

Leech-business and Hungary

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Leech-therapy¹ was originally applied as a remedy against diseases caused by superabundance, rush or stagnation of blood, or against toxins, being – besides venesection and cupping - the third main way of diminishing blood. The theoretical background of leech-therapy was the so called humoral pathology. According to this, diseases are caused by the superabundance of one of the four humours constituting the body, i.e. that of bile, black bile, phlegm or blood. In antiquity, leech-therapy was used extensively, namely against hydrophobia, epilepsy, inflammations, migraine, or hypertension as well. Galen wrote a separate treatise on it², and the therapy survived into the Middle-Ages as a popular way of healing. The 17th-18th. centuries saw a further development of the therapy. Several works were written on the topic even by such great scientists like Jan van Heurne (Greifswald, 1652), Georg Ernest Stahl (Halle, 1699) and Carl von Linné ((Uppsala, 1765).

The golden age of the therapy, however, was in the first half of the 19th century. François Joseph Victor Broussais (1772-1838)³ and his followers applied leeches almost as a panacea – they were called rightly by their contemporaries „modern vampires”.⁴ In the heyday of the therapy, from the 1820s to the 1840s sometimes even 60 to 100 leeches were put on a single patient.⁵ Anyone who survived this, probably really deserved to be healed!

The success of leech-therapy is proved by the fact, that in 1827 in France alone 32 millions leeches were sold while two years later in London 7 millions. J. L. Casper writes, that in 1823 in the hospitals of Paris 5 to 6 millions leeches were applied. Leeches also appeared in the Taxa of the 20s at a rather high price. In England for example one single Hungarian leech costed 28 Shillings, some times one Guinea (a week's wage of a clerk). Those who profited from this, were probably Hungarian businessmen rather than the unfortunate patients. Since that time Hungary became the main exporter of leeches in Europe.

Hungary's main rivers at that time were unregulated, so the country's fine lands, especially the territories laying between the two main rivers, the Danube and the Tisza were covered by endless marshes teeming with leeches. Leeches were collected mainly by poor people and certain specialists named „*nadályos*” using various tricky methods. The *nadályos* for example waded into the water with bare legs then nipped the leeches off his leg. In other places leeches were caught by dangling bits of meat at the end of a rope, by a horse made to stand in the water for a while, or by a special leeching-rod. Leeches were transported and sold in big wicker-woven bags to the customers or to pharmacists. The animal was available even

¹ In Europe two main types of leeches were used for medical purposes. The brown-reddish striped „Hungarian” leech (*Hirudo officinalis* L., *Sanguisuga officinalis* Savigny) and the northern greenish „German” leech (*Hirudo medicinalis* L., *Sanguisuga medicinalis* L.). The Greek name of the animal is *bdellos*, and means 'sucker'. Its Latin name, *hirudo* comes from the verb *haereo* 'I stick', while the Middle-Latin *sanguisuga* – which is the ancestor of the French *sangsue* – means blood-sucker. Its English name means originally 'medical', while its German one *Blutegel* 'blood-worm'. The Hungarian words „*pióca*” and „*nadály*” are of Slavic origin.

² Galen: *De hirudinibus, revulsione, cucurbitula incisione et scarificatione*. In: *Caludii Galeni opera omnia.*, ed. C.G.Kühn. Lipsiae: Knoblochius; 1826. XI: 317-319.

³ Broussais, F-J-V.: *Examen des doctrines médicales et des systèmes de nosologie*. Paris, Méquin-Marvis, 1821. T. 1-2. In Paris the leech-therapy created even a mode: dresses with a leech-pattern were called „*robes à la Broussais*”. Broussais taught, that every illness roots in the digestive tract, which is to be cleared first of all by the help of leeches. Schury, G.: *Kulturgeschichte des Blutes*. Leipzig, Reclam, 2001. 40-41.

⁴ Simon, A. F.: *Der Vampirismus im neunzehnten Jahrhundert*. Hamburg, Hoffmann und Campe, 1830.

⁵ Sarlandière, J-B.: *Notice sur le bdellomètre*. Paris, 1819.

in the 1950s in big glasses, in the markets of the Great Hungarian Plain. The animals were collected mainly in autumn, they were transported in big humid-soiled wooden boxes on carriages to Vienna's suburbs, e.g. to Altmannsdorf, where they were bought by wholesalers, and transferred in 10 days by mail-coaches to Paris, to the „hirudinomanest” city of the world, or further to England or even to the US.⁶

The Hungarian leech export – according to Ioannes Somp who wrote a medical dissertation on the topic published in 1834 - – generated an 42-60 tons⁷, or 8-12 millions of leeches.⁸ If we count only 4 kreuzers per leech, this meant a yearly income of probably 280 000 – 400 000 forints, which equalled the income of the richest Hungarian family, that of the Esterházy. To put this into perspective, the average income of a peasant's household was yearly 10-20 forints.⁹ According to the customs regulations of the year 1835¹⁰ only the customs income of the state - regarding this business - was probably 4-5000 forints per year, equaling a yearly income of ca. 400 average peasant's households.

The profits of the leech-commerce was shared by several players taking part in this business. Besides export, also inland commerce proved to be very lucrative. From 1826 onwards a royal order obliged apothecaries to buy and sell leeches all year round.¹¹ They were also obliged to sell them in summertime for 4 in winter however for 8 kreuzers. (In counties rich in leeches prices were much lower.) These prices were pegged even by Hungarian Taxa medicamentorum from the year 1829 up to 1910. The collecting of leeches provided a good income for the poor of the villages. The great Hungarian Orientalist, Ármin Vámbéry mentions in his autobiography, that as a poor 10 years old Jewish boy in the 40s he earned his bread by collecting leeches. In the bigger cities of the country independent leech-shops were founded and worked even in the 60s of the 19th century.¹² So from this leech-commerce the poor, the businessman, the pharmacist, the surgeon and the state equally profited to a lesser or greater extent.

Unfortunately it is not possible to estimate the number of leech-collectors in the Kingdom of Hungary. However, it is clear that this medical and pharmaceutical mode promoted the birth and survival of some old folk professions (pákász, csikász, nadályos), and at the same time it helped many people to take part in the well documented contemporary rise

⁶ „Leeches collected in Hungary were kept in Altmannsdorf in five small artificial ponds in fresh water by a businessman named Camilla. From here they were transported in small linen sachets placed, in wooden cages on an open mail-coach to Paris. The coach was travelling day and night, so the way took ten days to Paris.” Dercsényi J.: Az ártézi kutakról, honunkra alkalmaztatva. (On artesian wells applied also to our homeland) Tudománytár 1836. (11) 137.; Anonymus: Nadálykereskedelem (Leech-commerce). Orvosi Tár 1831. III. kötet 9. füzet 288-289.

⁷ 700-1000 centenariuses

⁸ Somp I.: Sanguisugae. Dissertatio inauguralis physiographico-medica. Budae: Regia Universitas Hungarica; 1834. 24-25. The rather informative 37 pages long work includes the zoological description of the leech, and gives a detailed description of the breeding, collecting, transporting and medical use of the animal as well. Author refuses the „hirudinomaniam Francicam”, emphasizes however the medical importance of the leech in curing various diseases.

⁹ Kaposi, Z.: Magyarország gazdaságtörténete 1700-2000. (History of economy in Hungary 1700-2000). Budapest-Pécs, Dialóg-Campus K., 2002. 54-66.

¹⁰ The value of one centenarius of leeches was 400 forints, and its customs fee was around 5 forint.

¹¹ Royal orders and regulations regarding leeches – written in Latin - are to be found in: Linzbauer, Fr.-X.: Codex sanitario-medicinalis Hungariae. Budae, Typis Caseareo-Regiae Scientiarum Universitatis, 1860. Tom.III. Sectio III. 140, 174, 368. and Tom. III. Sectio V. 8., 498.

¹² „Near to the Calvinist church on the Széna square in Buda stands the house of the Rottenbiller family, neighboured by a shop with a tablet „Leech-store”. Ujházy F.: Fővárosunk művészeti állapota a múlt század közepén. (The state of art in our capital around the middle of the last century) Nyugat 1922 (6). A leech-wholesaler Jakab Steinbeck still flourished in Pest in the 60ies having a shop under the Király street 23.. His insert is to be found in the Gyógyszerészeti Hetilap 44. (1867) 703-704.

of Hungarian society. Leech-commerce no doubt also promoted the rise of the number and of the income of pharmacies throughout the country.¹³

The limitless consumption of leeches resulted in 1843 in an order of the Royal Council of Governor-General, which encouraged medical men to find a remedy for the „situation emerged”, namely for the lack of leeches. This order is rather surprising, since – as Dr. Somp wrote in his dissertation – leeches from the 30s were already bred in artificial ponds throughout the country, not only collected in their natural environment. A village surgeon, Ferenc Való – in addition - proposed a good method for recycling used leeches in 1840 in the Hungarian medical journal, *Orvosi Társ.* This method consisted mostly of a thorough massage of the exhausted animal, with fingers tinted by beer.¹⁴

As a result, of the rise of modern medicine, enthusiasm for leech therapy declined from the 1860s – we cannot find for example the entry „leech” in Henkel’s *Pharmaceutical Wares’ Dictionary* published in 1869. It survived nonetheless. In the 1920s the Hungarian I. Apáthy, the Austrian B. Aschner and the French F. Termier made it again popular for a while.¹⁵ Nowadays leech therapy is still in use in alternative and folk medicine all over the world.¹⁶

The history of the Hungarian leech-export proves, that even at the beginning of the 19th century a country’s economical and social development could be formed by medical and pharmaceutical modes as well. Not to mention our Brave New World.

¹³ The number of pharmacies in Kingdom Hungary (without Transylvania) between 1820 and 1859 rised from 160 to 445. Linzbauer, X.F.: *Statistik des Medicinal-Standes der Kranken- und Humanitäts-Anstalten der Mineralwässer, Bäder, Trink- und Gesundbrunnen von Ungarn.* Wien, Braumüller, 1859. 313-314. „Private” leech export still existed even at the beginning of the 20th century e-g. to the apothecaries of Kassa (today Košice, in Slovakia). See: Kiss L.: *Nagyhalász. (Nagyhalász) Etnographia.* 1954 (65/3-4) 358.

¹⁴ Való, F.: *A nadályok isméti könnyű használhatásáról.* (On the repeated and easy use of leeches) *Orvosi Társ* 1840; Semester 4. , No. 15. 234-235.

¹⁵ It was discovered at the beginning of the 19th century, that intestinal tube of the leech contains a material inhibiting blood-clotting. This material was extracted and produced arteficially first by J.B.Haykraft in 1884, later isolated and named hirudin by K.Jakoby. Hirudin was applied first against eclampsia, thrombosis or phlebitis. In Hungary in the State Hospital of Gyula, in the Obstetrical Institute in Kassa, and in the University Clinic in Kolozsvár the leech itself has been used till the 1940ies against thrombosis, as a profilactic, though the aim of the cure was not bloodletting, but injection of hirudin. Kese Gy. *Az orvosi pióca alkalmazása a szülészet és nőgyógyászatban.* (The application of medical leech in obstetrics and gynecology) *Magyar Kórház* 1944; 13. sz. 4. 112-119.; Eulenburg A. (Hrsg.): *Real-Encyclopädie der gesamten Heilkunde.* Wien-Leipzig: Urban und Schwarzenberg; 1885: Bd.III: 204-206.

¹⁶ In the folklore the leech has a long and extended history. See: Bächtold-Stäubli, H. – Hoffmann-Krayer, E. (Hrsg.): *Handwörterbuch des deutschen Aberglaubens.* Berlin-New York: W.de Gruyter; 1987. (2. Aufl.) I: 1442-1444. and Grynaeus, T.: *Nadály és nadályosok.* (Leech and leech-collectors) *Communicationes ex Bibliotheca Historiae Medicae Hungarica* 1962:26:129-156.,