Review article

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THE USE OF MEDICAL PLANTS FROM PAST TILL NOW

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ABSTRACT

Healing with medical plants is old not more than the mankind. Connection between the man and his tracing for drugs in the nature dates from the past, for what various sources in frame of i.e. written information's, preserved monuments even though and original plant medicines, give evidence. Consciousness for the use of medical plants are result from the many years struggles with illnesses from which man was informed to discover the drugs in the barks, seeds, fruits and other parts of the plants. For many drugs with plant origin, which are familiar with the ancient civilizations and were used through the millenniums, contemporary science acknowledged their active acting and placed them in the modern pharmacotherapy. Introduction with the ideas connected with the use of medical plants, and evolution of the consciousness increased the ability of the pharmacists and physicians to respond to the challenges which appeared with the spreading of the professional services in the facilitating of the man's life.

Key words: *medical plants, history, plant drugs, usage,*

INTRODUCTION

Since ancient times people seeking relief from disease, drugs searched in nature. The beginning of use of medical plants have been instinctive, just like animals. In that time there was not enough knowledge about the causes of diseases or which plant and how it could be used for treatment all that was based on experience. Gradually were discovered specific ways of application of medical plants in certain diseases, so that the application of medical plants gradually went from empirical framework and based on the explantional facts. Until the emergence of iatrochemistry 16th century plants were the basis for treatment and prophylaxis. Today, the smaller efficiency of the produced synthetic drugs and more frequent adverse effects of their use, are the reason for actuating the use of drugs with natural origin.

IMPORTANT HISTORICAL SOURCES ON THE USE STUDY OF MEDICAL PLANTS

The oldest written evidence of the use of medical plants for the manufacture of drugs is found on Sumerian clay slab of Nippur, about 5,000 years old. It contained 12 recipes for making drugs in which are mentioned over 250 different plants, including some such as alkaline. poppy, henbane, and mandrake. Chinese book on roots and herbs Pen Ts'ao written by Emperor Shen Nung around 2500 years BC applies for 365 drugs (dried parts of medicinal plants),

many of which today are used as: Rhei rhisoma, camphor, Theae folium, Podophyllum, Raven, gingseng, thorn apple, bark of cinnamon and ephedra. In Indian holy books "Rig Veda" healing with plants is mentioned, which is rich in this country. Very spicy plants that are still used, originating from India: nutmeg, pepper, cloves and others. Eber`s papyrus written around 1550 years BC, a collection of 800 prescription in which are mentioned 700 plant types and drugs used for therapy, including the pomegranate, castor oil, aloe, senna, garlic, onion, fig, willow, coriander, centaury etc. (1). According to data from the Bible and Jewish holy book the Talmud, during the various rituals that were used pratele treatment plants and fragrant myrtle and incense. From Homer's epics the Iliad and Odyssey, which occurred about 800 years BC, we learn for 63 plant species from the Minoan, Mycenaean and Egyptian-Assyria pharmacotherapy. Some names have received under the mythological characters of these epics, such as Oman (*Inula helenium* L. Asteraceae) named in honor of Helena around which fought in the Trojan War. The plant of the genus Artemisia, which are believed to return to power and protect health, the name is derived from the Greek word meaning Artemis healthy. Herodotus (500 yr. BC) mentions castor oil, and garlic hellebore, Orpheus and Pythagoras sea onion (*Scilla maritima*), mustard and cabbage. In Hipocryte works (459-370 years. BC) listed over 300 medicinal plants distributed by the physiological effects including: fever have been used against bitterness and centaury (*Centaurium umbellatum* Gilib) against intestinal parasites garlic, were used as precursors opium, henbane, and mandrake, deadly nightshade; as a mean to cause vomiting and hellebore, European wild ginger; as a diuretic coastal onion, celery, parsley, asparagus, garlic, and as adstringent oak, pomegranate (2). Theophrast (371-287 years. BC), student of Plato and Aristotle, in his book "De causis plantarium (Aetiology of plants) and" De historia plantarium "(History of Plants) describes guidelines for collecting, preparation and application of medicinal plants. He made a classification of over 500 species previously known medicinal plants. Among other he mentions cinnamon, the iris rhizome, white hellebore, mint, pomegranate, cardamom, hellebore, *Aconitum napellus* and others. While describing poisonous effect of plant Theophrast underlines the important attribute of man to get use them with the gradually increasing doses. Discoveries in these topics gained him with the epithet "father of botany" because his services in settling and describing the medicinal plants are large (3). Famous enciclopedist and medical writer Aulus Cornelius Celsus (25 yr. BC to 50 years. BC) in his book "De re medica Libri octo" writes about 250 medicinal plants including aloe, henbane, flax, poppy, pepper, cinnamon, great yellow gentian, cardamom, white hellebore etc. (4).

The most important writer of the old century plant drugs "father of Pharmacognosy is Dioscorid who, as a military physician and pharmacognost, has studied medicinal plants wherever he go with the Roman army. 77 year wrote the book "De Materia Medica". This classic work of the old century, which is many times translated, gives a lot of data on medicinal plants that constitute the basic medical material until the late Middle Ages and Renaissance. Of the 944 drugs described, 657 are of plant origin with descriptions of the external appearance, location, method of collection, preparation of herbal medicines and their therapeutic action. Beside the description of the plant are often given the names of other languages and places where they grow or are cultivated. The prevailing plants with slight agitation, but using those containing alcaloid and other substances with strong action (hellebore, white hellebore, poppy, *Ranunculus*, thorn apple, henbane, deadly nightshade). The domestic plants are most appreciated Dioscorid willow, chamomile, garlic, onions, white marshmallow, ivy, wort, nettle, sage, centaury, coriander, parsley, garlic and sea white hellebore. Chamomile (*Matricaria recucita* L.) Chamaemelon known, used as antiflogistic treatments for wounds, stings, burns and ulcers, clystering and then rinse the eyes, ears nose and mouth. For the benefit carminative action is particularly suitable for use on children. Dioscorid thought abortive act, which wrote: "The flower root and whole plant accelerate menstruation, accelerated the release of the embryo and excretion of urine and scale, if used in the form of infusion. This false belief was later accepted by the Romans and Arabs, hence the Latin name Matricaria, derived from two word mater meaning mother, or matrix, which means uterus. More Dioscorid distinguish more species of the genus Mentha, which were grown and used against headaches and stomach. The coastal garlic bulbs and parsley are used as diuretics, while the bark of oak used for gynecological purposes, and white willow as antipiretic. Scilae bulbus under Dioscorid used as expectorant, and cardiacum

antihidrotic (5). It is important that Dioscorid suggested the possibility of counterfeiting of drugs such as domestic counterfeiting of opium juice with milk yellow poppy (*Glaucium flavum*) and Poppy, Oriental and more expensive drugs, which are worn by Arab traders from the Far East, such as iris, common sweet flag, caradamom, incense and more. Pliny the Elder (23-79 yr. AD), a contemporary of Dioscorid who traveled in Germany and Spain, in his work "Historia naturalis" mentioned about the approximately 1,000 medicinal plants. The writings of Pliny and Dioscorid collected all previously known knowledge of medical plants. The most famous Roman physician (also a pharmacist) Galen (131-200 yr.) Compilated the first list of drugs with are similar or with same action (parallel drugs) that can be replaced with each other, "De succedanus. From today's vantage point, some of the proposed substitutes do not respond to pharmacological sense and are completely unacceptable. Galen introduces in therapy and use some new herbal drugs which Dioscorid not describes as *Uvae ursi folium*, which today are use as uroantiseptic and mild diuretic. In the Middle Ages the skill of healing, the therapy is based on 16 medical plants which physician monks necessarily grown as follows: sage, fennel, mint, Greek seeds, savory, tanacetum, etc.

Charlemagne (742-814 yr.), The founder of the famous medical school in Salerno, in his "Kapitulari" ordered medicinal plants to be grown on state property. Listed were about 100 different plants that today are used as: sage, coastal garlic, iris, mint, centaury, poppy, marshmallow and others. Great rulers especially appreciated sage (*Salvia officinalis* L.). Latin name comes from the old Latins who call saving herb (salvare = rescue, recovery). Sage today is obligatory plant in all Catholic monasteries (5, 6). In the Middle Ages the Arabs introduced many new medicinal plants in pharmacotherapy, mostly from India, which traded most with real healing value, which until this day are held in all the pharmacopoeia in the world. Arabs used aloe, deadly nightshade, henbane, coffee, ginger, strihnos, saffron, turmeric, pepper, cinnamon, rheumatism, Senna and others. Some drugs with strong action replaced with less action. So, for example. Sennae folium was used as laxans weaker than the previously used purgative *Heleborus odorus* and Euphorbium. Throughout the Middle Ages, European physicians are served with Arab works "De re medica" by Ioannis Mesuae (850 yr.) "Canon Medicine" by Avicenna (980-1037 yr.) And "Lieber magnae collectionis simplicum alimentorum et medicamentorum from Ibn Bajtar (1197-1248 yr.) described in over 1000 medicinal plants. The Macedonian region is particularly important activity of St. Kliment Ohridski, who was using pharmacologically Nicene code of 850, he expanded his knowledge of medicinal plants t to his students and through them the masses (3). Travels of Marco Polo (1254-1324 yr.) In tropical Asia, China and Persia, the discovery of America (1492 yr.) and Vasco da Gama travel in India (1498), bringing Europe numerous medicinal plants. Boot botanical gardens tare over Europe which attempts to breed domestic and medicinal herbs brought from the old and the new world. With the discovery of America, materia medica is enriched with a substantial number of new medicinal plants: Cinchona, Ipecacuanha, sprat, Ratanhia, Lobelia, Jalapa, Podophdilum, Senega, Vanilla, mate, tobacco, pepper and others. In the 17th century in European medicine is introduce peruvian bark obtained from Cinchona tree, known under the name "Contessa powder" because it first use as a drug by contessa Cinhon. Peruvian bark quickly conquered England, France and Germany, although there were opponents by the side of many reputable doctors members of various academies. Paracelsus (1493-1541) was one of the proponents of chemical medicines prepared from raw plant and mineral substances, and still firmly believed that the collection of these substances should be astrologicaly obtained. He often highlighted his faith in observation and at the same time he advocated "signature-doctrinae doctrine of signature. It is the belief that God placed his sign of healing substances that demonstrates their use in certain diseases eg. European wild ginger like the liver, therefore, must be good for diseases of the liver St John's wort would be good for treating wounds and stings, because the leaves of this plant look like stained. While the older people have used medicinal plants mainly in the form of simple pharmaceutical forms: inphuzes, decoctes macerates and in the Middle Ages, and especially to 16th - 18th century demanded more complex drugs that beside medical plants and includes drugs of animal and vegetable origin.

In many drug – terriac was made from several medicinal plants, rare animals and minerals are more appreciated and with more expensive value for sale. In 18th century Linnaeus (1707-1788 yr.) In his work Species Plantarium (1753) gives a brief description and classification of previously described species.

Species have been described and named without taking account of whether some of them were previously described. The appointment was used polinominal system where the first word denotes a genus other polinominalna phrase explains other features of the plant (eg Willow Klusijus call Salidzh antera angustifolia pumila). Linnaeus changed the system of appointment in binominal. The name of each species consists of the name of the genus which begins with a capital letter and the name of the type that starts with a small letter (7). The beginning of the 19th century is a milestone in knowledge and use of medical plants. The discovery, proof and isolating the alcaloids from the opium poppy (1806 yr.) ipecacuana (1817 yr.) strychnos (1817 yr.) peruvian bark (1820 yr.) pomegranate (1878.) of other plants, and then isolating the glycoside,all that marks the beginning of scientific pharmacy. With the development of chemical methods were discovered other active ingredients from medicinal plants, tannins, saponozides, ether oils, vitamins, hormones, etc. (8). At the end of 19th and beginning of the 20th century there was a great danger-medicinal plants completely to be removed from the therapy. Many authors have written that drugs derived from them have many short comings, due to devastating effect on the enzymes that cause profound changes during the drying of medicinal plants. Currents depend of the way of drying. Isolating the glycoside and alcaloids in pure state began in the 19th century terapy more to suppress the drugs that are separated. However, quickly concluding that the effect of pure alcaloids although is faster, the effect of alcaloid drugs in many cases are complete and lasting. In the early 20th centuries were proposed methods of stabilization of fresh medicinal plants, especially those with unstable medical ingredients. Apart from that, great efforts were invested in studying the conditions of production and cultivation of medical plants (9, 10). With the chemical, physiological and clinical trials in pharmaceuticals many forgotten plants and medicines derived were returned in use, from them: aconitum, pomegranate, hyoscyamus, thorn apple, Secale cornutum, male fern rhizome, opium, Colchicum, castor oil, etc.. The active ingredients of medicinal plants are the product of natural modern laboratory. The drug received from them the human organism is best tolerated, because man is an integral part of nature (11). Such examples are many, perhaps they will encourage serious research on old manuscripts of medicinal plants, which will be considered as a historical curiosity, as possible sources of modern pharmacotherapy. Today, almost all Pharmacopoeia: Ph Eur 6 (12), UPS XXXI (13), BP 2007 (14) in the world prescribe herbal medicinal drugs from the real value. Some countries (UK, Russia, Germany (15)) have special herbal pharmacopoeia. However in practice, always use a large number of unofficial drugs. Their application is based on the experience of folk medicine (traditional or folk medicine) or new scientific research and experimental results (conventional medicine). Many medicinal plants are used only as medication as recommendation of the physicians and pharmacist. Used alone or in combination with synthetic drugs (complementary medicine).

For treatment to be adequate and successfully applied, it is necessary to know the exact diagnosis of the disease, knowledge of medicinal plants or pharmacological activity of their ingredients. As therapeutic tools are used herbal drugs and phytopreparates, usually defined active ingredients, certified operation and sometimes therapeutic efficacy. In Europe's largest producer and consumer of herbal preparations Germany, is carried phytotherapy rational based on the use of agents whose efficiency depends on the application dose, identified effective compounds, and their efficiency is confirmed eksperimental and clinical tests. These products are made from standardized extracts of plant drugs and subject to all requirements for quality of pharmaceutical drugs. The new law on drugs and medical devices from September 2007 (16), in the Republic of Macedonia, dried or fresh parts of medicinal plants (herbal substances) may be prepared: herbal medicines, herbal preparations and traditional herbal medicines. Herbal substances can be used for the production of homeopathic medicines, which are also provided by this law. In the Republic of Macedonia herbal preparations are dispensed without a prescription as ("over The counter "OTC) preparations.

CONCLUSION

People since ancient times trying to find a medication to relieve pain and cure various diseases. In each period, with each subsequent century of development of mankind and advanced civilizations, were establishing medicinal properties of certain medicinal plants, and interviewers were transmitted to future generations. The benefits of a society are

taught to another, which upgrade old, revealed new medicinal properties, until today. Continuous and uninterrupted interest of people for medical plants, led to today's modern and sophisticated way of their processing and use.

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