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HUNGARIAN AND COMPARATIVE FOLKLORE PROGRAM

Theses of PhD Dissertation

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**HUNGARIAN TRADITIONS OF DENTISTRY IN RESPECT OF SOURCES
AND BIBLIOGRAPHY**

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2012

1. SUBJECT, OBJECTIVE, METHODS AND STRUCTURE OF THE THESIS

1.1 Subject and Objectives

The dissertation aims at revealing knowledge accumulated on the conventional Hungarian folk dentistry, tracing back from the conquest to date, expanding the research on all Hungarians in the Carpathian Basin.

The history of folk dentistry in Hungary has not been elaborated as yet. There have been publications (Oravecz Pál¹, Huszár György², Forrai Judit³, Péter Mihály⁴) describing the history of Hungarian dentistry they, however, dealt primarily with the „official” dental cure history and only sporadically disclosed data about the folk dentistry.

In my thesis I attempted to identify the circle of healers, „specialists” participating in medieval and recent dentistry. I have investigated, collected and systematized the medicinal materials - irrespective of their origin - applied in curing theeth, as well as methods, procedures, practices, treatment modalities used in Hungary during the past centuries for the management of dental and oral cavity diseases. I have tried to disclose the ratio of „rational” and „irrational, magic” interventions; the outcome of dental diseases and treatments, how people attended their theeth, protected their health; how much importance they attached to the role of theeth in esthetics and facial harmony; whether they made any effort to maintain the evenness and whiteness of their theeth.

I have also investigated the matter what elements of past medicine were accepted or could become accepted (perhaps in an alternative form) as medically acknowledged therapeutic approaches.

1.2 Methodology

My thesis is primarily based on disclosure, collection, review and processing of written keepsakes, scientific literature sources, ethnographic assembling materials.

1.2.1 I have made endeavours to find original relevant sources: manuscripts and prints, cure and herbal books, formularies, letters, codices of the sixteenth to nineteenth century, etc. I have studied reprint issues, medical topographies, chief medical officer reports and dissertations, too.

I have (mostly) utilized materials of the National Széchenyi Library, the Library of Hungarian Academy of Sciences and the Archive of Manuscripts as well as old book collections; furthermore

¹ Oravecz P. 1958.

² Huszár Gy. 1965.

³ Forrai J. 2005.

⁴ Péter M. 2006.

documents of Semmelweis Medical History Library; Library of Eötvös Loránd University, Central Library of Semmelweis University; Municipal Szabó Ervin Library, Library of Folklore Department of Eötvös Loránd University and Library of Ethnographic Museum and, in a minor portion, of the Hungarian National Archives, respectively. I have discovered a total of 46 cure books (partly uncatalogued up to now), formularies and household omniscients that describe data in regard of folk dentistry.

1.2.2 I have made efforts to survey and elaborate the ethnomedicine literature as completely as possible in the course of which I have fully read several hundred publications and papers. Information on folk dentistry and generally on teeth can be discovered not only in papers dealing with folk medicine. Often scientific papers describing ethnography, customs, features of individual regions or essays devoted to other fields of ethnography (incantations, suppositions, superstitions, ditties, idioms, etc.) or perhaps research related to everyday rural life, (medicinal) herbal plants, animals, household habits can also yield valuable contribution.

From the literature I have reviewed not only papers of the well-known journals and periodicals but numerous local, occasional publications (partially those over the frontier) as well.

1.3 Structure of the Thesis

The first two chapters: Introduction and the Research Sources are followed by the section (3) dealing with the general history of dental cure. I have comprehensively elaborated the history of general dental cure but have taken over only those details from ancient, medieval etc. dental cure history that are somewhat common or correlate with the Hungarian traditions of dental cure. Chapter 4 discusses the history of Hungarian dentistry. Chapter 5 describes the (suspected) causes of toothache. The second part of the dissertation (chapters 6 to 12) deals with the therapy of dental and oral cavity diseases.

The most comprehensive chapter (6) is devoted to the dental caries, toothache and their management. In regard of toothache I consider therapies according to the quality and nature of drugs: herbal medicines (together with peculiarities of folkish herbal use), compounds of animal origin, chemical and mineral substances, oils, etc. (It goes without saying that numerous folk „medicaments” are known that contain various ingredients, in many cases the medicines are even mixed with magic elements.)

Separate attention is paid to drugs to be applied not in the oral cavity or on the face but on other parts of the body (wrist, neck, ear, etc. 6.4). Chapter 6.5 describes tooth extraction and other surgical interventions. Other therapeutic modalities for alleviation of toothache are also interesting (6.6) that cannot be categorized in neither chapters above, e.g. scarification, bath, etc.

In Chapter 7 I dealt with childhood dental and oral cavity complaints and their treatment. In this regard, a number of various characteristics and substantial differences can be observed as compared to adults. Thus, e.g. many interesting pieces of information can be found in connection with the eruption and shedding of teeth, the thrush, etc.

The next chapter (8) is about the other great part of oral cavity diseases i.e. the inflammation of the gingiva and other soft tissue parts of the mouth.

A separate chapter (9) is dedicated to the magical, sacral cures of tooth and oral cavity diseases. Procedures have been collected where the primary therapeutic tools consisted mainly of words, prayers, actions, series of actions, sacraments, etc. even if some (medicinal) compound is listed in the „prescriptions”.

Further chapters describe other, rare diseases of the teeth and oral cavity like the moving „unsteady” teeth (10); treatment of the sublingual frog (11); the black, discoloured teeth (12); elimination of bad breath (13) and diseases of the tongue (14).

Chapter 15 seeks an answer to the question how people in early centuries attended their teeth, whether they cleaned their teeth at all. What actions were made for mouth and tooth hygiene in the long run?

The closing chapter summarizes the peculiarities, characteristics of the Hungarian folk dentistry, synthesizing the information and knowledge accumulated among Hungarian people in connection with the oral cavity and teeth, which knowledge seems to be getting buried in oblivion nowadays.

2. RESEARCH RESULTS

2.1 I have collected and systematized the medical materials used in past centuries for the cure of dental and oral cavity diseases in Hungary, the therapeutic procedures and methods, respectively. I have been principally interested in the everyday, conventional, folk cure approaches rather than in data of the „official therapies”.

I have not only dealt with the cure of diseases but have striven to highlight background (suspected) causes of therapeutic approaches, theoretical considerations, beliefs, superstitions, etc. of whatever origin they are.

In respect of data disclosed and elaborated, I guess my work can play a suppletory role both for ethnomedicine and history of dentistry.

2.2 The data elaborated unequivocally prove that in the tradition-world of dental cure, up to the eighteenth century (or even to the mid-nineteenth's) there was no definite boundary between the

knowledge of folk and „official” dentistry. The same applies to the methods and medicaments applied for therapeutic interventions. More or less identical drugs (mainly) of plant origin were used in the country, in towns by educated doctors, rural healers or itinerant quacks. Therapeutic knowledge, its theoretical bases did not significantly vary with people either poor or rich, high or low ranking, living at different regions of the country.

The process from the intertwining and overlapping (starting in the 18th century) of folk and science-based medicine to their definite separation from the mid-19th century, could clearly be elucidated from literature sources; in this process scientific medicine was getting to lose the folkish elements. While „official” cure was getting to have its own way from the mid-19th century, in the provinces, villages, among „common people” rural tooth-pullers, folk healers, quacks, herb-women, conventional cure methods continued to function – as evidenced by a great number of collections, studies of the 19th to 20th century.

Although great advances had been made in dentistry from the 19th century, and it was getting separated from the conventional folk practices, it was also proved that the history of Hungarian folk dentistry comprised a united, continuous system almost up to the end of the twentieth century. Already Mihály Hoppál established and recent research has proven a considerable homology between therapeutic procedures and drugs described in medical books, formularies, cure books, home omniscent and the folkish healing methods applied later (occasionally in the 20th century), and also the drugs used are characterized by the same durability⁵.

The above statement, however, must be completed with the fact that the practice of folk dentistry, its traditions were getting to be used in an ever narrowing circle, in ever smaller territory. With the introduction of country-wide dental management more and more people in the country presented themselves at dental physicians resulting in a gradual sinking of folk cure methods into oblivion as early as in the last century. A few elements of folk medicine live only in the memory of elderlies, overwhelmingly among Hungarians beyond the frontier (collections of L. Danterné, Erzsébet Kótyuk and others).

I myself made efforts to assemble information in various regions of Hungary (at Lake Balaton, in villages neighbouring Nyíregyháza and Sopron Cf; but very few evaluable answers were provided by (elderly) people. As a known procedure - for curing toothache they mentioned only the alcohol (mainly brandy)-soaked compress or rinsing, and the insertion of clove into the hole of the tooth. After tooth extraction, if the site of extraction is painful and heals hard, the rinsing with salty chamomile is sometimes advised even today.

⁵ Cf. Oláh 1956. 84; Hoppál M. 1990. 703.

2.3 Evidence has been found as to the principles and methods of folk dentistry of the 16th to 20th centuries are based on century- or, in certain cases (e.g. tooth worm theory, fumigation, incantation, analogy, disease transmission) on thousand year-old traditions. Tooth worm theory for example, originating from the Babylonians is assumed to be known and accepted among several ancient folks (e.g. Egyptians, Greeks, Romans, etc.⁶), although the tooth worm was the most believed cause of toothache in the Middle Ages and it is in modern times, too. From ancient times to date, popular belief attributed dental and oral cavity diseases also to other causes such as the decay of blood, common cold, consumption of cold, hot and sour food, etc.). Certain causes of disease (e.g. effect of sharp vibrations) obviously came over to medical literature through Hungarian translation from foreign publications, otherwise never occurred in folk cure.

Cure methods (fumigation, steaming, irrigation, scarification, venesection, purgation, unction, bath, hirudinization, diet, tooth cauterization) and some of the drugs used for dental and oral diseases have been also inherited through thousand years.

Numerous medicinal substances, drugs were widely used for centuries in Europe and Asia, too. As examples the henbane, garlic, onion, aloe vera, ginger, pepper, clove, chamomile, horse radish, hyssop, sage, opium, alcohol, vinegar, wine, incense, etc., or sumac and the various animal parts were just as familiar in ancient times as in the twentieth century. .

The composition of prescriptions was also similar for thousands of years although despite the similarity their structure in the various old hand-written cure books was not uniform. One of the most frequent types can be divided into three segments. The first part is the initial domain generally containing the name of the disease or a sort of medicinal product without mentioning the etiologic or monographic character. The second part is the instruction describing the components and mode of preparation. The third part (sometimes can be omitted) is the so-called conviction, „promotion⁷”, emphasizing the usefulness and justification of the prescription or even reference to scientists or inventor of the drug. - The sequence of the three parts may of course be different.

2.4 Folk Dental Medicines

2.4.1 Substances of plant origin. In Hungary, folk dentistry used as many as four hundred plants for curing dental or oral diseases. One can observe that plants applied in the 20th-century dentistry had already existed in prescriptions of the 16 to 17th centuries. Nevertheless, while a huge amount of herbal drugs used for various oral cavity complaints are mentioned from the 16 to 17th centuries, their number showed a significant decrease by the 19th to 20th centuries. This phenomenon suggests, on one hand, the rationalization of medicine and accomplishment of medical knowledge

⁶ Ring, M. 1997. 27.; Hoffmann-Axthelm, W. 1923. 27.; Forrai J. 2005. 54.

⁷ Kuna Á. 2008. 332.

while the gradual loss and falling of the traditional, ancient medical knowledge into oblivion on the other.

There was obviously no awareness of the mechanism of action of plants used still their pain killing and antiphlogistic effect was still realized. - Garlic (*Allium sativum*) e.g. was far not accidentally the most preferred „drug” to which folk medicine attributed and still does attribute strong curing, prevention and life extension power ⁸ because it was established that it contains at least twenty five various active constituents (from the antibiotic to hypotensive effect). The same is valid for the azulene-containing achillea and chamomile, the antiphlogistic, volatile oil-containing plants among them also for thyme and pine ⁹. Tannin and alkaloids could undoubtedly have favourable antimicrobial, astringent and analgesic effect.

Due to its analgesic, antiphlogistic effect, clove is still a constituent of several dental materials (e.g. Endomethason for root filling).

Numerous plants such as garlic, pepper, ginger, incense, great burdock or even the powder of red coral were suitable for devitalisation.

Naturally, there were also ineffective, definitely harmful, hazardous procedures and drugs, too. Treatment of the aching tooth with incense, vitriol, night-shade, etc. is an example for this. The tissue destruction effect of these materials was taken use of to facilitate the removal of teeth. The surrounding teeth and tissues could unfortunately be damaged, too.

Toxicants and narcotics (such as the widely used night-shade) that sometimes could affect one's performance status were also used for treating dental and oral diseases.

Interestingly, tobacco and liquids of high alcohol content (spirit of salt, hard drink, Cologne water) were getting widespread merely from the late 18th or 19th century (although wine had been long used, primarily as solvent or carrier). Materials of plant origin today are only sporadically applied for the management of dental and oral diseases.

Natural medicine and homeopathy have „retrieved” certain drugs to daily practice though without widespread application. In addition, dentists have hot disputes regarding the suitability of „alternative” therapies for managing dental diseases. On the other hand, however, toothpastes, mouth-washes contain medicinal plants, above all, for the treatment or prevention of mucosal disorders.

2.4.2 Substances of animal or human origin. Animal parts or products, e.g. the horn of goat and deer, the tooth of pike and foal, the tooth and jaw of wolf, the tooth, skull and hoof of dead horse, the toenail of colt, crayfish, the leg of frog, the skin of snake, the leg of calf with marrow, the head

⁸ Cf. Oláh A. 1986. 160.

⁹ Oláh A. 1986. 160.

of rabbit with marrow, the hair of black dog, the powder of snail, the grub, the sun-worm, the Spanish-fly; the cobweb, the lard of barrow, pullet, horse and goose, the fat of pig;, the milk of dog, sheep and goat;, the blood of cocks-comb, the various stools and occasionally urine, too were used to be applied with special preference for treating dental and oral cavity diseases.

As to human body parts and fluids the extracted tooth of child, woman or man, the dead man's tooth; of the human excretions and excrements the milk, urine, saliva and earwax could be used, respectively.

For centuries, folk healers had been aware of the therapeutic effect of certain body fluids, which was certainly based on thousand-year observations. Human and animal body fluids comprise enzymes and organic substances having beneficial effect on certain diseases.

The direct utilization of individual human or animal body parts or organs have almost disappeared from the arsenal of modern medicine. Naturally, among ingredients of certain ointments, cosmetics or homeopathy preparations one can still find animal extracts but the practice of direct contact between certain human or animal organs and patients in the course of therapy has been fully eliminated in our society.

2.4.3 Mineral and chemical substances. The most frequently used materials of this type included salt, alum, camphor, sometimes copper sulphate, iodine tincture, stove powder, hub oil, fore-copper, lye-ashes, burnt lime, salicyl, denatured alcohol, alcohol rub, nitric acid, ethyl alcohol, soot, sootdrop, American drop, vitriol, alabaster powder, coral powder, etc. and even gun powder, after dissemination of its use. Several of the above listed substances have toxic effect, too therefore their application would not have anything to do with.

Salt and alum do really possess vasoconstrictive, preservative and disinfectant effect. The recognition of these properties as well as the belief in the exorcizing power of salt could have greatly contributed to the spreading and frequent use of these materials.

2.4.4 The magic-religious character of therapies has existed since ancient times. Folk and scientific medicine contained a mixture of empiric approaches and those based on experience accumulated throughout generations with magic and cosmic elements induced by beliefs, superstition and religion. Where therapeutic knowledge proved insufficient often demons, ghosts and gods were invoked to help. This was the case in Assyria, Egypt or among the Greeks and Romans just like in medieval and modern Hungary¹⁰.

Cursing (repeated three times) or sending off diseases was already a habit of the Babylonians and Romans¹¹ just like of the Hungarians. At various ages people tried to cure also by incantation or

¹⁰ Ring, M. 1997. 27; Coven-Helfland 1992. 22.; Schott, H. 1993. 32.

¹¹ Hoffmann-Axthelm, W. 1973. 28.; Ring, M. E. 1997. 24.

prayers. There was a belief in the possibility of passing and transmitting diseases¹². In Hungarian folk cure it was widely used to transmitting diseases to wind, water, tree or simply to other persons.

The traditional folk dentistry cured with sacraments, too, furthermore sacred or magic-believed places and timepoints also played an important role.

In the course of cure our predecessors made use of numerous magic effects, habits, procedures, „power”, symbols, etc. where the transcendent factor does not derive from Christianity much rather from the ancient, heathen body of beliefs. Utilization of the principle of analogy was organic part of Hungarian folk dentistry. The idea „what spoils also cures” can be clearly detected in several therapeutic approaches. Dental caries induced by toothworm, as a matter of fact, was often attempted to be treated with worm, caterpillar or vermin. – Another unambiguous example of analogic therapy is the cure of tooth tissue with another hard tissue or its powder; e.g. with tooth of pike, horn of deer and different animal-human teeth, respectively.

There was also a habit of placing a drug on another body part, e.g. among Babylonians, Hebrews, etc.¹³.

Numerology had also played a role in Hungarian folk cure. Magic power was attributed to numbers 3, 9 and 7 (and their multiples), respectively.

2.5 The dissertation (like every folklore research) has cultural historic and linguistic lessons. One can obtain knowledge of contemporary plants and herbs, kitchen devices, units of measurement, kitchen operations, drug formulations and mode of preparations, too.

Names given for tooth and oral diseases are of utmost importance also from ethnographic, linguistic and medical points of view: lip fissure, baby „anthrax”, frog, tube ulcer, dogwind, bud, morsel, nibble, ulcer, tartar of teeth, torment of tooth, inflamed node of gingiva, tindery flesh, groth of gingiva, „epulis”, tooth breaking, tooth wobbling, damned bone of tooth, „caries”, bleeding of tooth tray, budding, variola in the mouth, discharge of gum, decay of gum, rabid mouth, etc. The above listing also proves that the type of disease could not often be exactly determined therefore only symptoms and descriptions of the lesions were established.

Precariousness is proved by the fact that several diseases were named similarly, and individual diseases could have differing names e.g. crumbling of segment, mouth, rotting of mouth, etc.

Linguistically interesting words are those referring to the onset, development and recovery of diseases: one is knocked down by malady, struck by disease, attacked by illness, disease is passed over; one is run or impressed by malady; [a part of the body: the tooth, gingiva, mouth] gets swollen, inflamed, shot or bothered, falls out, spoils, perishes, parches, etc.

¹² Ring, M. E. 1997. 47.

¹³ Hoffmann-Axthelm, W. 1973. 28.; Forrai J. 2003.49.

2.6. Succinctly characterizing folk dentistry we can establish that selection of substances, modes of therapy were selected upon century- or thousand year-old traditions and experience. Treatment mainly focused on alleviation, elimination of symptoms, complaints and pain. Antiphlogistic, analgesic substances were used in the oral cavity, sometimes teeth were pulled, tissues incised, the nerve (or worm) was killed. Discoloured teeth were tried to be whitened, bad breath eliminated by another, pleasant-scented material, wobbling teeth fixed, etc. respectively.

For thousand years, due to the special anatomic position and structure of teeth healers were unable to perform certain – by now customary – interventions, e.g. radicle treatment in the lack of which each sick, necrosed, gangrenal, inflamed tooth remained in the body, representing a source of inflammation, focus of disease thus risking the exacerbation of another acute inflammation or the dissemination of infectious agents.

The management of carious teeth could not be perfect either since, according to modern practice, after removal of infected dental tissues 'firmly closing' tooth filling has to be prepared. One can sometimes read about pouring of carious teeth with tin but, if not previously 'cleaned up', the caries progressed, leading to necrosis and pulpitis in the long run.

In summary, we can establish that some concepts and therapeutic methods were correct and are acceptable even today but many of them were inappropriate, ineffective or even harmful. Among suspected causes of dental and oral diseases we can agree that consumption of sour, sweet, very cold or hot food, insatiable eating, lack of tooth cleaning, damaging of tooth enamel are harmful; or oral cavity diseases can be induced by consumption of impure food, the use of other persons' glass, etc. To attribute the causes of dental and oral cavity diseases to toothworm, however, was faulty – still these false opinions had determined the pathogenesis of dentistry for many centuries.

Naturally, numerous remedies (primarily plants) were suitable for pain relief, alleviation of inflammation, killing of pathogens (even if not definitely targeted), devitalisation, facilitation of tooth removal, etc. It was also correct to suppress bleeding after tooth extraction by biting on gauze plug (earlier on cotton or cloth). Cauterization of teeth, as a rule, also brought about the expected result. For example, steaming of the swollen face for promoting the dissolution of inflammations was useful (*pus bonum et laudabile*). This purpose was achieved by thick, „warm” materials, e.g. frequently stools or animal fats were applied. The use of remedies containing human or animal excretions can no longer be regarded as correct whereas the concept had some common sense. Obviously, today no one would place rabbit cerebrum or blood of cockscomb onto the gingiva of a small child suffering from dentition, irrespective of their effectiveness or ineffectiveness.

Purulent, already absorbed inflammations were frequently incised as done today, too. It was wrong rinsing the mouth after tooth removal since it increases rather than decreasing bleeding. The

practice of crude ripping up of the frenulum of newborns was also improper. Obviously, there were ineffective or definitely harmful, dangerous procedures and drugs, too.

Treatment of aching teeth with incense, vitriol, henbane, etc. is an example for this. In such cases the tissue destructive effect of these materials were utilized for facilitating the tooth removal but the surrounding teeth and tissues could often get damaged. Poisons, narcotics (like henbane) were also in use, which certainly had an impact on the whole organism.

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