questions and discoveries. However, newer observations cannot but depend on a host of imperfect previous observations, which encompass fragments of an as-yet unrevealed truth. Furthermore, it is good scientific practice to investigate both the successes and the failures in the evolution of medicine,

a Crombie A.C., *Augustine to Galileo*, (in Greek) vol. A, MIET 2015 pp. 23-24

b Sellami I., Maamouri E., Chahed Th., Wannas W., Kchouk M., Marzouk B. Effect of growth stage on the content and composition of the essential oil and phenolic fraction of sweet marjoram (*Origanum majorana* L.) *Industrial Crops and Products*, 2009, 30 (3) pp. 395-402

especially when said failures have served humanity for centuries. We thus observe something of a paradox. While the medicine of the pre-experimental period is incompatible with modern medicine, the manuscript

under examination nevertheless demonstrates the threads that bind the two. Medicine is a cumulative science, in which future discoveries do not exist in a vacuum.

ΠΕΡΙΛΗΨΗ

«Ιατρική Βίβλος», μια ιατρική πραγματεία του 17ου αιώνα από τον Έλληνα ιατρό Νικόλαο Ιερόπαιδα

Αλεξάνδρα Λειβαδίτου

Η Ιατρική Βίβλος περιλαμβάνεται στον κώδικα αριθμ. 46, ο οποίος απόκειται στη βιβλιοθήκη της Μονής Ολυμπωτίσσης της Ελασσόνας. Αποτελεί ένα ιατρικό εγχειρίδιο, το οποίο περιλαμβάνει μεγάλο αριθμό νοσημάτων, υπό την έννοια ποικίλων παθήσεων, περιγράφοντας την αιτιολογία, τα σημεία και τα συμπτώματά τους. Ακολουθεί η διάγνωση, βάσει της οποίας καταγράφονται οι σχετικές θεραπευτικές προτάσεις. Η εν λόγω εργασία συνιστά ένα συμπλήρωμα ιατρικών κειμένων από Έλληνες, Άραβες ή Δυτικούς ιατρικούς συγγραφείς.

Εξετάσαμε τη Βίβλο από ιατρική σκοπιά αναζητώντας ενδείξεις οι οποίες να ενισχύουν ή όχι τα εξής:

- α. την επιστημονικότητα του κειμένου και την συσχέτισή του με κάποια θεωρητική βάση ως προς τα περιγραφόμενα σημεία και συμπτώματα των νόσων. Παρ' όλον ότι η ταξινόμηση των νόσων στηρίζεται σήμερα σε διαφορετικά κριτήρια, εντούτοις ήταν δυνατή η ταυτοποίηση ορισμένων απ' αυτές από τα περιγραφόμενα σημεία και συμπτώματα. Δόθηκε ιδιαίτερη προσοχή όσον αφορά την ελληνική ορολογία, διότι πολλοί όροι χρησιμοποιούνται έως σήμερα με το ίδιο ή διαφορετικό σημασιόμορφο.
- β. την επιρροή των αρχαίων ιατρικών αυθεντιών και τις επικρατούσες ιατρικές γνώσεις στην εποχή του Ιερόπαιδος.
- γ. τη χρησιμότητα ή μη των ιαμάτων που απαριθμούνται. Μελετήσαμε τις δραστικές ουσίες των προτεινόμενων φυτών, ζωικών ιστών και μετάλλων, με σκοπό να αποκαλύψουμε εάν είχαν την όποια θετική ή αρνητική επίδραση στα περιγραφόμενα συμπτώματα. Στη συζήτηση περιγράφουμε τον προβληματικό χαρακτήρα κάθε ανάλογης έρευνας, λόγω του ότι παραλείπονται πολλές ουσιαστικές λεπτομέρειες που επηρεάζουν τη δράση τους.

Συμπερασματικά, ο Νικόλαος Ιερόπαις, ένας Έλληνας ιατρός του 17ου αιώνα, είναι προσκολλημένος στις αρχές της φυσικής φιλοσοφίας, οι οποίες καθόριζαν την ιατρική της εποχής του. Οι παραπομπές του στους Δυτικούς αναγεννησιακούς ιατρούς του 16ου αιώνα δεν προσφέρουν καμία νεωτερικότητα. Επίσης, οι προτεινόμενες θεραπείες εμφανίζουν γενικά ελαφρά αποτελεσματικότητα, ενώ σπανιότερα έχουν στοχευμένο αποτέλεσμα.

Λέξεις Κλειδιά: Νικόλαος Ιερόπαις, ιατροσόφια, αιτιολογία κα σημειολογία νοσημάτων, ελληνική ιατρική, 17ος αιώνας

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