

Aegyptus et Pannonia VIII.



Acta Symposii anno 2021

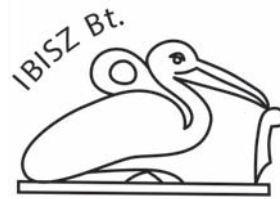
BUDAPEST

Aegyptus et Pannonia VIII.

Acta Symposii anno 2021

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Aegyptus et Pannonia VIII.

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“Plants for Health from Ancient Egypt to Present Day” Conference and the HEFS AEC

DR. HEDVIG GYŐRY PHD
HEFT AEC president

After the realization of the 2019 mummy conference, the need arose to discuss the new trends, methodologies and achievements in ancient materia medica from a phytotherapeutic point of view and to disseminate the results achieved by our in-depth research. With this conference, we also wanted to explore how many different ways there are to approach ancient plants and medicine, also from historical, cultural, religious, ethnographic and pharmacological points of view, and to compare it with other related fields. We also wanted to draw attention to other areas of research into plants that maintain and improve health. In this way, contemporary and historical treatments were juxtaposed, Egyptian, Hittite, Greek, Roman and later European herbal medicine, to mention only the most important regions studied in these proceedings. The conference was held in two languages, English and Hungarian, but all the articles in the proceedings are English. We hope that this way we can bring these issues to the attention of as many people as possible.

This time we have chosen to discuss the plants used for health problems. A significant proportion of the substances in ancient Egyptian prescriptions are of plant origin. Reviewing and studying their effects and data can also provide new opportunities for the current pharmacopoeia. Our group of doctors thought that there was a lot of new knowledge to be gained in this area worldwide, and that the knowledge of plants is becoming increasingly important, if we only think of the research into pathogens, many of which have adapted to synthetic drugs. We need thus new materials to use to eliminate them, and earlier medical practices may lead to the discovery of new active substances that are important for people today. Knowledge of these active ingredients makes it possible to apply these drugs as new medicines in a consistent quantity and quality. On the other hand, there are also many places where conditions do not allow the use of drugs produced by modern technology, but nature can help patients with its often hidden treasures. In addition to pharmacological research, folk remedies studied by ethnomedicine

and historical medical research play an essential role in getting to know them.

The HEFS AEC partly organizes its activities in cooperation with other organizations – the above-mentioned international workshop of the Nephthys project in 2022 was co-organized by the Hungarian Natural History Museum, while this very conference took place in partnership with the HNM Semmelweis Museum of Medical History, whose members gave several lectures on historical medicine and modern ethnomedicine, and where a special chamber exhibition would have welcomed the participants in honour of the conference, if the COVID had not prevented the organization of a face-to-face meeting. Nevertheless, we were able to offer the possibility of discussions and consultations in special virtual chambers, allowing the exchange of professional experiences.

The HEFS AEC has published these new proceedings, this time in two volumes (Aegyptus et Pannonia VII-VIII), containing more than half of the papers presented at the conference: “Plants for Health from Ancient Egypt to Present Day”. As we focused on our main research topic in the Medical Research Group of the HEFC Ancient Egyptian Committee, we wondered what the scientific community thought about the ancient Egyptian use of plants in various fields of human and natural sciences, the continuity of related knowledge, and the implications and possibilities of these ancient practices for people today. We also wanted to present the ideas we had developed and the results we had achieved in the professional field, and to provide an opportunity for specialists to discuss different topics. In terms of the structure of the proceedings, we have returned to the previous method of the series, so that the articles are once again listed in alphabetical order of authors, rather than by subjects

THE HEFS ANCIENT EGYPTIAN COMMITTEE AND THE MEDICAL HISTORY

The HEFS, which has been operating since 1995, carries out several activities in the tradition of its earlier activities: the general programs focus on the last five thousand years, selecting interesting and important topics, while the work of the AEC is mainly directed in three directions. An important objective is (1) the cultural transmission and dissemination of knowledge about ancient Egyptian culture through lectures and public meetings for interested adults, also in the framework of the Hungexpo. We also organise (2) artistic and handicraft activities, workshops accompanied by discussions on various topics with children, launching every year a fine arts competition (drawing/painting), the results of which will be exhibited for the third time in January 2023 in the Deák 17 Children’s and Youth Art Gallery of the Budapest History Museum; and (3) following scientific and scholarly research into the use of ancient objects, human and animal remains – including an international event of the Nephthys Project in 2022 – and medical history, concentrated on phytotherapy and surgery.

As far as our material at the conference is concerned, we present here as a starting point our research focused primarily on the use of plants in surgery, if only because several members of the group are doctors from the Department of Surgical Research and Techniques at the Faculty of Medicine in Semmelweis University, Budapest. The first scientific results of this new direction are published of today's surgical tools and materials. Thus our conference papers focus on the ancient Egyptian surgery from the point of view of the application of plants in these volumes, but research is also being carried out in other areas. Firstly we present research in the direction that is mainly focused on comparative analysis, directed towards the ancestors surgical kit, the plant materials used for wound care and the general knowledge of ancient Egyptian surgeons, with a view to the surgical culture of other peoples and periods or the use of pharmacognostic knowledge. We have also considered it essential to investigate into possible reasons for the use of plants, which may allow us to consider modern phytotherapeutic applications.

Two other areas of our phytotherapy research are also represented in these volumes. The origin and treatment of various diseases throughout the world, and especially in ancient Egypt, is also an interesting topic. In this direction, we have chosen to focus one disease in particular. Diabetes is one of the most widespread diseases of our time, and we have chosen to study its ancient treatment methods. In this case, as in the case of surgery, we have compared several cultures to find out the ancient knowledge and problem-solving methods, and have pointed out herbs that are officially used in the world, or in Hungary.

Another problem of our time, seemingly far removed from the history of medicine, is the conservation and preservation of biodiversity, which is affected not only by climate change and other natural factors, but also by human activity. This phenomenon can be traced back even to ancient Egypt, although the process has accelerated in the last hundred years. One of our topics in this respect is presented here, showing how an ancient curiosity herb has become a plant of large-scale production in the 21st century, and saving this way the species from extinction.

A new direction of the group is the study of the history of Hungarian phytotherapy in partnership with the Semmelweis Museum for Medical History. We have just taken the first steps in this direction, but we can already say that the classical Roman authors, and the ancient Egyptian knowledge they transmitted also played an important role in official medical practice and influenced folk medicine in our country. It seems that the herbaria published in Hungarian language played a key role in this process.

The interweaving of contemporary and historical issues characterizes many of the articles in the volumes. At the same time, mutual influences, shifts of emphasis and reinterpretations within the ancient world, or elements of later historical periods that reach into the past or present, play a prominent role. In this field, it is essential to collect and examine the sources from a new perspective in order to obtain a clearer picture of certain details of the past. Historical, artistic, literary, religious, economic, museological, pharmaceutical, phytotherapeutic, ethnobotanical or even chemical points of view appear in individual articles. It has been proven that the ingredients listed in many of the ancient Egyptian recipes studied so far can still be used as effective medicines today.

This volume contains 16 contributions on the role of drug use in different periods. There are chapters on the reconstruction of some ancient Egyptian remedies, on the ancient method prescribed for the preparation of antjw ointment, or on the preparation and action of kyphi, and pelargonium, traced through biochemical and experimental research; Others are devoted to the materia medica used in Hungary over the centuries, or to the comparison of contemporary Egyptian folk medicine and pharaonic materia medica in the field of gynaecology; another is devoted to studies on the possible identification of magical Egyptian plant names with a dominant connection to the moon, or to the ritual and non-ritual use of some plant substances with religious names in Egypt. Others relate to the popular treatment of diseases such as tuberculosis and cholera in Hungary, or which edible plants have been identified in Coptic medical therapies. Sedative plants are also featured in the current volume, and a plant closely associated with a butterfly is discussed. Another article focuses on the pomegranate, with its many meanings as a symbol of fertility and female power. Yet another focuses on the worldwide surgical use of plants, while others discuss the balance between practical and religious beliefs in the use of medicinal plants. The pop-up exhibition for the conference is briefly introduced, hinting at the museological aspect of medical history.

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We would also like to express our gratitude to all those colleagues and volunteers who have shared their expertise and offered their generosity by providing scientific or linguistic proofreading for these volumes.

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**“LET EVERY MAN KEEP READY AT HOME
SOME HORSERADISH ROOTS AND AT LEAST
ONE MASH OF BEER, BLACK RUE, MIXED
WITH HALF A VERDUNG RYE FLOUR.”
EXCERPTS FROM THE POSSIBILITIES OF CURING
CHOLERA DURING THE FIRST EPIDEMIC, 1831**

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ABSTRACT

From the outbreak of the first cholera epidemic in Hungary in June 1831 to its end, 230,000 people, or almost 3% of the population at the time, died and 421,468 became ill. The reasons for the high mortality rate include that an unknown disease spread, there were not enough doctors, and also the mistrust and ignorance, which accompanied the epidemic.

In this article we try to answer the question of what knowledge was available at the beginning of the epidemic to help common people protect themselves against the disease. To do this, we have turned to articles in the medical press of the time and to sources preserved in the pages of church registers in the *medicina pastoralis*. As the surviving prescriptions usually refer to herbs that were known and tried to combat the disease, we have listed the most common herbs and what was known about them at the time.¹

KEYWORDS: cholera, epidemic, herbal medicine, *medicina pastoralis*, nutrition, hygiene

INTRODUCTION

The first time in European history that a society with a relatively advanced health system was confronted with a disease hitherto unknown in its region was the first cholera epidemic in 1831. Almost everything is already

1 József MÁTON (ed.), Magyar Kurir 45/36, 1st Nov. 1831, 294.

known about the centralised official measures taken to combat it, but little is known about the personal level in the lower strata of society. Therefore, in the article I would like to illustrate what was available to ordinary people to treat the disease, how it was fought and how it was cured.

Cholera is caused by a gram-negative bacterium called *Vibrio cholerae* and has a rapid onset, with the main symptoms being acute vomiting and diarrhoea.² As the disease progresses, the patient develops violent muscle contractions, sunken eyes, blue lips and a characteristic “cholera face”. The explanation is that the patient loses large amounts of water in a very short time. The loss of fluid causes a salt and water imbalance in the body system, which eventually leads to kidney and circulatory failure. The process leading



to the patient’s death can sometimes take only a few hours if left untreated. In the 19th century, the mortality rate from the disease was usually between 30 and 60 percent. It was responsible for the deaths of around one million people in Hungary during the epidemics that ravaged the country in several waves in that century.³

Figure 1. A young woman of Vienna who died of cholera, depicted when healthy and four hours before death. Coloured stipple engraving. Date: [1831?] Reference: 5396i. Wellcome Collection.

Cholera has been present in the Ganges and Indus estuaries for centuries, but began its global conquest in 1817. It reached the borders of Hungary via Galicia and Moldavia in December 1830. To monitor the impending epidemic, which was already raging in Russia, the Viennese court sent a medical delegation to study the symptoms and cures on the spot.⁴ Although Mihály Lenhossék (1863-1937), the country’s chief physician, together with the medical faculty of the University of Pest, declared still in December 1830 that cholera was a contagious disease transmitted by human contact, air, animals

2 Cholera – National Public Health Centre, Healthline at <https://egeszsegvonalo.gov.hu/k/826-kolera.html>, last accessed 29.12.2022.

3 MÁDAI 1983, 58.

4 Kiss 2005, 79-92.

or certain objects,⁵ its veracity was long doubted. In fact, it was not until Robert Koch (1843-1910) isolated the cholera bacterium in 1884⁶ that it became known exactly how the disease was spread or transmitted.⁷

EARLY PROTECTIVE MEASURES

To stop the 1830 outbreak, the authorities used tools that had been tried and tested in previous outbreaks of other infectious diseases. To control the spread of the disease, they restricted the movement of people, setting up cordons along county borders, town boundaries, trade routes and rivers, with soldiers checking who crossed and why. Cholera-stricken areas were placed under strict quarantine, which had proved effective during the plague epidemics. These places were called ‘quarantine houses’. They were set up for travellers, who spent as much time there as necessary to find out whether they were infected or not.⁸

While the authorities struggled with their administrative resources to stop the spread of the disease, the medical community was also looking for possible solutions to both contain and cure the disease. External and internal factors were identified as causes of the disease. An important part of protection was therefore lifestyle advice, teaching people how to live to preferably avoid infection. Several external factors were identified. It was initially thought that the disease developed in circumstances where the climate of the dwelling was unfavourable, unhealthy, damp and the air was stagnant and musty. Cholera was found to be more severe if the patient was malnourished or had an unhealthy lifestyle, including excessive eating and drinking, or was anxious. The first recommendations thus included frequent ventilation, exposure to the open air and a moderate lifestyle.⁹

Despite a relatively well-developed health system, the shortage of doctors in the country was most evident at the height of the epidemic. As a result, in the usual way, Church representatives were given a prominent role in educating people about the symptoms of the disease and how to treat it.¹⁰ Through the Church, various “tried and tested” and “well proven” remedies were disseminated throughout the country. These relied heavily on previously successful folk remedies and substances that were readily available.

5 TÓTH 1971, 2417.

6 HOWARD-JONES 1984.

7 GÖNCZI 2006-2007, 114.

8 FRISNYÁK 2018, 39-63.

9 SCHUSTER 1831, 46. These are the instructions of János Okolicsányi, 10th July, 1831, published by MEGAY 1965, 248.

10 SZÁLLÁSI 2018, 92.

As there was no agreement among practitioners as to the exact nature of the disease, these folk medicines were even distributed in printed form by the doctors themselves. These were just as successful and/or unsuccessful as the official treatments, because they were still in experimental stage. By way of example, I present two methods, which were considered useful. The first example is the prescription of János Morvai, a priest from Tiszabábolna:

“I put the patient in a warm bed, cover him with blankets and furs so that he has not the slightest access to the outside air, leaving only his nose uncovered, and put a cloth on his head. All the same, when the patient lies down, a bandage is applied: spearmint (herba mentae crispae), (Krausemünze), mugwort (herba abrotani), (Beifuss, a kind of wild wermuth [Artemisia abrotani]), savory (herba saturea, [Satureja montana]), sage (herba salvia, [Salvia officinalis]), mallow growing along the route (mallow [prob. Malva sylvestris or M. neglecta]). After cutting them, I boil them in water, or I put the cut herbs between two cloths and sprinkle one side with hot wine, and while they are still warm, I tie them on the patient’s belly, while they are still fresh, and cover the patient well again. I also give him a drink prepared as follows: I boil a decoction of elderberry mint or elderflower (flores sambuci, Krausemünze or Holler [Sambucus nigra]), or chamomile flower (flores chamomillae vulgaris [Matricaria chamomilla]), (Chamillen-Thee), and often let the patient drink it while still warm. As I have run out of spearmint, I use the herb pennyroyal (herba pulegii [Mentha pulegium]) (poley) instead, which grows in abundance in the meadows. If the patient get thirsty, I boil barley and give him the juice of it while it is still warm; if he is hungry, I boil hot soup, but give him the juice of the barley again to drink.

When the patient has overcome the heat, which drives away the disease, though he remains in heat under the blankets, he still suffers with a gentle patience; I have seen it in several persons when I was with them. – Even when the patient begins to feel better, I do not remove the bandage, but have it renewed in warmth, and cover him up to the neck with two sheets, so that no sudden changes occur; if the patient sweats under the sheet, it is a very good sign. Then I let him get up, but dress him in winter clothes; then, if he eats warm soup, I let him drink a little wine. In this way, many of my patients who were ill in the morning walked around the house in the evening.

As for me, I used to carry 4 bags of chlorine, but I have given it up; now I sometimes wash my hands with vinegar, which I pour into my handkerchief. I used to skip breakfast before the illness, but now I do not skip it. I often sweat in bed in the morning, but only in moderation. If I sweat during the day, I do not fail to change my white clothes. I sometimes bath, eat and drink in moderation. Above all, I guard against bloating and the return

of perspiration to the body. Other than that, I have not taken any other precautions up to this time.”¹¹



Caricature of a man fighting against cholera, painted by J.B.Wunder (c. 1832, ©Wellcome Collection).

various types of therapy such as sore throat, cystitis, nausea, flatulence or diarrhoea. The plant was thought to be an aphrodisiac. It has been shown to inhibit the growth of the fungus *Candida albicans*.

Spearmint (*Menta crispa*) is known to be a good laxative, antispasmodic, digestive and stomachic, and its tea can also be used for colds and coughs due to its anti-inflammatory and sedative effects. It also has some antibacterial activity against gram-positive bacteria.

It is no coincidence that mugwort (*herba abrotani*, [*Artemisia abrotani*]) is called “God’s tree” in Hungary, as God has blessed it with many positive properties. It was used as a yellow dye, as a moth repellent, to drive away flies and parasites, as a spice for fatty meats because of its appetising and digestive effects, in syrup form to flavour drinks, and for widespread medicinal purposes since the time of Hippocrates. Some even compared its effects to those of chamomile (Hecker, *Praktische Arzneimittellehre*, 1814). In fact, its medicinal effect on nervous stomach disorders has been confirmed, as has its stimulating effect on the appetite. It is no longer used because of the toxins it contains, such as thujon.

Savory (*herba saturea*, [*Satureja montana*]) is used today mainly as a seasoning for beans and meat, but it is also an antiseptic, carminative and digestive remedy, having been used at times against insect bites and for

11 PALLA 1958, 242-243.

Sage (*herba salvia*, [*Salvia officinalis*]) is an essential condiment in British cuisine and is frequently mentioned in classical works. The Romans called it *salvia*, a plant that “saves”. Indeed, they used it to ward off evil, increase fertility, diuretic or anaesthetic, emmenagogue, tonic, antipyretic and headache drug among others. In the late Middle Ages, it became an ingredient in a so-called *prophylactic vinegar* (also known as “*four thieves’ vinegar*”), a concoction invented to prevent the Black Death (pest) epidemic. Its antimicrobial and insect repellent properties make it a useful plant indeed.

The edible leaves and fruits of the mallow (*Malva sylvestris* or *M. neglecta*) can be made into a vegetable dish,¹² but they are also used as a yellow-green dye and as a medicine. Mucilage can be made from the decoction of the leaves, demulcent tea from the seeds, and the leaves can be used externally as a soothing compress. Experience suggests that it is used for stomach cramps, to suppress coughs and to soothe the mucous membranes of the mouth. The vitamin A, iron and calcium content is also beneficial.

Although elderberries [*Sambucus nigra*] are poisonous when eaten raw, they can be boiled to make a fine jam or jelly, and in Hungary a special brandy is made from them. The flowers, on the other hand, are usually dipped in a light batter and fried into pancakes or made into a drink. In the past, the flowers were used to treat colds and flu, stomach, kidney and bladder problems, and to strengthen the heart. Indeed, its antioxidants protect cell membranes, have anti-inflammatory, analgesic and antipyretic properties, while the aromatic complexes of its essential oils have a mild diaphoretic and expectorant effect. When combined with peppermint, eldermint combines the benefits of both.

The chamomile flower (*flores chamomillae vulgaris* [*Matricaria chamomilla*]) is still one of the most widely used drugs in folk medicine. Its medicinal use dates back to the time of the ancient Egyptians. It is used to treat inflammation, migraine, pain, haemorrhoids, asthma, colds, bronchitis, kidney problems, intestinal cramps, colitis, digestive problems, dizziness, cramps or as an appetite stimulant, to name but a few. Its anti-inflammatory, soothing, antispasmodic and nerve-calming properties have been clinically proven in wound care and cosmetic applications. The tea is an effective respiratory expectorant.

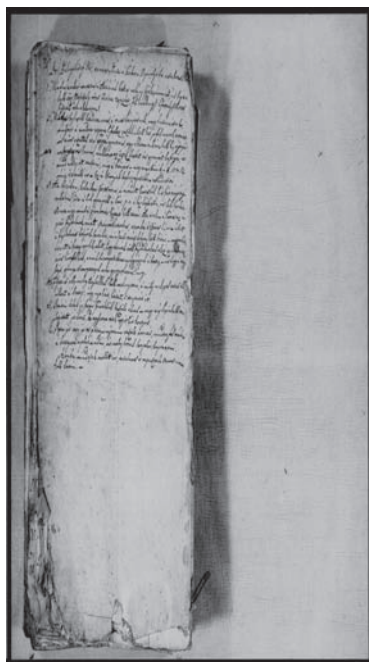
The Latin name of pennyroyal (*herba pulegii* [*Mentha pulegium*]) (Poley), from *pulex* “flea”, alludes to an important function of the plant: it gave away fleas. Apicius (1st century AD) often used it as a flavouring in his cookbook, but it fell out of use in the 20th century – we already know that, despite its peppermint flavour, it is poisonous if ingested. However, Nicholas Culpeper

¹² The leaves are made in Egypt and in some other countries in the Middle-East, into a stew-like dish, called *khobeiza* / *khobiza*.

(1616-1654), whose medical and botanical book was also known in Hungary, found its use effective for gastrointestinal problems, especially constipation, and haemorrhoids, but also for skin problems such as itching and blemishes.

If we look at the common folk medicinal uses of the plants included in the above recommendation, it is clear that this method of treatment was rightly considered beneficent, although not really enough to cure the patient.

Another method of treatment, recorded by the local parish priest in Enying, is as follows:¹³



Baptismal register of the Reformed parish of Enying from the years 1818-1862, with the advice of József Balog.

Mr József Balog's advice for the cholera epidemic. 1831

Let every man keep ready at home some horseradish roots, and at least one mash beer, black rape, mixed with half a verdung (about half a pound) rye flour.

As soon as watery vomiting or diarrhoea begins the slightest way, immediately grate half a handful of horseradish into the black rapeseed flour and knead it with strong vinegar to make a paste, spread it in two small-digits layers on a cloth large enough to cover the whole stomach and belly, and leave it there until the vomiting stops – up to 8, 10 or 12 hours and even longer. This is the safest way to quench your thirst. If there are cramps in the hands and feet, put two-two palms of the poultice on clothes and tie them on the places where the skin is weaker, i.e. on the curve of the hand and on the calf, almost in the same way as the bandage on the stomach. If the patient cannot bear the bandage because of the burning pain and the spasm does not stop, the bandage should be applied to another place immediately after it is removed

from the painful spot, reminding the nurses that the more pain you cause with strong bandages, the more certain is that the patient will be cured, and that great harm cannot be cured by weak caresses.

The soles of the feet must be warmed with such warm bricks that the patient can only stand, and the neck, back and palms of the hands must also be warmed. Let him drink tea of fragrant herbs, or, better still, good

13 CZUCZOR – FOGARASI 1840, 510.

warm wine, but only one or two sips at a time.

*It is very good to put a good pinch of freshly grated horseradish on the tongue of the patient every half an hour, swallowed with warm wine, i.e. pressed down with it. Besides all this, however, there should be the supervision of a sensible and experienced doctor.*¹⁴

All the plants mentioned in the advice were familiar to the people of the time, and were used to treat illness. The horseradish [*Armoracia rusticana*] mentioned in this example from Enying, for example, was used for colds, as an immune booster, and to treat gastrointestinal disorders. It has a proven bactericidal effect due to its mustard oil content, and the high vitamin C content also had a beneficial effect. Black mustard [*Sinapsis / Brassica nigra*] enhances this effect. In addition, rye flour contains many minerals, especially potassium and phosphorus, which are supplemented by several types of B vitamins, amino acids and a large amount of folic acid. Therefore, even if the treatment did not contain enough active ingredients for recovery – as in the previous case – it certainly increased the chances of survival.

As the epidemic progressed and experience with the disease multiplied, more and more medical recommendations came to light. However, procedures and treatments varied from area to area and often from doctor to doctor. Some of the recommendations were even, as we already know, harmful. Also extreme remedies and medicines, such as for instance the recommendation to treat the patient's feet and back with hot irons¹⁵, were spread. These, and the often contradictory treatments greatly reduced confidence in the medical profession, especially as doctors were unable to control the spread of the epidemic or at least to reduce mortality. No wonder, since the medical knowledge of the time was essentially limited to the treatment of complaints: to alleviate the main symptoms of cholera, drugs based on bismuth, chlormequat, calomel, opium and herbs with similar effects such as spearmint, chamomile and comfrey (*Symphytum officinalis*) or orchis (*Orchis sp.*) were used.

As far as the latter is concerned, orchis¹⁶ was used in the Middle Ages for irritations of the gastrointestinal tract, while comfrey was believed to be effective in healing bones and wounds,¹⁷ which can be explained by

14 Baptismal register of the Reformed Church of Enying 1818-1862. <https://www.familysearch.org/ark:/61903/3:1:939K-BH9T-5X?i=196&cc=4133831&cat=93202>. Accessed 29.12.2022.

15 RIGLER 1911, 912.

16 As the various species are very similar to each other, and there occur many hybrid forms in the nature itself, we only can speak of the genus, and it is irrational to think that they would distinguish them either.

17 Its Latin name taken from Greek, also attest it: *symphis* „growing together” + *phyton* „plant”.

the many phytochemicals it contains, especially allantoin, which accelerates cell formation and construction. However, it is hepatotoxic when consumed. Camphor was thought to have particularly strong medicinal properties.



Phlebotomy set in the ©HNM Semmelweis Museum. Photo by Eszter Blahák.

According to medical practice at the time, an essential part of professional medicine was phlebotomy, which usually involved cutting the blood vessels. If this was not possible because the blood had thickened, leeches were used to drain the patient's blood. Although the release of blood reduced the number of germs in the body, it also reduced the amount of blood, and with it the loss of physical strength. As blood transfusions were not yet an

option at the time, this common medical practice certainly had a negative effect on patients.

The public health authorities ordered increased personal hygiene and disinfection of the patient's environment and all objects that came into contact with the patient. The use of chloride of lime was recommended for this purpose,¹⁸ but these measures were still far from meeting today's standards. Doctors and pharmacists throughout the country stocked up to meet the expected increase in demand,¹⁹ but the spread of the disease could not be prevented, so the government also raised awareness of the importance of prevention.

PREVENTION

The industrial development and rapid urbanisation of the reform era changed not only social relations but also public attitudes, particularly in the medical profession. In addition to curing diseases, the importance of disease prevention and public health became central, not least thanks to successive cholera epidemics.

Despite the growing population of the settlements, there was no progress in the area of sanitation. In the absence of a sewerage system, sewage flowed from the streets into the rivers in some covered but mostly uncovered ditches.

18 Kiss 1965, 33.

19 SZECSKÓ 1831, 158, 160.

As the population grew, manure from animals, mostly horses, used to transport goods and people, was also dumped into these drains. The rubbish around the markets, which provided food for the population, was also mostly waiting to be washed away by a heavy shower. Sanitary conditions remained virtually at medieval levels.²⁰

József Fodor (1843-1901),²¹ the creator of Hungarian public health, painted a vivid picture of urban life in Pest. Although his book was published in the years after the first cholera epidemic, it is reasonable to assume that public sanitation conditions were similar before the first outbreak.

“In Pest, human waste – faeces and urine – falls through free openings, or at most through openings blocked with boards, into vertical drains in the walls of the houses and from there into horizontal drains a few metres below the courtyards and streets. The same drains also receive kitchen water, industrial liquids and rainwater, for which the drains have openings in several places leading to the open air – courtyard, corridor. These openings give off a very foul odour, which is particularly noticeable on hot summer days.

The yard drains lead to the street where they join the municipal sewer. These collectors eventually lead to the Danube, with open sewers at various points along the Danube. The sewage itself is dirty, has a very unpleasant smell, mixes slowly with the water of the Danube, and flows undiluted far from the shore until it is cleansed of the unfriendly elements by the Danube water carriers.

In the construction of the canals, little care is taken to avoid placing them near wells, which is why we often see the well and the latrina side by side in the same small corner of the yard.

In suburban tenements, the faeces and urine also fall through an opening into a vertical drain and from there directly or through another gutter or water-level drain into a pit. The pit is a few metres below the surface of the house and yard and is covered with earth, planks, stones and bricks. When they are full, they are emptied at night; the contents are stirred up with a rod, lifted with buckets, and carried away in barrels with tight seals”.²²

In addition to the question of the cleanliness of public places, the question of personal hygiene was also on the horizon of medical thought. Recommendations were made on the need for washing and the quality of

20 JUHÁSZ 1998, 51-60.

21 SZÁLLÁSI 2017, 105.

22 FODOR 1869.

clothing.²³ On the basis of the knowledge gained during the first period of the epidemic – and following the general view of the time – the authorities emphasised a healthy lifestyle and diet, which they formulated in several regulations. One of them, issued in Heves county, reads as follows

“Regulations for the Public where Cholera has appeared”

“To the inhabitants of the place where the cholera has struck, it is recommended to use wholesome, nutritious and easily digestible food; the use of herbs, pepper, cumin, aniseed, onion and garlic is also useful; but all raw and sour fruits, grapes, melons, watermelons, cucumbers, etc., are injurious. In practice, what is harmful is that which easily boils and makes digestion difficult, such as beer, sour milk, smoked salty or rotten fish, and fatty foods. On the other hand, the spirituous drinks are beneficial, namely those made from cumin, aniseed and the juice of juniper berries [Juniperus communis], and a little wine in moderation. On the other hand, the abuse of extremely hot and spicy foods, as well as spirituous drinks [today we call them alcohol], and the strain on the stomach, especially in the evening, are harmful. It is therefore necessary to pay attention to wine-selling houses, all the more so as drunkenness is a favourable adjuvant to “cholera”. But the quality of the food deserves the greatest attention, especially the presence of good bread in sufficient quantity.”²⁴

REMEDIES COMMONLY RECOMMENDED

We can conclude from the official recommendations that diet was by far the most important factor in preventing illness. The same herbs were often used as spices and medicines, and if we look at the medical recipes in circulation at the time, we can see that the first and foremost remedies for illnesses were those that were readily available at home, and that these recipes were based on ingredients that had long been known in folk medicine.²⁵ Sámuel Diószegi's book on herbal medicine (1813), which described the most commonly recommended herbal remedies, was widely used at the time.

Sage (*Salvia officinalis*) was found in every farmer's garden.

“Its tea, poured with water, is useful against stomach and breast troubles, bronchitis, belching, colic and headache; it dilutes the blood, helps with perspiration and sweating, if one is well covered after consuming it. But it is curious that it, when poured over wine, stops the languid and profuse perspiration, even in tuberculosis, if the patient drinks it cold, and also

23 SCHUSTER 1831, 115.

24 SZECSKÓ 1831, 158.

25 CSUPOR 2020, 20.

stops the flow of blood in women after childbirth, and of their milk after the child is weaned."²⁶

Almost all of the cholera recommendations include the mint (*Mentha crispae*), which was a favourite herb in peasant households. It is presented as follows:

"All kinds of mint are irritating, nerve-awakening, stimulating, astringent, relieve diarrhoea and vomiting, strengthen the stomach, aid in monthly cleansing, and it is very good to live with in pour tea form for those with great weakness, uterine spasms, hypochondria, phthisis (TB), colic and gout.



Mint, *Mentha crispata* Schrad. ex Willd., synonym to the binominal name for *Mentha spicata* L. in DARVAS-MAGYARY-KOSSA 1925, 116.

Manuscript by an unknown author at the Library of The HNM Szechenyi Museum, with drawing made after binding, in 1843. No. 255. (see UNKNOWN)

26 DIÓSZEGI 1813, 262.

With regard to its antiemetic properties, it should be noted that if vomiting is due to an inflammation of the stomach, mint tea is harmful and even increases vomiting.

Externally, a bath and a warm wet compress made of it stretches the sore and burned tendons, cures the luxations and dissolves the tumours arising from them."²⁷

He also recommended horseradish (*Armoracia rusticana*) as a medicine for external and internal use.

"It was also found to be useful for choking, colds, prolonged colds, bronchitis, gout and oedema. Grated horseradish, when applied to the skin, turns red and after a long time it draws a blister; and is therefore useful in the treatment of lancinating roaming pains (rheumatism), and in the treatment of the limbs when they have numbness, strokes and the like."²⁸

To prevent dehydration, the patient was given a thin barley broth and a barley compress was applied to his limbs to keep him warm.

Barley porridge and small porridge are made from barley; both are good, nutritious food. Its slippery juice is used to treat illnesses that require cooling and slimy drinks, such as colds, bronchitis, dysentery and diarrhoea."²⁹

The most common concoction that cholera patients drank was the stomach-soothing, emetic, mildly pain-relieving chamomile tea.

Medicinal chamomile is one of the best-known remedies among those in the pharmacopoeia and household; it has a wide range of benefits, for its flowers are decomposing, thawing, softening, and wind relieving, astringent, scorching and pain-relieving."³⁰

CONCLUSION

To sum up, despite the best efforts of the health authorities, the first cholera outbreak was characterised by a lack of thought and a rush to action. Methods developed during previous plague epidemics were used to prevent the spread of the epidemic, but these restrictions did not effectively prevent the spread. In the countryside, where the medieval health network was still in place, the Church was able to help some of the victims, but the medical profession, which was expected to overcome the epidemic, was often forced to

27 DIÓSZEGI 1813, 267

28 DIÓSZEGI 1813, 278.

29 DIÓSZEGI 1813, 153.

30 DIÓSZEGI 1813, 309.

fight it itself without effective means, which severely undermined confidence in doctors. Superstitious fear of the disease made protection even more difficult. News of poisonings caused by the medicines of well-meaning but poorly trained doctors swept through the country like a storm, leading to an awareness of allopathic medicine. Villagers preferred to accept ancient, well-known herbs as possible medicines. And so did the doctors.

“*In medicine, I did not exclusively follow the suggestions of one or the other, but common sense, the advice of reason, and based on my experience, I used something of every remedy for the illness,*” wrote Sámuel Trombitás, chief physician of Zemplén County.³¹ Studying the medical press and the records available at the time, the treatment of the disease during the first epidemic could not be better summarised: doctors and *pastors* tried to treat the patients from their own source of experience learned by different diseases with similar symptoms, in order to stop the spread of the epidemic, but the try and error methods required many victims.

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31 Nemzeti Levéltár IV. 504: Borsod Vármegye kolera ügyében kiküldött Állandó Bizottságának iratai (Cholera acták) [Documents of the Standing Committee of the County of Borsod sent to deal with cholera]. In BÁLINT NAGY 1931, 1233.

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**“LET EVERY MAN KEEP READY AT HOME
SOME HORSERADISH ROOTS AND AT LEAST
ONE MASH OF BEER, BLACK RUE, MIXED
WITH HALF A VERDUNG RYE FLOUR.”
EXCERPTS FROM THE POSSIBILITIES OF CURING
CHOLERA DURING THE FIRST EPIDEMIC, 1831**

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ABSTRACT

From the outbreak of the first cholera epidemic in Hungary in June 1831 to its end, 230,000 people, or almost 3% of the population at the time, died and 421,468 became ill. The reasons for the high mortality rate include that an unknown disease spread, there were not enough doctors, and also the mistrust and ignorance, which accompanied the epidemic.

In this article we try to answer the question of what knowledge was available at the beginning of the epidemic to help common people protect themselves against the disease. To do this, we have turned to articles in the medical press of the time and to sources preserved in the pages of church registers in the *medicina pastoralis*. As the surviving prescriptions usually refer to herbs that were known and tried to combat the disease, we have listed the most common herbs and what was known about them at the time.¹

KEYWORDS: cholera, epidemic, herbal medicine, *medicina pastoralis*, nutrition, hygiene

INTRODUCTION

The first time in European history that a society with a relatively advanced health system was confronted with a disease hitherto unknown in its region was the first cholera epidemic in 1831. Almost everything is already

1 József MÁTON (ed.), Magyar Kurir 45/36, 1st Nov. 1831, 294.

known about the centralised official measures taken to combat it, but little is known about the personal level in the lower strata of society. Therefore, in the article I would like to illustrate what was available to ordinary people to treat the disease, how it was fought and how it was cured.

Cholera is caused by a gram-negative bacterium called *Vibrio cholerae* and has a rapid onset, with the main symptoms being acute vomiting and diarrhoea.² As the disease progresses, the patient develops violent muscle contractions, sunken eyes, blue lips and a characteristic “cholera face”. The explanation is that the patient loses large amounts of water in a very short time. The loss of fluid causes a salt and water imbalance in the body system, which eventually leads to kidney and circulatory failure. The process leading



to the patient’s death can sometimes take only a few hours if left untreated. In the 19th century, the mortality rate from the disease was usually between 30 and 60 percent. It was responsible for the deaths of around one million people in Hungary during the epidemics that ravaged the country in several waves in that century.³

Figure 1. A young woman of Vienna who died of cholera, depicted when healthy and four hours before death. Coloured stipple engraving. Date: [1831?] Reference: 5396i. Wellcome Collection.

Cholera has been present in the Ganges and Indus estuaries for centuries, but began its global conquest in 1817. It reached the borders of Hungary via Galicia and Moldavia in December 1830. To monitor the impending epidemic, which was already raging in Russia, the Viennese court sent a medical delegation to study the symptoms and cures on the spot.⁴ Although Mihály Lenhossék (1863-1937), the country’s chief physician, together with the medical faculty of the University of Pest, declared still in December 1830 that cholera was a contagious disease transmitted by human contact, air, animals

2 Cholera – National Public Health Centre, Healthline at <https://egeszsegvonal.gov.hu/k/826-kolera.html>, last accessed 29.12.2022.

3 MÁDAI 1983, 58.

4 Kiss 2005, 79-92.

or certain objects,⁵ its veracity was long doubted. In fact, it was not until Robert Koch (1843-1910) isolated the cholera bacterium in 1884⁶ that it became known exactly how the disease was spread or transmitted.⁷

EARLY PROTECTIVE MEASURES

To stop the 1830 outbreak, the authorities used tools that had been tried and tested in previous outbreaks of other infectious diseases. To control the spread of the disease, they restricted the movement of people, setting up cordons along county borders, town boundaries, trade routes and rivers, with soldiers checking who crossed and why. Cholera-stricken areas were placed under strict quarantine, which had proved effective during the plague epidemics. These places were called ‘quarantine houses’. They were set up for travellers, who spent as much time there as necessary to find out whether they were infected or not.⁸

While the authorities struggled with their administrative resources to stop the spread of the disease, the medical community was also looking for possible solutions to both contain and cure the disease. External and internal factors were identified as causes of the disease. An important part of protection was therefore lifestyle advice, teaching people how to live to preferably avoid infection. Several external factors were identified. It was initially thought that the disease developed in circumstances where the climate of the dwelling was unfavourable, unhealthy, damp and the air was stagnant and musty. Cholera was found to be more severe if the patient was malnourished or had an unhealthy lifestyle, including excessive eating and drinking, or was anxious. The first recommendations thus included frequent ventilation, exposure to the open air and a moderate lifestyle.⁹

Despite a relatively well-developed health system, the shortage of doctors in the country was most evident at the height of the epidemic. As a result, in the usual way, Church representatives were given a prominent role in educating people about the symptoms of the disease and how to treat it.¹⁰ Through the Church, various “tried and tested” and “well proven” remedies were disseminated throughout the country. These relied heavily on previously successful folk remedies and substances that were readily available.

5 TÓTH 1971, 2417.

6 HOWARD-JONES 1984.

7 GÖNCZI 2006-2007, 114.

8 FRISNYÁK 2018, 39-63.

9 SCHUSTER 1831, 46. These are the instructions of János Okolicsányi, 10th July, 1831, published by MEGAY 1965, 248.

10 SZÁLLÁSI 2018, 92.

As there was no agreement among practitioners as to the exact nature of the disease, these folk medicines were even distributed in printed form by the doctors themselves. These were just as successful and/or unsuccessful as the official treatments, because they were still in experimental stage. By way of example, I present two methods, which were considered useful. The first example is the prescription of János Morvai, a priest from Tiszabábolna:

“I put the patient in a warm bed, cover him with blankets and furs so that he has not the slightest access to the outside air, leaving only his nose uncovered, and put a cloth on his head. All the same, when the patient lies down, a bandage is applied: spearmint (herba mentae crispae), (Krausemünze), mugwort (herba abrotani), (Beifuss, a kind of wild wermuth [Artemisia abrotani]), savory (herba saturea, [Satureja montana]), sage (herba salvia, [Salvia officinalis]), mallow growing along the route (mallow [prob. Malva sylvestris or M. neglecta]). After cutting them, I boil them in water, or I put the cut herbs between two cloths and sprinkle one side with hot wine, and while they are still warm, I tie them on the patient’s belly, while they are still fresh, and cover the patient well again. I also give him a drink prepared as follows: I boil a decoction of elderberry mint or elderflower (flores sambuci, Krausemünze or Holler [Sambucus nigra]), or chamomile flower (flores chamomillae vulgaris [Matricaria chamomilla]), (Chamillen-Thee), and often let the patient drink it while still warm. As I have run out of spearmint, I use the herb pennyroyal (herba pulegii [Mentha pulegium]) (poley) instead, which grows in abundance in the meadows. If the patient get thirsty, I boil barley and give him the juice of it while it is still warm; if he is hungry, I boil hot soup, but give him the juice of the barley again to drink.

When the patient has overcome the heat, which drives away the disease, though he remains in heat under the blankets, he still suffers with a gentle patience; I have seen it in several persons when I was with them. – Even when the patient begins to feel better, I do not remove the bandage, but have it renewed in warmth, and cover him up to the neck with two sheets, so that no sudden changes occur; if the patient sweats under the sheet, it is a very good sign. Then I let him get up, but dress him in winter clothes; then, if he eats warm soup, I let him drink a little wine. In this way, many of my patients who were ill in the morning walked around the house in the evening.

As for me, I used to carry 4 bags of chlorine, but I have given it up; now I sometimes wash my hands with vinegar, which I pour into my handkerchief. I used to skip breakfast before the illness, but now I do not skip it. I often sweat in bed in the morning, but only in moderation. If I sweat during the day, I do not fail to change my white clothes. I sometimes bath, eat and drink in moderation. Above all, I guard against bloating and the return

of perspiration to the body. Other than that, I have not taken any other precautions up to this time.”¹¹



Caricature of a man fighting against cholera, painted by J.B. Wunder (c. 1832, ©Wellcome Collection).

various types of therapy such as sore throat, cystitis, nausea, flatulence or diarrhoea. The plant was thought to be an aphrodisiac. It has been shown to inhibit the growth of the fungus *Candida albicans*.

Spearmint (*Menta crispa*) is known to be a good laxative, antispasmodic, digestive and stomachic, and its tea can also be used for colds and coughs due to its anti-inflammatory and sedative effects. It also has some antibacterial activity against gram-positive bacteria.

It is no coincidence that mugwort (*herba abrotani*, [*Artemisia abrotani*]) is called “God’s tree” in Hungary, as God has blessed it with many positive properties. It was used as a yellow dye, as a moth repellent, to drive away flies and parasites, as a spice for fatty meats because of its appetising and digestive effects, in syrup form to flavour drinks, and for widespread medicinal purposes since the time of Hippocrates. Some even compared its effects to those of chamomile (Hecker, *Praktische Arzneimittellehre*, 1814). In fact, its medicinal effect on nervous stomach disorders has been confirmed, as has its stimulating effect on the appetite. It is no longer used because of the toxins it contains, such as thujon.

Savory (*herba saturea*, [*Satureja montana*]) is used today mainly as a seasoning for beans and meat, but it is also an antiseptic, carminative and digestive remedy, having been used at times against insect bites and for

11 PALLA 1958, 242-243.

Sage (*herba salvia*, [*Salvia officinalis*]) is an essential condiment in British cuisine and is frequently mentioned in classical works. The Romans called it *salvia*, a plant that “saves”. Indeed, they used it to ward off evil, increase fertility, diuretic or anaesthetic, emmenagogue, tonic, antipyretic and headache drug among others. In the late Middle Ages, it became an ingredient in a so-called *prophylactic vinegar* (also known as “*four thieves’ vinegar*”), a concoction invented to prevent the Black Death (pest) epidemic. Its antimicrobial and insect repellent properties make it a useful plant indeed.

The edible leaves and fruits of the mallow (*Malva sylvestris* or *M. neglecta*) can be made into a vegetable dish,¹² but they are also used as a yellow-green dye and as a medicine. Mucilage can be made from the decoction of the leaves, demulcent tea from the seeds, and the leaves can be used externally as a soothing compress. Experience suggests that it is used for stomach cramps, to suppress coughs and to soothe the mucous membranes of the mouth. The vitamin A, iron and calcium content is also beneficial.

Although elderberries [*Sambucus nigra*] are poisonous when eaten raw, they can be boiled to make a fine jam or jelly, and in Hungary a special brandy is made from them. The flowers, on the other hand, are usually dipped in a light batter and fried into pancakes or made into a drink. In the past, the flowers were used to treat colds and flu, stomach, kidney and bladder problems, and to strengthen the heart. Indeed, its antioxidants protect cell membranes, have anti-inflammatory, analgesic and antipyretic properties, while the aromatic complexes of its essential oils have a mild diaphoretic and expectorant effect. When combined with peppermint, eldermint combines the benefits of both.

The chamomile flower (*flores chamomillae vulgaris* [*Matricaria chamomilla*]) is still one of the most widely used drugs in folk medicine. Its medicinal use dates back to the time of the ancient Egyptians. It is used to treat inflammation, migraine, pain, haemorrhoids, asthma, colds, bronchitis, kidney problems, intestinal cramps, colitis, digestive problems, dizziness, cramps or as an appetite stimulant, to name but a few. Its anti-inflammatory, soothing, antispasmodic and nerve-calming properties have been clinically proven in wound care and cosmetic applications. The tea is an effective respiratory expectorant.

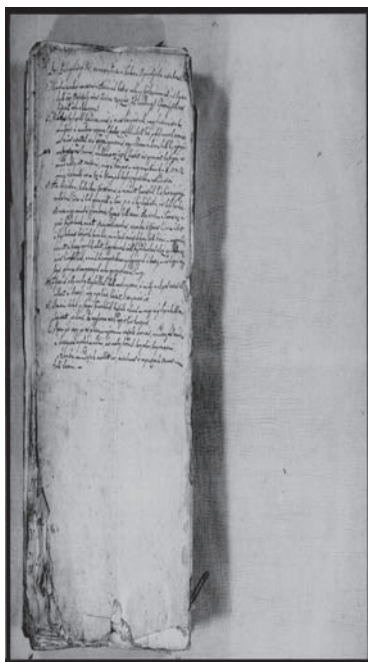
The Latin name of pennyroyal (*herba pulegii* [*Mentha pulegium*]) (Poley), from *pulex* “flea”, alludes to an important function of the plant: it gave away fleas. Apicius (1st century AD) often used it as a flavouring in his cookbook, but it fell out of use in the 20th century – we already know that, despite its peppermint flavour, it is poisonous if ingested. However, Nicholas Culpeper

¹² The leaves are made in Egypt and in some other countries in the Middle-East, into a stew-like dish, called *khobeiza* / *khobiza*.

(1616-1654), whose medical and botanical book was also known in Hungary, found its use effective for gastrointestinal problems, especially constipation, and haemorrhoids, but also for skin problems such as itching and blemishes.

If we look at the common folk medicinal uses of the plants included in the above recommendation, it is clear that this method of treatment was rightly considered beneficent, although not really enough to cure the patient.

Another method of treatment, recorded by the local parish priest in Enying, is as follows:¹³



Baptismal register of the Reformed parish of Enying from the years 1818-1862, with the advice of József Balog.

Mr József Balog's advice for the cholera epidemic. 1831

Let every man keep ready at home some horseradish roots, and at least one mash beer, black rape, mixed with half a verdung (about half a pound) rye flour.

As soon as watery vomiting or diarrhoea begins the slightest way, immediately grate half a handful of horseradish into the black rapeseed flour and knead it with strong vinegar to make a paste, spread it in two small-digits layers on a cloth large enough to cover the whole stomach and belly, and leave it there until the vomiting stops – up to 8, 10 or 12 hours and even longer. This is the safest way to quench your thirst. If there are cramps in the hands and feet, put two-two palms of the poultice on clothes and tie them on the places where the skin is weaker, i.e. on the curve of the hand and on the calf, almost in the same way as the bandage on the stomach. If the patient cannot bear the bandage because of the burning pain and the spasm does not stop, the bandage should be applied to another place immediately after it is removed

from the painful spot, reminding the nurses that the more pain you cause with strong bandages, the more certain is that the patient will be cured, and that great harm cannot be cured by weak caresses.

The soles of the feet must be warmed with such warm bricks that the patient can only stand, and the neck, back and palms of the hands must also be warmed. Let him drink tea of fragrant herbs, or, better still, good

13 CZUCZOR – FOGARASI 1840, 510.

warm wine, but only one or two sips at a time.

*It is very good to put a good pinch of freshly grated horseradish on the tongue of the patient every half an hour, swallowed with warm wine, i.e. pressed down with it. Besides all this, however, there should be the supervision of a sensible and experienced doctor.*¹⁴

All the plants mentioned in the advice were familiar to the people of the time, and were used to treat illness. The horseradish [*Armoracia rusticana*] mentioned in this example from Enying, for example, was used for colds, as an immune booster, and to treat gastrointestinal disorders. It has a proven bactericidal effect due to its mustard oil content, and the high vitamin C content also had a beneficial effect. Black mustard [*Sinapsis / Brassica nigra*] enhances this effect. In addition, rye flour contains many minerals, especially potassium and phosphorus, which are supplemented by several types of B vitamins, amino acids and a large amount of folic acid. Therefore, even if the treatment did not contain enough active ingredients for recovery – as in the previous case – it certainly increased the chances of survival.

As the epidemic progressed and experience with the disease multiplied, more and more medical recommendations came to light. However, procedures and treatments varied from area to area and often from doctor to doctor. Some of the recommendations were even, as we already know, harmful. Also extreme remedies and medicines, such as for instance the recommendation to treat the patient's feet and back with hot irons¹⁵, were spread. These, and the often contradictory treatments greatly reduced confidence in the medical profession, especially as doctors were unable to control the spread of the epidemic or at least to reduce mortality. No wonder, since the medical knowledge of the time was essentially limited to the treatment of complaints: to alleviate the main symptoms of cholera, drugs based on bismuth, chlormequat, calomel, opium and herbs with similar effects such as spearmint, chamomile and comfrey (*Symphytum officinalis*) or orchis (*Orchis sp.*) were used.

As far as the latter is concerned, orchis¹⁶ was used in the Middle Ages for irritations of the gastrointestinal tract, while comfrey was believed to be effective in healing bones and wounds,¹⁷ which can be explained by

14 Baptismal register of the Reformed Church of Enying 1818-1862. <https://www.familysearch.org/ark:/61903/3:1:939K-BH9T-5X?i=196&cc=4133831&cat=93202>. Accessed 29.12.2022.

15 RIGLER 1911, 912.

16 As the various species are very similar to each other, and there occur many hybrid forms in the nature itself, we only can speak of the genus, and it is irrational to think that they would distinguish them either.

17 Its Latin name taken from Greek, also attest it: *symphis* „growing together” + *phyton* „plant”.

the many phytochemicals it contains, especially allantoin, which accelerates cell formation and construction. However, it is hepatotoxic when consumed. Camphor was thought to have particularly strong medicinal properties.



Phlebotomy set in the ©HNM Semmelweis Museum. Photo by Eszter Blahák.

According to medical practice at the time, an essential part of professional medicine was phlebotomy, which usually involved cutting the blood vessels. If this was not possible because the blood had thickened, leeches were used to drain the patient's blood. Although the release of blood reduced the number of germs in the body, it also reduced the amount of blood, and with it the loss of physical strength. As blood transfusions were not yet an

option at the time, this common medical practice certainly had a negative effect on patients.

The public health authorities ordered increased personal hygiene and disinfection of the patient's environment and all objects that came into contact with the patient. The use of chloride of lime was recommended for this purpose,¹⁸ but these measures were still far from meeting today's standards. Doctors and pharmacists throughout the country stocked up to meet the expected increase in demand,¹⁹ but the spread of the disease could not be prevented, so the government also raised awareness of the importance of prevention.

PREVENTION

The industrial development and rapid urbanisation of the reform era changed not only social relations but also public attitudes, particularly in the medical profession. In addition to curing diseases, the importance of disease prevention and public health became central, not least thanks to successive cholera epidemics.

Despite the growing population of the settlements, there was no progress in the area of sanitation. In the absence of a sewerage system, sewage flowed from the streets into the rivers in some covered but mostly uncovered ditches.

18 Kiss 1965, 33.

19 SZECSKÓ 1831, 158, 160.

As the population grew, manure from animals, mostly horses, used to transport goods and people, was also dumped into these drains. The rubbish around the markets, which provided food for the population, was also mostly waiting to be washed away by a heavy shower. Sanitary conditions remained virtually at medieval levels.²⁰

József Fodor (1843-1901),²¹ the creator of Hungarian public health, painted a vivid picture of urban life in Pest. Although his book was published in the years after the first cholera epidemic, it is reasonable to assume that public sanitation conditions were similar before the first outbreak.

“In Pest, human waste – faeces and urine – falls through free openings, or at most through openings blocked with boards, into vertical drains in the walls of the houses and from there into horizontal drains a few metres below the courtyards and streets. The same drains also receive kitchen water, industrial liquids and rainwater, for which the drains have openings in several places leading to the open air – courtyard, corridor. These openings give off a very foul odour, which is particularly noticeable on hot summer days.

The yard drains lead to the street where they join the municipal sewer. These collectors eventually lead to the Danube, with open sewers at various points along the Danube. The sewage itself is dirty, has a very unpleasant smell, mixes slowly with the water of the Danube, and flows undiluted far from the shore until it is cleansed of the unfriendly elements by the Danube water carriers.

In the construction of the canals, little care is taken to avoid placing them near wells, which is why we often see the well and the latrina side by side in the same small corner of the yard.

In suburban tenements, the faeces and urine also fall through an opening into a vertical drain and from there directly or through another gutter or water-level drain into a pit. The pit is a few metres below the surface of the house and yard and is covered with earth, planks, stones and bricks. When they are full, they are emptied at night; the contents are stirred up with a rod, lifted with buckets, and carried away in barrels with tight seals”.²²

In addition to the question of the cleanliness of public places, the question of personal hygiene was also on the horizon of medical thought. Recommendations were made on the need for washing and the quality of

20 JUHÁSZ 1998, 51-60.

21 SZÁLLÁSI 2017, 105.

22 FODOR 1869.

clothing.²³ On the basis of the knowledge gained during the first period of the epidemic – and following the general view of the time – the authorities emphasised a healthy lifestyle and diet, which they formulated in several regulations. One of them, issued in Heves county, reads as follows

“Regulations for the Public where Cholera has appeared”

“To the inhabitants of the place where the cholera has struck, it is recommended to use wholesome, nutritious and easily digestible food; the use of herbs, pepper, cumin, aniseed, onion and garlic is also useful; but all raw and sour fruits, grapes, melons, watermelons, cucumbers, etc., are injurious. In practice, what is harmful is that which easily boils and makes digestion difficult, such as beer, sour milk, smoked salty or rotten fish, and fatty foods. On the other hand, the spirituous drinks are beneficial, namely those made from cumin, aniseed and the juice of juniper berries [Juniperus communis], and a little wine in moderation. On the other hand, the abuse of extremely hot and spicy foods, as well as spirituous drinks [today we call them alcohol], and the strain on the stomach, especially in the evening, are harmful. It is therefore necessary to pay attention to wine-selling houses, all the more so as drunkenness is a favourable adjuvant to “cholera”. But the quality of the food deserves the greatest attention, especially the presence of good bread in sufficient quantity.”²⁴

REMEDIES COMMONLY RECOMMENDED

We can conclude from the official recommendations that diet was by far the most important factor in preventing illness. The same herbs were often used as spices and medicines, and if we look at the medical recipes in circulation at the time, we can see that the first and foremost remedies for illnesses were those that were readily available at home, and that these recipes were based on ingredients that had long been known in folk medicine.²⁵ Sámuel Diószegi's book on herbal medicine (1813), which described the most commonly recommended herbal remedies, was widely used at the time.

Sage (*Salvia officinalis*) was found in every farmer's garden.

“Its tea, poured with water, is useful against stomach and breast troubles, bronchitis, belching, colic and headache; it dilutes the blood, helps with perspiration and sweating, if one is well covered after consuming it. But it is curious that it, when poured over wine, stops the languid and profuse perspiration, even in tuberculosis, if the patient drinks it cold, and also

23 SCHUSTER 1831, 115.

24 SZECSKÓ 1831, 158.

25 CSUPOR 2020, 20.

stops the flow of blood in women after childbirth, and of their milk after the child is weaned."²⁶

Almost all of the cholera recommendations include the mint (*Mentha crispae*), which was a favourite herb in peasant households. It is presented as follows:

"All kinds of mint are irritating, nerve-awakening, stimulating, astringent, relieve diarrhoea and vomiting, strengthen the stomach, aid in monthly cleansing, and it is very good to live with in pour tea form for those with great weakness, uterine spasms, hypochondria, phthisis (TB), colic and gout.



Mint, *Mentha crispata* Schrad. ex Willd., synonym to the binominal name for *Mentha spicata* L. in DARVAS-MAGYARY-KOSSA 1925, 116.

Manuscript by an unknown author at the Library of The HNM Szechenyi Museum, with drawing made after binding, in 1843. No. 255. (see UNKNOWN)

26 DIÓSZEGI 1813, 262.

With regard to its antiemetic properties, it should be noted that if vomiting is due to an inflammation of the stomach, mint tea is harmful and even increases vomiting.

Externally, a bath and a warm wet compress made of it stretches the sore and burned tendons, cures the luxations and dissolves the tumours arising from them."²⁷

He also recommended horseradish (*Armoracia rusticana*) as a medicine for external and internal use.

"It was also found to be useful for choking, colds, prolonged colds, bronchitis, gout and oedema. Grated horseradish, when applied to the skin, turns red and after a long time it draws a blister; and is therefore useful in the treatment of lancinating roaming pains (rheumatism), and in the treatment of the limbs when they have numbness, strokes and the like."²⁸

To prevent dehydration, the patient was given a thin barley broth and a barley compress was applied to his limbs to keep him warm.

Barley porridge and small porridge are made from barley; both are good, nutritious food. Its slippery juice is used to treat illnesses that require cooling and slimy drinks, such as colds, bronchitis, dysentery and diarrhoea."²⁹

The most common concoction that cholera patients drank was the stomach-soothing, emetic, mildly pain-relieving chamomile tea.

Medicinal chamomile is one of the best-known remedies among those in the pharmacopoeia and household; it has a wide range of benefits, for its flowers are decomposing, thawing, softening, and wind relieving, astringent, scorching and pain-relieving."³⁰

CONCLUSION

To sum up, despite the best efforts of the health authorities, the first cholera outbreak was characterised by a lack of thought and a rush to action. Methods developed during previous plague epidemics were used to prevent the spread of the epidemic, but these restrictions did not effectively prevent the spread. In the countryside, where the medieval health network was still in place, the Church was able to help some of the victims, but the medical profession, which was expected to overcome the epidemic, was often forced to

27 DIÓSZEGI 1813, 267

28 DIÓSZEGI 1813, 278.

29 DIÓSZEGI 1813, 153.

30 DIÓSZEGI 1813, 309.

fight it itself without effective means, which severely undermined confidence in doctors. Superstitious fear of the disease made protection even more difficult. News of poisonings caused by the medicines of well-meaning but poorly trained doctors swept through the country like a storm, leading to an awareness of allopathic medicine. Villagers preferred to accept ancient, well-known herbs as possible medicines. And so did the doctors.

“*In medicine, I did not exclusively follow the suggestions of one or the other, but common sense, the advice of reason, and based on my experience, I used something of every remedy for the illness,*” wrote Sámuel Trombitás, chief physician of Zemplén County.³¹ Studying the medical press and the records available at the time, the treatment of the disease during the first epidemic could not be better summarised: doctors and *pastors* tried to treat the patients from their own source of experience learned by different diseases with similar symptoms, in order to stop the spread of the epidemic, but the try and error methods required many victims.

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