

Remedies for kidney ailments in the “Botany Practical” (1838) by Dionysios Pyrros the Thessalian (1774-1853)

Botany Practical by Dionysios Pyrros the Thessalian

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ABSTRACT

Dionysios Pyrros the Thessalian (1774-1853), a polymath, priest, teacher and doctor, is the prototype scholar of the Balkan Enlightenment. Among his many publications, we distinguished a pharmacological treatise, “Pharmacopoeia General” (1818), which is the first written in vulgar Greek language and a medical and husbandry treatise, “Botany Practical” (1838), which includes coloured illustrations of plants drawn by the author.

The aim was to study natural prescriptions with nephrology-related pharmacological action or indications found in “Pharmacopoeia General” and “Botany Practical” and compare them in content and illustrative style with those in “de Materia Medica” by Dioscorides, as they appear in the Vienna and Neapolis manuscript copies and a modern edition in Greek by Max Wellmann, Berlin (1907).

Among the ten prescriptions based on plants in the “Pharmacopoeia General” nine were also described in the “Botany Practical”, with the same or similar indications. Ten out of twelve recipes with natural ingredients found in Pyrros’s works were also found in the ancient text. Furthermore, Pyrros follows the style of Dioscorides in referring to the plant names in different languages, including Ancient and Modern Greek, French, Italian, Turkish. However, his plant pictures were mainly original, not slavish copies. Our findings underline a still existing significance of ancient medicine and the work of Dioscorides, at least in the Greek pharmacological bibliography of the early 19th century. “Pharmakopoeia General” and “Botany practical” are hybrid products in style, content, language of the transient period when Greece was trying to balance between Western, Ancient and Oriental medical traditions.

KEYWORDS: Botany, Dioscorides Pedanius, Dionysios Pyrros the Thessalian, Pharmacology, Renal disease

Introduction

Biography. Dionysios Pyrros the Thessalian (1774-1853), a polymath, priest, teacher and doctor, is the prototype scholar of the Balkan Enlightenment and a devout Christian. During the Greek Revolution for Independence (1821) he was in ripe age and took actively part in the fight. The source of information about his life is mainly a historical autobiography, which he published in 1848 (1, 2).

His father died when he was five. Nevertheless, supported by his poor mother, he followed general studies in his birth village Kastanea (on the mountain Agrafa, which translated in English stays for “Unwritten”). As an adolescent he became a novice in the “Metamorphosis Cloister” on the Meteora cliffs and then followed Greek studies at the Meteoron School. He continued his studies in Trikki (with the teacher Stefanos Stamkos) and in Tyrnavos (with the teacher Ioannis Pezaros) both local cities of Thessaly (3, 4).

After a long journey in many places of the then Othoman Empire (Thessaly, Macedonia, “Mount Athos”, Limnos and Tenedos islands and Thrace) he came to Istanbul (Constantinople) where he worked as a private teacher and a “writer” (secretary) for the Bishop of Chalcidon Jeremias. He visited the Holly Lands and afterwards he completed his higher Greek studies (Lyceum). He studied in the Academy of Kydonies (Ayvalic; teachers Veniamin Lesvios and Gregorios Sarafis) and in the School of Chios (in Chios Island, teacher Athanasios Parios) (4).

In 1807, carrying with him recommendation letters from the local Greek nomenclature of Chios and prominent Greek scholars (Athanasios Psalidas, 1767-1829, “Kaplaneios Academy”, Ioannina), he sailed over to Italy in order to study medicine (4). During his studies in Europe, he follows his wish to see his theoretical knowledge in experimental and practical application (1, 2).

He studied in the Faculty of Medicine and Surgery at the University of Pavia (est. 1361) and stayed in Italy from 1807 to 1813. He visited many cities especially Milan, where he followed lessons in Astronomy, and Vienna.

After acquiring his diploma he returned to Greece 1813 and practiced medicine in Patra, Athens, Chalkida and finally in the capital of the Empire. Information about the forthcoming outbreak of the Greek Revolution for independence (1821) led him to flee from Istanbul (1, 2).

During the fight of independence he visited and acted in many places: we find him in Mount Athos (trying to produce gun-powder for the fight) and in Tripolis (treating the wounded of the war) (5). After the achievement of Greece’s independence he lived in Nauplion and finally settled in Athens the capital of the new state until his end (5, 6).

Ergography. In Athens he published many books and practised medicine always with great success. Dionysios Pyrros was a multifarious personality. He believed that in free states local production of paper establishes independence and human rights. However, his longstanding efforts to establish his own paper producing industry in the newly grounded Greek State were not crowned by success.

He became first president of the Medical Society of Athens (1835) and founding member of the Athens Archaeological Society (1837) (7). He wrote and published geographical atlases and numerous treatises (24 published and 4 unpublished) on Astronomy, Arithmetic, Geography, Botany, Pharmacy and Medicine (1, 2, 8). His main publications in Medicine were following: “Pharmacopoea General” (1818); “Handbook for Doctors, Practical Medicine” (1831); “Botany Practical” (1838) and the Greek translation “Pharmacopoea General of Antonio Campana” (1850) (2, 8-10).

Scope and Methodology

Among Pyrrhos's publications in Medicine, we distinguished two: "Pharmacopoea General" (1818) (9) and "Botany Practical" (1838) (10). Pharmacopoea General, published "by permission of his Holiness the Oecomenical Patriarch Kyrillos" in 1818, is the first pharmacological treatise written in vulgar Greek language in the early 19th century and includes 214 prescriptions. "Botany Practical", published 1838 in Athens, is a medical and husbandry treatise, devoted by the author to Queen Amalia of Greece (1836-1862) and includes 200 plants, accompanied all with colour illustrations drawn by the author.

The aim was to study nephrology-oriented natural prescriptions found in both the "Pharmacopoeia General" and the "Botany Practical" and compare them in content and illustrative style with those in "De Materia Medica" by Dioscorides Pedanios Anazarbeus, as they appear in the Vienna and Neapolis manuscript copies in Greek (11), its 1907 modern edition by Max Wellmann, Berlin (12) and the English translations published in 1934 by Robert Gunther, Oxford & New York (13) and in 2000 by Osbaldeston and Wood, Johannesburg (14).

Nephrology-oriented prescription means a prescription with nephrology-related pharmacological action (diuretic) or indication (dysuria, nephritis, kidney stones or sand, dropsy).

Results

"Pharmacopoea General" includes 214 prescriptions, 184 medical remedies and 30 otherwise used chemicals. Among the 184 treatment prescriptions there were 32 (17.4%) of nephrological interest (20 with chemical and 12 with natural ingredients). Among ten prescriptions based on plants nine were also described in the "Botany Practical", with similar nephrological indications.

"Botany Practical" includes 200 plants describing their use in husbandry and medicine. Among them there were 41 (20.5%) prescriptions used in medical treatment for nephrological indications.

The nephrological indications in all these prescriptions included diuretic action, dropsy (oedema), dysuria or nephritic pain and all forms of lithiasis (Table 1).

Table 1

Book	Pharmacopoea General, 1818	Botany Practical, 1838
Total entries	214 prescriptions	200 plants
Nephrological perscriptions	32/214 (17.4 %)	41/200 (20.5 %)
Dropsy; n (%)	19 (59.4)	16 (39.0)
Diuretic; n (%)	17 (53.1)	18 (43.9)
Dysuria; n (%)	10 (31.2)	17 (41.5)
Lithiasis; n (%)	12 (37.5)	2 (4.9)
Natural ingredients; n (%)	12 (37.5)	200 (100%)

Perscriptions with nephrology-related pharmacological action (diuretic) or indication (dysuria, nephritis, stones, sand, dropsy) in the books of Dionysios Pyrrhos the Thessalian (1774-1853).

Dropsy (oedema) as a therapeutic indication was found both in "Pharmacopoea General" and "Botany Practical" in more than 35% of the nephrology related prescriptions. The frequency of dropsy (oedema) was relative high compared with a mere 9.5% (40/422) found in "De Materia

Medica” by Dioskurides Pedanius (12 – 15).

Prescriptions mentioning an application as a diuretic was found in more than 40% of the nephrology related prescriptions both in “Pharmacopoea General” and “Botany Practical”. This frequency was comparable with a 32.7% (132/422) of diuretic prescriptions found in “De Materia Medica” (12 – 15).

Among the prescriptions with nephrological indication found in the ancient text there were 19 of the 41 such prescriptions in the “Botany Practical”. Similarly, ten out of twelve nephrological prescriptions with natural ingredients (ten from plants, two from animal parts) included in “Pharmacopoeia General” were found also in the ancient text (12 – 15).

In “Botany Practical”, Pyrros followed classification system of Carolus Linnaeus and the style of Dioscurides’s “De Materia Medica” in referring to the plant names in six different languages, including Ancient and Modern Greek, Latin, French, Italian and Turkish. The plant pictures included were mainly original, not slavish copies. A simple comparison of these pictures to the illustrations of “De Materia Medica” of Dioscorides is absolutely indicative for this fact (11).

Discussion

Dionysios Pyrros is a characteristic example of a polymath scholar of the 19th century. He is considered the prototype of the Balkan Enlightenment, as, in contrast with the European model, he was a devout Christian.

He was a multifarious personality, published numerous treatises on Astronomy, Arithmetics, Geography and Medicine and geographical atlases (1, 2). Among the Pyrros’s publications in Medicine, we distinguished and studied two: “Pharmacopoea General” (1818) (9) and “Botany Practical” (1838) (10).

In the above two works prescriptions of nephrological interest cover about 20% of the total number of remedies described by Pyrros. The comparison to the ancient text underlines for the early 19th century a still existing significance of ancient medicine and the work of Dioscurides, at least in the greek pharmacological bibliography. It is not surprising as Pyrros himself states that one of his sources was “De Materia Medica”.

In addition, by this comparison we easily recognize a clear change towards an increasing importance of prescriptions for diseases with dropsy or oedema in clinical practice. This might be associated either with a change in the form of practicing medicine or more probably with a real change in disease epidemiology (16).

In “Botany Practical” Pyrros is copying the style and form of Dioscorides, first, in referring to the names of the plants in many languages (i.e. Ancient and Modern Greek, Latin, French, Italian, Turkish) and, second, in including many colored plant illustrations. The plant pictures included in BP were mainly original, not slavish copies. A simple comparison of these pictures to the illustrations of “De Materia Medica” of Dioscorides is absolutely indicative for this fact (11). Besides, Pyrros was experienced in this context: during his stay in Athens in 1813, he had planted a new botanic garden with about 300 sorts of healing plants (1, 2).

In his autobiography Pyrros stresses the great significance of illustrations in a Botany textbook and states “I created my own lithography... Bavarians ... caused me a lot of trouble until I finally managed to finish, color, print and distribute it in Athens in 1838. No other Greek has ever created such a botanical textbook and all careful students were (previously) deceived studying incomplete botanical books without being able to understand and learn” (1). The above bitter reference to the

“Bavarians”, which were members of King Otto’s government, contradicts the fact that his “Botany practical’ was dedicated to the young and beautiful Queen, Amalia Queen of Greece (1832-1862).

Scholars of the European Enlightenment were all anti-establishment, with leading role in the French Revolution. At the same time, however, they sought patronage of liberal and scholarly oriented monarchs. The flattering dedication to Queen Amalia in “Botany Practical”, lets us conclude that Pyrros was attached at least in its early period to the Dynasty of Otto (1832-1862).

The books of Pyrros are hybrid products – in style, content and language – of the transitional period when Greece tried to balance between Western, Ancient and Oriental medical traditions.

REFERENCES

1. Pyrros D (1848) Περιήγησις ιστορική και Βιογραφία (Historical Tour and Biography of Dionysios Pyrros the Thessalian). Athens (in Greek)
2. Paidousis M (1973) Dionysios Pyrros the Thessalian. Introduction of the facsimile edition of Pharmakopoeia. Philips Duphar, Athens.
3. Lafazanis M (2001) Ioannis Pezaros (1749 – 1806): his biography and his correspondence. Dissertation, University of Ioannina, Greece. doi 10.12681/eadd/17742
4. Paschalis M. Kitromilides (2013) Enlightenment and Revolution: The making of modern Greece. Harvard University Press, Boston
5. Pyrros D (1837) Letter of Dionysios Pyrros the Thessalian to the noblest master of the Thessalians Athanasios Papa-Polymerou. A. Aggelidis, Athens.
6. Pournaropoulos G (1973) Medicine during the Revolution of 1821. Athens.
7. Emmanuel E (1948) History of Pharmacy. Athens (greek)
8. Varella E (1993) Pharmazeutische Handbücher im Griechenland des frühen 19. Jahrhunderts – D. Pyrrhus und F.X. Landerer. Geschichte der Pharmazie 45:49-53
9. Pyrros D (1838) Βοτανική Πρακτική (Botany Practical), Athens (in Greek)
10. Pyrros D (1818) Φαρμακοποιία γενική (Pharmacopoea general). Athens (in Greek)
11. Tselikas A (1999) Pedanius Dioscurides, De materia medica, Codex neapolitanus greacus 1, National Library of Naples. Μίλητος, Athens (Reproduced greek manuscript).
12. Wellmann M (1907-1914) Pedanii Dioscuridis Anazarbei De materia medica, Vol. I: Libri I-II, Vol. II: Libri III-IV, Vol. III (1914): Liber V, Berlin (Modern edition)
13. Gunther RT (1934) The Greek Herbal of Dioscurides: Illustrated by a Byzantine A.D. 512. Englished by John Goodyer A.D. 1655. Hafner Publishing Co, Oxford & New York (English translation)
14. Osbaldeston TA Wood RPA (2000) Dioscorides, de materia medica: a new indexed version in modern English. Ibdis Press, Johannesburg (English translation)
15. Touwaide A (2000) Drugs and hygieno-dietetic treatment. Pharmacological therapy. In: Diamantopoulos A et al. (eds) History of Hellenic Nephrology, Papazisi, Athens, pp 377-398
16. Touwaide A, De Santo NG, Bellinghieri G, Savica V (2003) Healing Renal Diseases in antiquity. Plants from Dioscorides' De materia medica with illustrations from Greek and Arabic Manuscripts (A.D. 512 – 15th cent.) 2nd edition, Editoriale Bios, Cosenza.

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