REVIEW ARTICLE



MEDICAL USE OF VEGETABLES IN THE PRACTICE OF ANCIENT DOCTORS (BASED ON THE TREATISE OF QUINTUS GARGILIUS MARTIAL MEDICINAE EX OLERIBUS ET POMIS)

DOI: 10.36740/WLek202309128

Marta J. Petryshyn¹, Halina M. Zahaiska², Oxana V. Liubimova², Veronika H. Todoshchuk²

¹VASYL STEFANYK PRECARPATHIAN NATIONAL UNIVERSITY, IVANO-FRANKIVSK, UKRAINE ²YURIY FEDKOVYCH CHERNIVTSI NATIONAL UNIVERSITY, CHERNIVTSI, UKRAINE

ABSTRACT

The aim: The aim of our study is to investigate the specifics of the use of vegetables for the prevention and treatment of diseases in the medical practice of the Roman Empire.

Materials and methods: The research material was based on the surviving fragments of the Roman writer Quintus Gargilius Martial's *Medicinae ex oleribus et pomis*. The study relied on general scientific methods of analysis and synthesis, as well as the method of contextual analysis, descriptive and interdisciplinary methods.

Conclusions: Gargilius' treatise *Medicinae ex oleribus et pomis* is a valuable source of information on the use of vegetables, herbs, fruits, and nuts for the treatment and prevention of numerous diseases. Roman doctors highly valued the therapeutic and prophylactic properties of radish, pumpkin, cucumber, celery, beetroot, cabbage, turnip, rutabaga, lettuce, onion, garlic and other vegetables, and successfully used vegetables as a medicine to strengthen the immune system, enrich the body with vitamins and minerals, as well as for the prevention and treatment of wounds and injuries in surgery, various tumors and inflammations, diseases of the gastrointestinal tract, gynecological pathologies, fever, cough, diseases of the ENT organs and skin. For medicinal purposes, the Romans used leaves, stems, roots and seeds of various vegetable crops. The results of the study suggest the possibility of exploiting the therapeutic potential of vegetables in modern medicine.

KEY WORDS: history of medicine, Gargilius, vegetables, treatment, complimentary alternative medicine

Wiad Lek. 2023;76(9):2096-2102

INTRODUCTION

Already in ancient times, people realized that vegetables, herbs and fruits are not only food that the human body should receive every day, but also a natural source of natural vitamins and essential minerals and nutrients. Eating vegetables and fruits increases the secretion of digestive glands, their enzymatic activity, and promotes better digestion of food. In addition, some vegetables contain phytoncides, which have a beneficial effect on the body. These properties of vegetables, fruits, and berries make them essential in a person's daily diet and play a significant role in the formation of immunity. In this aspect, it is important not only to refer to Latin medical texts and the experience of ancient physicians, but also to analyze the adaptation of their contribution to the history of medicine and pharmacology.

THE AIM

The aim of our study is to investigate the specifics of the use of vegetables for the prevention and treatment of diseases in the medical practice of the Roman Empire.

MATERIALS AND METHODS

The research material was based on the surviving fragments of the work of the Roman writer Quintus Gargilius Martial, known in the history of medicine as Book IV of the Medicina Plinii entitled *Medicinae ex oleribus et pomis*. (Medicines from Vegetables and Fruits) [1]. The work contains a description of the medicinal properties of 60 herbs, vegetables and fruits and in fact is the only document that attests to the existence of Roman medical literature in the third century CE.

The defining feature of the methodological basis of the history of medicine is the use of a combination of general scientific and special methods. The method of contextual analysis allows identifying and studying textual fragments, and analyzing the beneficial and medicinal properties of various vegetables. The descriptive method is necessary for the accumulation of information and further theoretical comprehension of the medicinal use of vegetables in the practice of ancient physicians. The interdisciplinary method made it possible to comprehend the interaction of the history of medicine with the basics of natural sciences and pharmacology.

REVIEW AND DISCUSSION

A review of the scientific literature shows that the study of the creative legacy of Quintus Gargilius Martial has been the subject of research by historians and philologists. The analysis has revealed that modern researchers have mostly translated Gargilius' Medicinae ex oleribus et pomis into modern languages. For example, the English translation of the work is presented in Root Tapper's doctoral dissertation [2]. In Joon Riddle's research, one can find fragments of the English translation of Gargilius' treatise and a characterization of his work as an important source of knowledge in the field of pharmacology and nutrition [3]. The issue of researching Gargilius' legacy is thoroughly explored in the investigations of Maire Brigitte. For instance, in the article 'L'esprit ou la lettre: les sources des Medicinae de Gargilius Martialis, the researcher analyzes the question of Gargilius' medical knowledge origins and sources [4]. One of Maire Brigitte's contributions is her adaptation of approximately 60 chapters of the poem into French for contemporary readers whose interests lie in plants, their history, and their usage in ancient times [5]. The importance of Gargilius for the dissemination of knowledge about the healing properties of cultivated plants is also mentioned in the collective monograph 'Greek' and 'Roman' in Latin Medical Texts. Studies in Cultural Change and Exchange in Ancient Medicine [6].

The issue of reception of medical advice on the use of herbs, vegetables, and fruits as a means of alleviating or curing a disease, proper nutrition, and maintaining health based on Gargilius' work is presented in the study by Brodersen Kai [7]. The use of thyme as a snake repellent according to Gargilius' poem is partially discussed in the article by Arsenio Ferraces Rodríguez [8]. The attention of researchers of Roman literature of the late empire and historians of medicine is drawn to the translation of Gargilius' treatise into Polish by Tatiana Krynicka (Krynicka). T. Krynicka's work is not only the

second (after the French) complete translation of the ancient author's work into modern languages, but also an encyclopedia on the prevention and treatment of various injuries and diseases with the gifts of nature. Furthermore, in the preface, the researcher thoroughly analyzes the life and work of Gargilius, his knowledge of ancient medicine, and the bibliography of his work, which allows her to draw a conclusion about the author's critical and polemical attitude to source texts [9]. In the context of our study, it is also worth noting a thorough review of the translation of Gargilius' treatise into Polish by Magdalena Stuligrosz [10]. Selected recipes for using vegetables and fruits based on Gargilius' treatise are presented in the popular science investigation by Oleksiy Kovalenko [11]. The analysis of the vocabulary and stylistic devices of Gargilius' text is the focus of articles by Maire Brigitte [12] and Dimitrios Mantzilas [13]. Recognizing the earlier works, we believe that the issues of generalizing the experience of practical use of vegetables in the prevention and treatment of various diseases and injuries, and maintaining health require additional coverage, since the principles of modern naturopathy and nutrition are based on the centuries-old experience of ancestors, and the study of the past of medicine gives an idea of the gradual development of skills in the treatment and prevention of diseases and understanding of the functions of the human body.

In antiquity, doctors have already noticed that the consumption of vegetables, which are an important source of vitamins, mineral salts, organic acids, pectin substances, dietary fiber, and phytoncides, had a beneficial effect on the human body, enhanced the secretion of the gastrointestinal glands, increased the digestibility of food, and strengthened the immune system. Having seen, for example, the laxative, emetic, diuretic, analgesic, and other effects of certain vegetables, doctors began to use vegetable plants not only to satisfy hunger but also to alleviate some or other health problem. Therefore, we can safely claim that the first medicines have their origin in the kitchen.

Let us consider the medicinal properties of vegetables on the basis of Gargilius' *Medicinae ex oleribus et pomis*, which consists of two parts. The subject of our study is the first part (chapters 1-39, 651 lines), which is devoted to the characterization of vegetables and spices. Gargilius' treatise is a compilation of ancient physicians' knowledge about the use of vegetables, spices, and fruits in medical practice, since the text of the work contains references to more than 20 authors, among whom Pliny the Elder, Dioscorides, Galen, and Columella are most often mentioned. As a result of the text analysis, it was found that Roman doctors used mainly those vegetables for medicinal purposes that

were available to ordinary Romans, namely black radish (Raphanus sativus), beetroot (Beta vulgaris), pumpkin (Cucurbita pero), cucumbers (Cucumis sativus), cabbage (Brassica oleracea), celery (Apium graveolens), parsnip (Pastinaca sativa), onion (Allium cepa), garlic (Allium sativum), horseradish (Armoracia rusticana) etc.

The analysis of the treatise showed that the medicinal properties of vegetables were most often used in surgical practice and traumatology. A variety of powders, ointments, and solutions have long been used to facilitate wound cleaning and healing, as well as to treat animal bites, due to their antimicrobial, anti-inflammatory, analgesic, dehydrating, necrolytic, and osmotic properties. Ancient doctors highly valued the antiseptic and bactericidal properties of onions, garlic, horseradish, leeks, and pumpkin. Thus, a powder made from crushed dry pumpkin seeds was used to fill wound defects: semini sicco ... in pulverem tunsum et inspersum vulnera quae cavata sunt (VI, 13)¹, and ashes of pumpkin peel contributed to the healing of purulent ulcers on the genitals: cinerem ... vulnera in veretro iam in putredinem versa purgare et ad cicatricem usque perducere (VI, 10) and the treatment of burns: cinis aridae cortices efficaciter potest combusta sanare (VI, 9). The experience of using pumpkins to treat surgical pathologies has been partly adopted by modern folk medicine [14]. Fresh pumpkin juice or grated pumpkin is used to make applications for burns and ulcers, and pumpkin lantern flowers are used to treat wounds. To cleanse fresh and old purulent wounds, it is recommended to wash them twice a day with warm water and make applications of raw, shredded cabbage: vulneribus ... recentibus ... veteribus, canceratis, ... crudam contritam bis die imponi (XXX, 8). In the modern practice of folk healers, the antiseptic properties of cabbage leaves are an addition to the basic treatment of burns, boils, and purulent wounds [14]. The application of a powder made from the root of burnt horseradish: radix adusta et in pulverem versa siccandis ac purgandis vulneribus imponitur (XXXII, 5) or the application of leek leaves with honey also helped to clean and dry wounds: folia contrita cum melle vulneribus apposite non minus profuerunt (XXI, 14). Eating leeks accelerated the process of bone fusion in fractures: fracturas alligat (XXI, 21). Roman doctors used garlic with lard as an antineoplastic agent: tumores suspectos ex adipe dissoluit (XVIII, 21). In case of burns, it was recommended to lubricate the affected areas until blisters appeared with lettuce leaves ground with salt: tritae cum sale combusta sanant, si ante pustellas inlinantur (XI, 6).

Topical application of green pumpkin peel with bread: ignis sacris cum pane subveniunt (VI, 12) or beets with alum allowed quickly relieve swelling, progressive inflammation of the skin and pain in case of erysipelas: ignes sacros et quae adusta sunt cum alumina inlita restinguit (X, 2).

In ancient times, bites from domestic and wild animals often caused wound infection and infectious diseases. In this regard, a number of recipes in the treatise are devoted to the treatment of bites. For example, the use of garlic or smearing wounds with garlic juice was recommended for snake and scorpion bites to cleanse wounds and accelerate their healing: serpentes et scorpiones ... fugat, ictibus eorum aeque medetur sive vulneri inlitum sive in potione vel in cibo sumptum (XVIII, 4), and with honey for dog bites: morsui canino cum melle succurit (XVIII, 5). Interestingly, cucumber leaves ground with wine were also used to heal wounds from dog bites: folia ... ex vino trita vulneribus medentur quae caninus morsus impresserit (XVI, 2).

The use of vegetable crops in the treatment of digestive diseases has a long history, largely due to their ease of use and direct effect on the organ. A number of recipes found in Gargilius' text are devoted to the treatment of problems of excessive gas formation in the gastrointestinal tract, diarrhea, constipation and colic. These pathologies were caused not only by non-compliance with sanitary and hygienic cooking standards, but also by digestive disorders and intestinal inflammation caused by bacteria, viruses and parasites. For example, diarrhea was treated with pumpkin seeds and wine: ex vino bibendum dederunt ut solutiones alui fluentis inhiberet (VI, 14-15) or hot drink made from roasted rutabaga seeds: semen eius tostum atque tritum bibendum ex aquae calidae cyatis quattuor dysentericis obtulerunt (XXXIV, 4); in case of colic, it was recommended to eat asparagus with butter, cumin and salt on an empty stomach: cum cymino, oleo, sale ... coli dolorem ... emendat, ... ventrem leniter mollit (XXXI, 3). The laxative properties of pectin substances in beets, leeks, and cabbage were widely used to treat constipation. Cabbage juice with iris and soda was effective for bowel cleansing: sucum eius viridem cum iri et nitro ad molliendum alvum (XXX, 23), beets with honey: iniecta cum melle onera ventris exponit (X, 4). Garlic with coriander and figs promoted the process of digestion: cum coriandro et fico datum, alvum mollire perhibetur (XVIII, 15) as well as leeks boiled twice in water: capita bis aqua mutata cocta molliunt alvum (XXI, 8). To prevent digestive disorders caused by changes in the place of residence, climate and water quality, it

¹ The Roman numeral stands for the number of the chapter, the Arabic numeral – for the number of the verse line.

was recommended to use garlic, which suppressed fermentation processes, prevented bloating and improved intestinal microflora: peregrinantibus esui datum minime patitur eos aquarum et locorum mutatione turbari (XVIII, 9). A mixture of seeds and shoots of celery, anise, and henbane was known as an antibacterial preparation against stomach bacteria: stomachum inundatio capitis laborantem mire tuetur (II, 9-10).

Long ago, people learned to counteract various poisons. As soon as humans began to eat food, their digestive system became vulnerable to foods of poor quality or contaminated with microorganisms. In Gargilius' work, we also find information on the treatment of toxic infections. For example, eating radish on an empty stomach was considered one of the best antidotes for poisoning: contra venena unicum remedium est (I, 7), and leeks were recommended for mushroom poisoning: in cibo sumptus plurimum prodest contra venena fungorum (XXI, 20). The most powerful antidotes for snake bites were rutabaga seeds: laudatissimi seminis et contra venena fortissimi (XXXIV, 6), a decoction of celery leaves or roots: efficaciter pugnat contra insidias venenorum (II, 5); turnip seeds in wine: semen ex vino vulneribus venenatis inlitum prodest (XXXV, 10) or leeks with pure wine or honey water: contra ictus venenatos vel cum mero vel cum aqua mulsa sucus datus prodest (XXI, 13). Horseradish juice mixed with wine showed an antitoxic effect on the body in case of scorpion bites: sucum eius ex vino datum contra venena utilem crediderunt (XXXII, 9).

Lack of hygiene, poorly processed food, in particular meat and fish, unwashed greens, vegetables and fruits, often caused worm infestations, which negatively affected human digestive tract due to dysfunction of the hepatobiliary system and intestinal mucosal barrier, caused metabolic disorders, reduced the concentration of vitamins and minerals and increased the susceptibility to infectious diseases. In case of tapeworm infection, Gargilius recommends garlic boiled with honey and vinegar: tineas et alia ventris animalia in mulso aceto coctum perimit et expellit (XVIII, 6). The natural bitterness of radish suggested its use with a pinch of salt as an anthelmintic: ventris animalia extinguit (I, 10).

Ancient medical sources also provide recipes for using vegetables as diuretics. Consumption of vegetables has a mild diuretic action on the body and does not cause side effects. Celery, cucumbers, asparagus, horseradish, rutabaga, and leeks helped to remove excess fluid from the body by stimulating the function of the kidneys. Celery, rich in sodium and potassium, was especially valued as a pharmaceutical diuretic that helped to discharge surplus liquid: nulla enim alia res fortius vel urinae difficultates resoluit (II, 2). Celery is still

successfully used for this purpose [14]. A diuretic effect was also noticed in asparagus seeds mixed with cumin: semen obolorum trium pari pondere cum cymino potui datum ... sollicitat urinam (XXXI, 10); horseradish: in cibo sumpta copiosam effundit urinam (XXXII, 1), which in modern folk medicine is successfully used to treat urolithiasis and cystitis due to its diuretic properties [14]. Radish helped to excrete surplus liquid from the body and normalize water-salt balance: urinam citat (I, 10). Since ancient times, it has been recommended to consume cucumber seeds rich in sulfur and silicon with sweet wine to treat urolithiasis: semen ex dulci vino datum vesicae laboranti facilem praestat urinam (XVI, 3) and a kind of rutabaga whose flowers are similar to those of anise: quod angulosis foliorum caulibus ad anethi similitudinem floret, vesicae laboranti ... utile existimant (XXXIV, 2). One of the most effective means of dissolving kidney stones was grated asparagus roots with white wine: radix ex vino albo trita et in potionem perducta calculos frangit (XXXI, 5).

The ancient Romans also used vegetables in gynecological practice. They successfully treated menstrual irregularities with vegetables. For example, in case of delayed menstruation, it was recommended to add a lot of onions or a mixture of onion juice and wine to food: tardantibus menstruis feminarum non inutile est vel ipsas in cibo offerre vel sucum ex vini potione miscere (XXXVII, 16), cabbage: purgationem feminis excitat (XXX, 16) or horseradish: incitat etiam menstrua feminarum (XXXII, 2). Rutabaga boiled in honey water was used to stop menstrual bleeding: cessantibus menstruis feminarum decoctum ex agua mulsa utile existimant (XXXIV, 2). One can also find prescriptions for the treatment of uterine diseases and recommendations for increasing lactation. For example, grated asparagus root with white wine was recommended for uterine diseases: medetur etiam vuluae querelis (XXXI, 7), and raw cabbage with vinegar as an abortifacient for fetal death: cruda ex aceto sumpta ... partus etiam mortuos pellit (XXX, 18). Regular consumption of cabbage: copiam lactis infundit (XXX, 16) or lettuce: lacte plurimo nutrients feminas implent (XI, 3) helped to increase lactation.

General medicine successfully dealt with fever, which in ancient times was understood as an acute febrile illness, by rubbing the abdomen with an ointment made from boiled mashed cabbage, butter and rose oil: cocta, contrite et stomacho cum axungia vetere et rosacio superposita, ardores febrium mitigat (XXX, 16) or by the patient rubbing with pumpkin juice and rose oil: rosacio mixtus et unctioni corporis admotus febrium restinguit ardores (VI, 8).

In case of cephalgia, one of the most common symptoms of various diseases, it was recommended to

lubricate the temples with soaked boiled garlic: elixum inlitumque temporibus dolori capitis opitulatur (XVIII, 17) or to instill leek juice with a third of honey in the ears or nose: profuit multis in dolore capitis, cum dormitum ire cupissent, idem sucus sive auribus sive naribus cum parte tenia mellis infusus (XXI, 17). Drops based on leek juice had a soporific effect on the body. Another remedy for insomnia was to eat cabbage boiled with salt and butter on an empty stomach: insomnia ac vigilias compescere si decocta cum sale oleo ieiunis in cibo detur (XXX, 10). Attacks of gout, which in ancient times was called the disease of kings, and joint inflammation were treated with compresses based on cabbage, vinegar and Greek flour: podagricis et arthriticis cum aceto et feni Graeci farina utiliter imponitur (XXX, 24) or turnips baked and grated with fat: tosta et cum adipe contusa articulorum dolori medentur (XXXV, 6).

The treasures of ancient Roman medicine can also provide us with many valuable recipes for treating respiratory and ENT diseases. Coughing is one of the important defense mechanisms of the human body that helps to free the airways from pathogens, dust, and various allergens. Vegetable crops contributing to gentle cleansing of the respiratory tract, mucus removal, and acceleration of recovery were successfully used as a cure for this symptom. Ancient medicine had an arsenal of proven remedies that were effective in treating coughs. For example, radish seeds and honey were considered to be an effective remedy for coughing: semine raphani cum melle trito ... tussis arcetur (I, 9). Modern herbalists often recommend radish juice with honey as an expectorant for bronchitis [14]. The anti-inflammatory, antiviral and expectorant properties of garlic combined with beans have been successfully used to treat coughs and purulent inflammation in the chest: tussim et suppurationes pectoris mitigat in faba coctum (XVIII, 18). For thousands of years, the bactericidal, antimicrobial and antifungal properties of garlic have been highly valued by folk medicine. Garlic and honey milk, garlic with honey and lemon, and garlic water are successfully applied not only to soothe coughs and improve sputum production, but also to treat tuberculosis, physical fatigue, and to strengthen the immune system. Another indispensable and effective remedy for treating a long-standing cough was a mixture of leek juice and breast milk: eodem succo plerique cum lacte mulieribus veterem tussim atque pulmonis vitia sanarunt (XXI, 15) or barley soup with leeks: in sorbitione ptisinae datus ... tussim, thoracis, arteriae pulmonisque vitia compescit (XXI, 6). To thin sputum, Roman doctors often recommended horseradish with honey: pituitas glutinosas cum melle sumpta dissoluit (XXXII, 4), which is still considered a natural antibiotic with pronounced antibacterial properties. In the treasury of folk recipes, a mixture of horseradish and lemon juice is stored as a mucolytic agent [14].

Roman therapists successfully treated diseases of the nasopharynx and ears with vegetables. For example, due to the high content of biologically active substances and micro- and macronutrients, radish juice with rose oil was recommended for prevention of hearing loss: succus gravitatem aurium ... emendat (I, 5), and the anti-inflammatory properties of garlic juice with goose fat helped relieve ear pain better than any other medicine: aurium doloribus sucus cum adipe anserino tepefactus infunditur (XVIII, 18). Leek juice with one third of honey was also considered an effective remedy for otitis media and nasopharyngeal diseases: idem sucus sive auribus sive naribus cum parte tenia mellis infusus (XXI, 17), drops made from onion juice and breast milk: instillatus auribus sucus cum lacte mulieris prohibit dolorem (XXVII, 13) or pumpkin juice: ad compescendum velociter auriculae dolorem tepefactus infunditur (VI, 6). In case of dysphonia, ancient medicine recommended garlic cooked with peas or beans: raucitatem vocis emendat in pisa aut in faba sumptum (XVIII, 19), leeks with barley porridge: in sorbitione ptisanae datus ... vocem purgat (XXI, 7).

It is noteworthy that among numerous recipes for vegetable treatment, we find advice on the prevention of ophthalmic diseases. To relieve conjunctival edema, ancient medicine recommended applying grated pumpkin to the eyes: rasura earum oculorum tumores tollit (VI, 31), and regular consumption of cabbage helped prevent pathological disorders caused by sudden blurred vision and loss of image clarity: cibus eius assiduus caliginem discutit (XXX, 16).

Vegetable-based medicines were also widely applied in dermatology to treat alopecia, seborrhea, scalp ulcers etc. The treatise pays special attention to the problem of treating hair loss and baldness, as healthy and good hair has always been considered a way of manifesting beauty and attractiveness. Thus, medicines based on garlic, onions, cabbage, and beets were successfully used to treat alopecia and seborrheic dermatitis. For example, in case of ulcers on the scalp and alopecia, pounded raw beets were used: ulceribus in capite manantibus item alopeciis cruda trita optime inlinitur (X, 3). In ancient medicine, radish mashed with honey was used externally to fight alopecia: Capillos alopeciae iniuria raptos cum melle trita restituit (I, 4), and the juice was used against pediculosis: contra pthiriasim sucus eius adhibetur (I, 7). In modern folk medicine, radish oil is used as an insecticide for pediculosis [14]. To restore and accelerate hair growth, Gargilius recommends applying onion gruel on the scalp: alopecias tunsis cepis infricare inter efficacia remedia compertum est (XXVII, 19), and against scabies, rubbing the skin with cabbage soaked in vinegar and alum: lepras et psoras cum alumine rotundo ex aceto inlita emendat. Eadem virtute ... fluentes capillos retinet (XXX, 20-21). Masks made from onion juice, which stimulates blood flow to the hair follicles and enriches the skin with useful microelements, are still in the arsenal of folk recipes for combating hair loss and baldness [13]. To fight seborrhea, wash hair with water in which beets were boiled: aqua in qua decocta est furfures capitis elimat (X, 4). Pain and discomfort from foot abrasions were treated by applying a vegetable compress made of grated raw turnips: pedum maximeque trituris cruda tunsa succurrunt (XXXV, 9).

Since ancient times, people have had dental problems. The reason for this was the lack of proper oral hygiene, the use of solid food, and vitamin deficiency. Dentistry in Rome was not only about removing affected teeth. The treatise contains information about how Roman doctors tried to preserve patients' teeth conservatively. For example, to relieve toothache, they recommended keeping warm pumpkin juice in the mouth: idem sucus et dolores dentium mitigat, si diutius in ore teneatur (VI, 7). Toothache relief was also believed to be achieved by rubbing the teeth with parsnip root: dentes redice pastinacae circumscalptos credunt a dolore relevari (XXXIII, 8). Rinsing the mouth with onion juice also helped to strengthen teeth: conluendis dentibus frequenter assumptum integros eos servare praesumitur (XXVII, 15), and eating onions with bread remedied stomatitis: medentur oris ulceribus, si cum pane manducantur (XXVII, 8). It should be noted that even today, doctors recommend to consume a lot of onion, which has a powerful antimicrobial effect and destroys bacteria that cause caries and gum disease [14].

Certain vegetable crops that can increase sexual desire have been successfully used in the treatment of sexual disorders. Roman doctors already noticed that

parsnips and asparagus are natural aphrodisiacs and have a positive effect on marital relations. Daily consumption of parsnips, rich in essential oils, increased sex drive and libido: venerem stimulat copiosior in cibo sumpta (XXXIII, 7). Aphrodisiac powers of parsnip are recognized by modern doctors, too. Asparagus, which in Gargilius' time was recommended to be consumed with cumin, had a beneficial effect on male health, improved physiological tone, and helped maintain a good mood: semen obolorum trium pari pondere cum cymino potui datum venerem stimulat (XXXI, 10).

CONCLUSIONS

The ancient physicians left us a wealth of works that are now an invaluable source of information on the medical science of the time. One of these works is Quintus Gargilius Martialis' manual *Medicinae ex oleribus et pomis*, dedicated to the use of vegetables, herbs, fruits and nuts in the medical practice of Roman physicians.

Already in ancient times, the consumption of vegetables was considered one of the easiest ways to treat and prevent numerous diseases, and each vegetable crop was seen as a pharmacy in miniature. Due to the high content of biologically active substances, microand macroelements, fibre, phytoncides, essential oils, the Roman doctors highly valued the therapeutic and preventive properties of radishes, pumpkins, cucumbers, celery, beets, cabbage, turnips, rutabagas, lettuce, onions, garlic and other vegetables. Romans successfully used vegetable crops as medicine to strengthen immunity, enrich the body with vitamins and trace elements, as well as to prevent and treat wounds and injuries in surgery, various tumours and inflammations, gastrointestinal diseases, gynaecological pathologies, fever, cough, diseases of ENT organs and skin. In this regard, Hippocrates' statement that our food should be medicine and our medicine should be food remains relevant.

REFERENCES

- 1. Rose V. Gargilius Martilis, Medicinae ex holeribus et pomis: Plini secundi quae fertur una cum Gargilii Martialis medicina. Leipzig. 1875. https://wellcomecollection.org/works/b43y7y6x/items?canvas=139 [date access 25.11.2022]
- 2. Tapper RM. The Materia Medica of Gargilius Martialis. Doctoral thesis., University of Wisconsin-Madison. Ann Arbor, Michigan, USA. 1980, p.231.
- 3. Riddle JM. Gargilius Martialis as a Medical Writer. Journal of the History of Medicine and Allied Sciences. 1984; 39 (4): 408-429. doi: 10.1093/jhmas/39.4.408.
- 4. Brigitte M. L'esprit ou la lettre: les sources des Medicinae de Gargilius Martialis. Hommages à Carl Deroux (tome II): Prose et linguistique, Médecine. Pol Defosse (Ed.), Bruxelles: Latomus. 2002, pp. 514-535.
- 5. Brigitte M. Se soigner par les plantes. Les Remèdes de Gargile Martial. Lausanne: Édotions BHMS. 2007, p.172.
- 6. Brigitte M. "Greek" and "Roman" in Latin Medical Texts. Studies in Cultural Change and Exchange in Ancient Medicine". Studies in Ancient Medicine. 2014, p. 461.

- 7. Brodersen K. Gargilius, Gesundheit aus dem Garten. Stuttgart. 2022, p.220. (in German).
- 8. Arsenio FR. Ofidios y calor estivo: una enmienda necesaria en el texto de Plinio (Nat. XXIX 71). Emerita, Revista de Lingüística y Filología Clásica LXXXVII 2. 2019, pp.305-316.
- 9. Krynicka, T. (przekł.), Gargiliusz. Lekarstwa z owoców i warzyw Wrocław: ISKŚiO UWr: 2016, p.167.
- Stuligrosz M. Recenzja książki: Gargiliusz, Lekarstwa z owoców i warzyw, przełożyła Tatiana Krynicka. ISKŚIO UWR, Wrocław. Collectanea philologica XXI. 2018, p.172.
- 11. Kovalenko O. Frukty proty ovochiv. [Fruits vs vegetables]. Kyiv, Vikholo. 2021, p.224. (in Ukrainian).
- 12. Brigitte M. La variatio dans le lexique des Medicinae ex oleribus et pomis de Gargilius Martialis, Rivista di filologia e di istruzione classica. 1997 (125: 3): 306-318.
- 13. Mantzilas D. Variatio in Gargilius Martialis "Medicinae ex holeribus et pomis". Rhetoric & Science. 2021 (1): 108-118.
- 14. Hrodzinskyi AM. Likarski roslyny: Entsyklopedychnyi dovidnyk. [Medicinal plants: An encyclopedic guide]. K.: Vydavnytstvo «Ukrainska Entsyklopediia» im. M. P. Bazhana. 1992, p.544. (in Ukrainian).

ORCID and contributionship:

Marta J. Petryshyn: 0000-0003-4060-7440 A.B.D.E Halina M. Zahaiska: 0000-0003-1449-0269 A.B.D Oxana V. Liubimova: 0000-0003-0413-309X A.E.F Veronika H. Todoshchuk: 0000-0001-7293-6500 F

Conflict of interest:

The Authors declare no conflict of interest.

CORRESPONDING AUTHOR

Oxana V. Liubimova

Yuriy Fedkovych Chernivtsi National University 2 Kotsyubynsky st., 58012 Chernivtsi, Ukraine tel: +(038)095-440-51-45

e-mail: o.liubimova@chnu.edu.ua

Received: 12.03.2023 **Accepted:** 07.08.2023

A - Work concept and design, B — Data collection and analysis, C — Responsibility for statistical analysis, D — Writing the article, E — Critical review, F — Final approval of the article

© creative Commons Article published on-line and available in open access are published under Creative Common Attribution-Non Commercial-No Derivatives 4.0 International (CC BY-NC-ND 4.0)