

## Texts and Documents

# The Medical Skills of the Malabar Doctors in Tranquebar, India, as Recorded by Surgeon T L F Folly, 1798

NIKLAS THODE JENSEN\*

### Tranquebar and its History

From 1620 to 1848, there were several Danish colonies or trading-stations in India. The most important of these and the only one that was maintained for the entire period was Tranquebar or Tarangambadi, located south of Madras on the Coromandel Coast in the modern Indian state of Tamil Nadu. In 1777, the Danish Crown took over all Danish possessions in India from the Danish Asiatic Company, which had previously controlled the colonies and their trade. In the 1790s when Folly wrote his essays, the Danish colony in Tamil Nadu consisted of the fortified city of Tranquebar with a population of nearly 3000 (including about 200 Europeans) and the surrounding lands of roughly fifty square kilometres, inhabited by about 20,000 native farmers. In these years, trade, the main reason for the Danish presence, was fairly good, since Denmark remained neutral in the international wars of the late eighteenth century and was able to ward off occasional assaults from Indian warlords.<sup>1</sup>

The literature about Tranquebar under Danish rule is primarily in Danish and has not previously dealt with issues of health and medicine. The main focus has been on either political history or the history of the Protestant mission in Tranquebar. An excellent account of the former is found in the standard three volume history of the Danish East Indies by Gunnar Olsen, Kamma Struwe and Aage Rasch,<sup>2</sup> and in *Kolonierne i Asien og*

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\* Niklas Thode Jensen, PhD student, Department of History, The Saxo Institute, University of Copenhagen, Denmark. E-mail: ntj@hum.ku.dk

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<sup>1</sup> Aage Rasch, *Dansk Ostindien, 1777–1845: Storhedstid og hensygnen*, vol. 7 of series *Vore gamle tropekolonier*, ed. Johannes Brøndsted, 8 vols, Copenhagen, Fremad, 1966, pp. 7, 13, 52–3, 170–82.

<sup>2</sup> Gunnar Olsen, *Dansk Ostindien 1616–1732: de ostindiske kompagniers handel på Indien*; Kamma Struwe, *Dansk Ostindien 1732–1776: Tranquebar under kompagnistyre*; and Rasch, op. cit., note 1 above, vols 5, 6 and 7 of *Vore gamle tropekolonier*.

*Afrika* by Ole Feldbæk and Ole Justesen.<sup>3</sup> These sources are old but offer a comprehensive history of the Danish involvement in India; while an excellent account of the Christian mission in Tranquebar is given in Anders Nørgaard's PhD thesis *Mission und Obrigkeit: die dänisch-hallische Mission in Tranquebar, 1706–1845*.<sup>4</sup> A more recent approach to the history of Tranquebar—at least for the issues of health and medicine—has come from anthropology. The Danish anthropologist Esther Fihl has written about the social, political and economical interactions between the Indian society and the Danish colonial power.<sup>5</sup> A similar approach from a historical vantage point has been used by the Danish historian Niels Brimnes. In his book *Constructing the colonial encounter*, he uses caste conflicts in colonial Madras and Tranquebar to untangle the complex interactions between the Indians and the colonial powers.<sup>6</sup> Very recently, and of interest for the issues dealt with in this article, Brimnes has moved on to deal with indigenous doctors in South India. In his article 'Coming to terms with the native practitioner: indigenous doctors in colonial service in South India, 1800–1825', Brimnes reveals how European doctors and administrators came to perceive South Indian physicians during the first twenty-five years of the nineteenth century.<sup>7</sup> Presumably, these Indian physicians in British service originated from the same group or culture of south Indian physicians as those described by Folly in Tranquebar in the 1790s. Thus Folly's remarks on the south Indian physicians in Tranquebar are an early contribution to the European perceptions of south Indian physicians revealed and discussed by Brimnes.

Despite these scholarly endeavours, the system of health services in Tranquebar has not yet been subjected to historical research. A brief account of Danish medical history in Tranquebar sets the scene for Folly's comments; and together they offer the beginnings of a history of medicine in Danish India.

### Medicine in Tranquebar

As in most other European colonies in India, medicine in Tranquebar can be divided into two main branches: the European and the Indian. The European medical establishment in the colony consisted of at least three people: the head surgeon of the hospital and regiment, his assistant or second surgeon, and the medical doctor employed at the Protestant mission.<sup>8</sup> In addition there were occasionally surgeons from European navy and trading ships,

<sup>3</sup>Ole Feldbæk and Ole Justesen, *Kolonierne i Asien og Afrika*, in series *Danmarks historie*, ed. Svend Ellehøj and Kristof Glamann, Copenhagen, Politikens Forlag, 1980.

<sup>4</sup>Anders Nørgaard, *Mission und Obrigkeit: die dänisch-hallische Mission in Tranquebar, 1706–1845*, Gütersloh, Gütersloher Verlagshaus, 1988.

<sup>5</sup>Esther Fihl, *Tropekolonien Tranquebar*, Copenhagen, G E C Gad, 1989; *idem*, 'Some theoretical and methodological considerations on the study of Danish colonialism in southeast India', *Folk. Dansk Etnografisk Tidsskrift*, 1984, 26: 51–66.

<sup>6</sup>Niels Brimnes, *Constructing the colonial encounter: right and left hand castes in early colonial South India*, Richmond, Curzon Press, 1999.

<sup>7</sup>Niels Brimnes, 'Coming to terms with the native practitioner: indigenous doctors in colonial service in South India, 1800–1825', in Sanjoy Bhattacharya (ed.), *Imperialism, medicine and South Asia: a socio-political perspective, 1800–1950*, Delhi, Orient Longman (forthcoming).

<sup>8</sup>The Protestant Tamil mission in Tranquebar was a Pietistic mission founded in 1706 by missionaries trained in the Pietist centre of Halle, Germany, and supported by the Danish king Frederick IV (1699–1730).

The Medical Skills of the Malabar Doctors



Figure 1: Detail from a map of South India by Mathew Carey, 1811, showing the area around Tranquebar (situated between Pondicherry and Negapatam). (Reproduced by permission of the David Rumsey Map Collection.)

but in total the European medical presence was limited to no more than a half-dozen qualified people.

In contrast, the indigenous Indian medical establishment seems to have had a strong presence. First, there were physicians of Hindu, Christian and Muslim creeds among the Indians. In the official 1790 census of Tranquebar, the Hindu physicians were registered as either “doctor” or “barber” and belonged to the “Wadugen” (Waduga), “Nauden” (Naviden) and “Wellalen” (Vellala) castes.<sup>9</sup> In total the Hindu physicians in the city numbered eight (six doctors and two barbers). The Christian Indian physicians numbered three, namely one Catholic doctor of the Wadugen caste and two barbers of the Nauden caste belonging to the mission church. Finally, the census recorded a single Muslim doctor in the city.<sup>10</sup> In all, native doctors outnumbered European at best two to one.

The religion of the Indian physicians in Tranquebar does not, however, indicate the kind of medicine these men actually performed. In general, the indigenous Indian medical traditions were the Hindu systems of Āyurveda and Siddha, and the Muslim Yūnānī

<sup>9</sup>The caste name “Nauden” or “Naviden” is obscure and does not appear in authoritative works such as E Thurston, *The castes and tribes of Southern India*, 7 vols, Madras, Government Press, 1909.

<sup>10</sup>Rigsarkivet (Danish National Archive), Survey of Inhabitants, Tranquebar 1790 (Folketællinger. Mandtalsliste, Trankebar, 1790).

medicine. The physicians who had studied and practised these forms of healing were respectively named Vaidyas, Siddhas and Hakims.<sup>11</sup> To these three categories of doctors can be added the “empiricists”, “bonesetters” and “folk” practitioners of various sorts, who had learned their medical skills as a craft.<sup>12</sup> Because of this diversity and the present lack of research we cannot determine if the Indian doctors and barbers in Tranquebar practised Āyurveda, Siddha or Yūnānī medicine. Nor do we know if the native Christian physicians practised some form of Indian medicine or had received training in European medicine. Folly confirms only that Siddha medicine was present in Tranquebar, which is not surprising since this form of traditional medicine was, and still is, especially connected with the Tamil speaking parts of South India. Thus Folly’s writings are one of the earliest European descriptions of the drugs, techniques and practices in Siddha medicine.

The occurrence of at least two different forms of medicine in Tranquebar raises the question of the extent to which there was interaction and/or competition between the European and Indian doctors in the colony. Although the data are limited, some preliminary attempt can be made to answer this question. As previously mentioned, European physicians were employed both by the Danish Crown and by the Danish Mission. Therefore, three obvious areas of possible interaction with Indians present themselves via the military, the courts, and the missions. The regimental surgeon and his second surgeon were in charge primarily of the health of the military and secondly of all other state employed personnel in the colony. However, the army consisted of both European and Indian troops. In the 1790s, four companies or about 360 “sepoys” (Indian soldiers) were employed in Tranquebar.<sup>13</sup> We do not know how the medical service in these companies was structured, but it is likely that it was similar to the system used in the growing army of the English East India Company. Here the sepoy companies had their own “dressers” or “black doctors” supervised by the English assistant surgeon; and, as Niels Brimnes has shown, there was ongoing interaction between these Indian and European physicians.<sup>14</sup> In Tranquebar both the European and sepoy companies were stationed in the city itself and thus the dressers of the sepoy companies would most likely have been drawn from the group of Indian doctors and barbers who lived there.

An important tool in the medical service of the military and state personnel was the hospital. Again the person in charge was the regimental surgeon assisted by his second surgeon. However, the hospital also seems to have had a staff of Indian medical assistants. According to the early and questionable author Kay Larsen, who rarely cites the origin of his information, “The remaining personnel [in the hospital] normally consisted of Indians.” Furthermore he claims that the treatment at the hospital was free for both Europeans and Indians.<sup>15</sup> Whatever the extent of Larsen’s credibility, it is thus likely that the military and state areas brought European physicians into close interaction with Indian physicians and Indian soldiers.

<sup>11</sup> Dominik Wujastyk, ‘Indian medicine’, W F Bynum, and Roy Porter (eds), *Companion encyclopedia of the history of medicine*, 2 vols, London, Routledge, 1994, vol. 1, pp. 755–78.

<sup>12</sup> Brimnes, op. cit., note 7 above.

<sup>13</sup> Rasch, op. cit., note 1 above, pp. 88, 90.

<sup>14</sup> Brimnes, op. cit., note 7 above.

<sup>15</sup> Kay Larsen, *De Dansk-Ostindiske koloniers historie*, 2 vols, Copenhagen, Centralforlaget, 1907–1908, vol. 1, p. 145.

### *The Medical Skills of the Malabar Doctors*

Besides his military duties, the regimental surgeon also appears to have conducted medical investigations for the colonial courts in cases of suspicious deaths. In his capacity as an officer of the colonial court, Folly came in close contact with Indian society and was inevitably caught up in the recurring power struggle between the colonizer and the colonized. Brimnes has written extensively on the structure of the judicial system in colonial Tranquebar and the complex conflicts and negotiations over caste, privileges and power that centred on the courts.<sup>16</sup> These conflicts and negotiations between the Indian castes, customs, religions, etc. and the colonial administration are occasionally visible in Folly's manuscript. An example is the first incident Folly relates when he is ordered by the court to examine a dead woman (see translation below). Her husband is suspected of having poisoned her, but when Folly wants to make an autopsy, the husband and relatives oppose it and start a loud commotion. According to Folly, the "authorities", that is to say not only the court, but the colonial administration, "thought it best to leave things be . . . [she] was burnt and everything went silent" (literal translation of the Danish original). It is quite clear from the tone of the original document that Folly does not agree with the authorities' decision to trade exact medical knowledge (the autopsy) for peace in the colony. For him the central point is to show how strange, misinformed, superstitious and dangerous Indians and Indian medicine are and that, in this case, the Danish colonial authorities let the Indians get away with it.

Finally, the regimental surgeon also had a private practice. As the salary from the state was notoriously low, private patients would provide the surgeon with a tolerable income.<sup>17</sup> However, many of Folly's patients seem to have been poor Indians who with their limited means could only give him small presents for his services. Consequently, he appealed several times to his benefactors in the Ministry far away in Copenhagen for financial aid.<sup>18</sup> In his descriptions of several private patients we see him interacting with all parts of Tranquebarian society: Europeans and Indians, wealthy and poor.

The third possible area of interaction between European and Indian physicians was in the mission. The physician employed there was usually a (European) medical doctor, and thus he had studied theoretical medicine at a university, which was rarely the case for the regimental surgeons. This difference is made especially apparent by the fact that it was the doctors of the mission that made Tranquebar known for its scientific studies (see below). As to the interaction between European physicians and the Indians, the mission seems to have afforded a better possibility than either military or private practices. The missionary doctor was in charge of the health of both the European missionaries and the Indian converts; and, in addition, the mission had a general system of aid to the poor.<sup>19</sup> Because of the fundamental Christian notion of charity, the missionary doctor came into contact with the lowest class in Tranquebarian society, the Pariah caste.

In conclusion we can say that there were several areas of interaction between European physicians and Indian physicians and civilians. However, the interactions between Indian

<sup>16</sup> Brimnes, *op. cit.*, note 6 above, see, for instance, pp. 105–24.

<sup>17</sup> Rasch, *op. cit.*, note 1 above, p. 115.

<sup>18</sup> Rigsarkivet, Archive of the University of Copenhagen, Faculty of Medicine, the Royal

Academy of Surgeons (Kirurgisk Akademi), Cases of the Deanery (Dekanatssager), 26 May 1801, no. 34.03.04.

<sup>19</sup> Rasch, *op. cit.*, note 1 above, p. 99.



physicians and European patients are less visible. In the text translated below, Folly mentions the case of a captain who let himself be treated by an Indian physician and suffered terribly because of it, but we have no estimate of how many Europeans used Indian physicians or, for that matter, how many Indians used European physicians.

### Medical Ambiguities: European Perceptions of Indian Medicine

Although the relationship between the European and the Indian medical traditions is the major theme in Folly's text, it is necessary to know something of European attitudes to Indian medicine at the time to appreciate fully Folly's contribution to medical history in colonial India.

From the first arrival of the Portuguese in India in 1498 up until 1670, European doctors evidence a kind of kinship and equality with their Indian counterparts. Both the European and Āyurvedic medical systems were based on a type of humoral pathology and regarded health as dependent on the balance of a number of essential substances in the body. This helped to foster a sense of mutual respect and fruitful dialogue between the practitioners of the European medical system and those of the various Indian medical systems. However, from about 1670 to 1770, there was a growing feeling among European doctors that Indian doctors were not as "scientific" as themselves, because they did not perform autopsies, had very little knowledge of anatomy, and did not know about the newly discovered circulation of the blood. These were the latest developments in medicine in Europe during this period. From about 1770 until 1820, the period in which Folly wrote his remarks, medicine took yet another direction. The British East India Company (EIC) acquired large tracts of land in India and consolidated its imperial rule. Consequently, the English interest in ways to exploit the resources of the subcontinent, especially the botanical and medical resources, grew significantly. The EIC established botanical gardens and employed scientists (often doctors) who undertook scientific investigations and classifications of the Indian flora, following the system of the Swedish botanist Carl Linnaeus (1707–78). Moreover, there was an active exchange of information with colleagues of other nationalities in other parts of India—for instance in Tranquebar. The knowledge of Indian medicine and especially of its materia medica was collected directly through translations of the authoritative texts of Hindu and Islamic medicine, rather than from native practitioners. This approach to Indian knowledge was firmly rooted in contemporary Orientalist scholarship. The Orientalists perceived India as the cradle of all ancient knowledge; but because they regarded the knowledge possessed by living Indian scholars (and doctors) as degenerate and clouded by religious superstition, they assumed that only European scholars, who utilized the recently discovered method of comparative philology, could extract valuable scientific (and medical) truths from the ancient texts.<sup>20</sup> This resulted in a state of ambiguity between European and Indian doctors, and between European and Indian

<sup>20</sup>Mark Harrison, 'Medicine and Orientalism: perspectives on Europe's encounter with Indian medical systems', Biswamoy Pati and Mark Harrison (eds), *Health, medicine and empire: perspectives on colonial India*, Hyderabad, Orient Longman, 2001,

pp. 37–87, on pp. 41, 52–8. See also David Arnold, *Colonizing the body: state medicine and epidemic disease in nineteenth-century India*, Berkeley, University of California Press, 1993, pp. 44–7.

medicine during the period of 1770–1820. Thus, these years are characterized by equivocal feelings among European doctors towards Indian doctors and Indian medicine.<sup>21</sup>

Folly's text clearly demonstrates this attitude. On one hand, he sees the "Malabar" (Tamil) doctors as superstitious quacks with very little knowledge of medicine and none at all of surgery, on the other, he is very eager to find the precise textual sources for their metallic drugs, possibly in order to find a better treatment for venereal diseases (particularly syphilis). His assumptions seem to follow the patterns outlined above in the sense that he perceives the Indian doctors as only having erroneous knowledge of medicine, whereas their authoritative texts might contain the precise and correct art of original medicine. Therefore, he is always in search of the original sources of indigenous medical knowledge.

### **The Author: Theodor Ludvig Frederich Folly and his Life**

We know very little about T L F Folly. However, the following information, which is based on archival material, seems to be fairly reliable, if somewhat sketchy.<sup>22</sup>

Folly was born in Itzehoe, a town in the Duchy of Holstein in the northern part of present day Germany, which in the eighteenth century was a part of the Danish monarchy. The year of his birth is unknown but in 1769 he was employed as second surgeon on one of the ships of the Danish Asiatic Company. Where and how he received his surgical training is uncertain, but he did work in the dispensary of the great Royal Frederik's Hospital in Copenhagen for a period. Therefore, it is likely that he learned surgery as an apprentice, which was the custom at the time, rather than receiving formal schooling in medicine. Probably he had some kind of formal education too, because later in life, he was apparently very proficient, not only in the German and Danish languages used in the Danish realm, but also in Latin, English, French and Portuguese.

As second surgeon on ships of the Danish Asiatic Company, Folly made three return voyages from Copenhagen to India and China during the years 1770 to 1775. In 1777, he applied to the Ministry of Commerce and Finances (Kommerce Kollegiet) for the vacant position as second surgeon in royal service in the colony of Tranquebar in India. He received the position and due to his "poor [living] conditions", was awarded one year's salary in advance, a meagre 150 Rigsdaler (rd.), plus 100 rd. to pay for the voyage and to purchase the necessary surgical instruments. Unfortunately, Folly fell ill and did not manage to find a passage on any ship bound for India. In the winter of 1778, he was forced to apply to the ministry for more financial assistance. In the summer of the same year, deeply in debt, he left Copenhagen and arrived in Tranquebar in 1779.

From the time of his arrival until 1786, Folly worked as the hospital's second surgeon under the head surgeon Gottlieb Friderich Böttger. They were the only official European doctors in the area, save for one other employed at the mission in the city. In 1786, Böttger died and Folly became the head surgeon in charge of the hospital and the regiment.

<sup>21</sup> Brimnes, op. cit., note 7 above.

<sup>22</sup> Kay Larsen, *Seddelkatalog over Dansk-Ostindiske Personalial og Data* (card catalogue for biographical information and other data from the Danish East Indies), at the Rigsarkivet and the Royal Library, Copenhagen. See also Rigsarkivet,

Archive of the University of Copenhagen, Faculty of Medicine, the Royal Academy of Surgeons (Kirurgisk Akademi), Cases of the Deanery (Dekanatssager), 26 May 1801, no. 34.03.04. And: Hof-og Statskalenderen, diverse år (Court and State Calendar, various years), Royal Library, Copenhagen.

He was assisted by a second surgeon, first Nicolaus Feldtmann and then Johannes Heinrich Jacob Bruhns. At some point, Folly must have had a wife (or mistress) because, on 18 March 1801, his daughter was baptised in Tranquebar's Church of Zion and on 29 December 1803, a son was also baptised there. The name of his wife is not known. Unfortunately, surgeon T L F Folly did not live to see his son. He died in Tranquebar on 30 July 1803.

About the time Folly became head surgeon in Tranquebar, he seems to have had an extensive reputation as a knowledgeable and skilful doctor. He also corresponded with scientists in other parts of India and commented on the findings of prominent scientists like William Roxburgh.<sup>23</sup> However, since Folly was a surgeon, and thus only a skilled craftsman, he was too modest to regard himself as a learned man; and it may in part have been his medical curiosity and his modesty that led him to seek out local healing knowledge and write about it. The motivation for his remarks presented in this article centred on the disease syphilis and its treatment in the Danish colonies in India. In 1795 another Danish resident in Tranquebar, Johan Gottfried Klein, received the title of medical doctor from the University of Copenhagen on the acceptance of his dissertation concerning the treatment of venereal disease by Indian doctors. In Folly's opinion, based on his practical experience as a surgeon in India, Klein's dissertation was full of errors, and therefore did not deserve the degree of doctorate. Folly wrote a substantial and detailed review of Klein's dissertation in which he corrected or rejected several of the conclusions, and afterwards began an extensive investigation of the surgical (and medical) skills of the Malabar doctors with a special focus on the treatment of venereal diseases, such as syphilis. Folly's criticism of Klein will be the subject of further research.

### Science in Tranquebar

Folly was neither the first nor the last author of scientific literature in the Danish East Indies. However, as the history of medicine and natural science in that region has not yet been the subject of a comprehensive study, only a sketchy outline of the scientific community there can be given. In the following short account no clear distinction has been made between medicine and the natural sciences, because in the period dealt with here c.1750 to 1850, all sciences, i.e. medicine, botany, zoology, geology, etc., were studied together and by the same people.

Many of the scientists in Tranquebar were medical doctors employed by the Protestant mission. In chronological order the first was Samuel Benjamin Cnoll (1705–67), a medical doctor educated in Halle and employed at the royal Danish mission from about 1732 until his death in 1767. He supervised the hospital from the 1740s, and in 1753, published a small article on the Indian preparation of borax in the Danish journal *Acta Medica Hafniensis*.<sup>24</sup> After his death in 1767, his botanical garden or plantation was bequeathed to his successors as doctors at the mission.<sup>25</sup>

<sup>23</sup> T L F Folly, *Bemerkungen der von Dr. Roxburgh entdeckten Fieber-Rinde Swietenia Febrifuga*, 1792, 18 pages, Rare Manuscripts Collection, Royal Library, Copenhagen, catalogue number: Add. 761a, tillæg 4<sup>o</sup>.

<sup>24</sup> Samuel Benjamin Cnoll, 'Titera autographica Tranquebaria Indorum orientalium Fridericopolim Norvegiæ missæ de boracis artificiali compositione', *Acta Medica Hafniensis*, 1753, pp. 64–6.

<sup>25</sup> Larsen, op. cit., note 22 above.



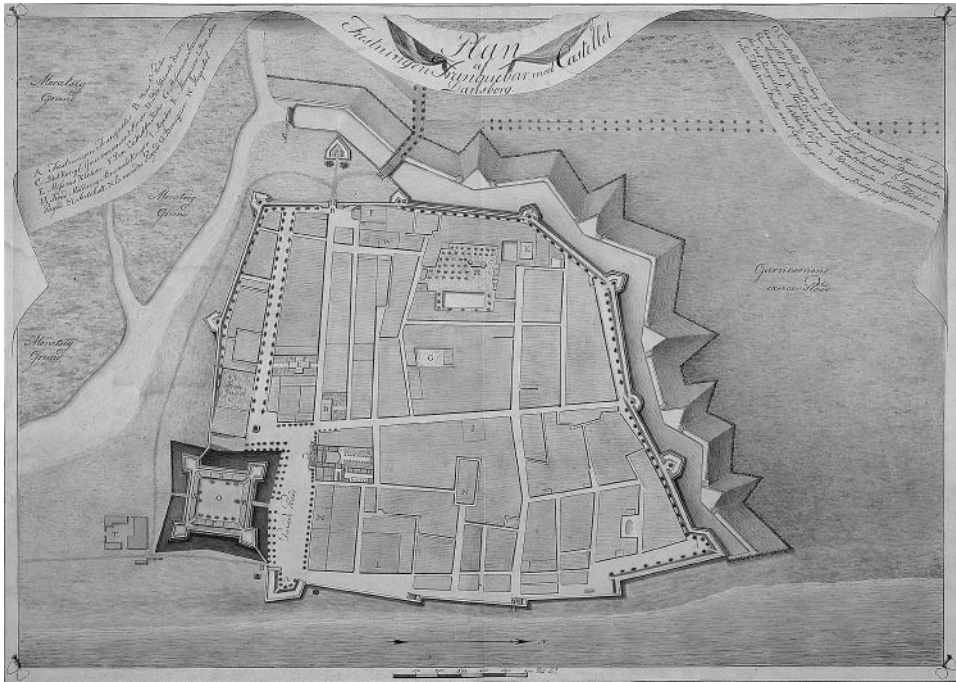


Figure 2: Map of Tranquebar, by Peter Anker, governor of Tranquebar from 1788 to 1807, c. 1800. (© Museum of Cultural History, University of Oslo, Norway; photo: Ann Christine Eek)

Cnoll was succeeded by Johann Gerhard Koenig (1728–85), a surgeon who had studied botany under the famous Carl Linnaeus in Sweden. For a period, he worked at the Royal Frederik’s Hospital in Copenhagen; and it seems that Folly actually served under him at the dispensary.<sup>26</sup> He arrived in Tranquebar in 1768 to take up the position of doctor at the mission; and in 1773 he received the doctor’s degree in absentia from the University of Copenhagen.<sup>27</sup> However, in 1774 Koenig was supposed to have given up his position at the mission for a more profitable one as naturalist to the Nawab of Arcot.<sup>28</sup> During this time he embarked on a voyage to the mountains north of Madras and to Ceylon, a description of which was later published in a Danish scientific journal.<sup>29</sup> In 1778 Koenig was transferred to a post with the EIC where he remained until his death, undertaking several scientific journeys and working with notable scientists like William Roxburgh.<sup>30</sup>

In 1788 the Tranquebar Society, a learned society modelled on the British Asiatic Society in Calcutta, was founded. It attracted naturalists, orientalists, linguists and historians from the Danish colonies and the mother country, including the missionary

<sup>26</sup> T L Folly, *Nogle Anmærkninger i Anledning af Doctor Kleins forsøg om den Veneriske Syges helbredelse i Ostindien*, Tranquebar, 1798, Rare Manuscripts Section, Royal Library, Denmark, catalogue number: Add. 761e 8°.

<sup>27</sup> Larsen, op. cit., note 22 above.

<sup>28</sup> Ray Desmond, *The European discovery of the Indian flora*, Oxford, Clarendon Press, and Kew, Royal Botanic Gardens, 1992, p. 39.

<sup>29</sup> Johan Gerhard Koenig, ‘Doctor Koenigs reise fra Trankebar til Zeylon’, *Videnskabernes Selskabs Skrifter*, Copenhagen, 1779, 12th part, pp. 383–402.

<sup>30</sup> Desmond, op. cit., note 28 above, p. 40.



Figure 3: View of Tranquebar from the south, by Peter Anker, c. 1800. (© Museum of Cultural History, University of Oslo, Norway; photo: Anne Christine Eek.)

Christoph Samuel John (1747–1813) who contributed several papers on the local flora.<sup>31</sup> John arrived in Tranquebar in 1771 shortly after Koenig and it is likely that John's and the other missionaries' strong interest in botany originated with Koenig. John remained in Tranquebar until his death and is known to have corresponded with, and been a friend of, William Roxburgh.<sup>32</sup>

In 1776 a new missionary named Johan Peter Rottler (1749–1836) arrived in the colony. He, too, was interested in botany. He went on botanical excursions around the Tranquebarian countryside and as far away as Ceylon. He published descriptions of new species in several European periodicals and verified the names of plants collected by two other members of the mission—Johann Klein and Benjamin Heyne. Johann Gottfried Klein (1766–1818), the son of a missionary, was born in Tranquebar. He went to school and studied medicine in Europe until 1791 when he returned to take up the position as mission doctor.<sup>33</sup> A few years later, in 1795, he received his doctor's degree in absentia from the University of Copenhagen.<sup>34</sup> Benjamin Heyne (1770–1819) joined the mission about the same time as Klein. He appears to have qualified as a doctor before departing for the Indies, and on arrival in Tranquebar he worked for a short while as doctor for the Moravian Brothers—another Protestant mission working out of Tranquebar to colonize the Danish Nicobar Islands.<sup>35</sup> However, like the doctors in Tranquebar, he found it hard to make ends meet. Therefore, Father John had to intervene on his behalf to ask his friend William Roxburgh to employ Heyne on the plantations of the EIC. Heyne worked for the EIC and later became the Company's Naturalist and Botanist in the Madras Presidency (1802).<sup>36</sup>

<sup>31</sup> Desmond, op. cit., note 28 above, p. 39. *Det Tranquebarske Selskabs Skrifter* (Journal of the Tranquebarian Society) 1789, I.

<sup>32</sup> Struwe, op. cit., note 2 above, vol. 6, p. 100.

<sup>33</sup> Desmond, op. cit., note 28 above, pp. 40–41.

<sup>34</sup> Larsen, op. cit., note 22 above. Klein's doctoral thesis was titled, *De morbi veneri curation in India Orientalis*, Hafnia, 1795.

<sup>35</sup> Larsen, op. cit., note 22 above.

<sup>36</sup> Desmond, op. cit., note 28 above, pp. 41–2.

### *The Medical Skills of the Malabar Doctors*

The last and probably the best known Danish scientist in India was Nathaniel Wallich (1786–1854). Wallich was a surgeon trained at the Royal Academy of Surgeons in Copenhagen. In 1807, he arrived at his new post as regimental surgeon in the Danish settlement of Serampore in Bengal, then known as Frederiksnagore. However, as a result of the Napoleonic Wars, the British from 1807 to 1815 occupied the Danish colonies and during that time Wallich was enlisted by the EIC. By the end of the war his scientific skills in botany were well known and he became the Superintendent of the Oriental Museum of the Asiatic Society in Calcutta. Later, he became Superintendent of the EIC's Botanical Garden in Calcutta, where he prepared a catalogue of more than 20,000 botanical specimens.<sup>37</sup>

Thus, it is clear that during the time when Folly lived in Tranquebar it was not just a small settlement in Southern India. A number of people, predominantly physicians, dedicated to the natural sciences lived and worked in the colony and their presence may well have inspired Folly to write the series of short essays on the medicine of South India.

#### **T L F Folly's Comments**

The essay offered in this article is one of a small series of texts written by Folly during the years 1795 to 1801. The exact extent of his writings has yet to be established, as some of them were published in eighteenth-century journals, while others exist only as manuscripts, with occasional copies. All of the manuscripts, including the one used for this article, are today kept at the Rare Manuscripts Section in the Royal Library, Copenhagen, Denmark.<sup>38</sup>

Folly's original manuscript 'Anmærkning Om Mallebar Lægernes Kundskab i Chirurgien. 1798', was transcribed from the Danish gothic script of the eighteenth century (see appendix), and translated into English. The footnotes in roman type (with occasional assistance from Gary Hausman) help to explain various obscure details of the text, while the footnotes in italics are translations of Folly's own notes in the original manuscript.

The essay itself is divided into five sections of which the first three are designated A, B and C. Section A is called 'Notes on the Surgical Skills of the Malabar Doctors' and is a very critical, if not a negative, description of the medical and surgical practices of Tamil doctors, accompanied by examples of the alleged ignorance and superstition of Tamil medical culture in general. Section B, called 'Note', is a short case study illustrating a curious and horrible side-effect of certain oils used in Tamil medicine. Section C entitled 'About the Preparation or Sublimation of Mercury by the Malabars', is Folly's interview with two wandering Tamil doctors about their manufacture and use of mercurial drugs. To this is added the fourth section as an addendum called, 'The Process of Mercury Sublimation; translated from the Tamil Author Agastyer's Manuscript'. It contains a translation of a text written by the Siddha master Agastya on the preparation of mercurial drugs. Finally, in the last section called 'Remark', which is a kind of epilogue, Folly looks at the general extent of indigenous medicine in India, noting

<sup>37</sup> See: <http://www.indianmuseum-calcutta.org/wallich.html> (accessed, 8 May 2004).

<sup>38</sup> Catalogue number of the original manuscript: Add. 761e 4<sup>o</sup>, and catalogue number of the copy made

by the Royal Academy of Surgeons in Copenhagen: Add. 333a Fol.

that the Tamils probably had some ancient knowledge of medicine, as did the Indians in the northern provinces also.

In conclusion, Folly's comments on "the Surgical Skills of the Malabar Doctors" supply us with new information about at least three interesting aspects of medicine in colonial Tranquebar in the last decade of the eighteenth century. First, Folly shows the familiar ambivalence among European doctors in the period 1770–1820 towards Indian doctors and Indian medicine. In this way, he makes an early contribution to the European perceptions of south Indian physicians discussed by scholars like Niels Brimnes. At the same time Folly's text connects the previously unknown medical establishment in Danish Tranquebar with the general state of colonial medicine in India in the last decades of the eighteenth century. Secondly, Folly's text is one of the earliest European descriptions of the drugs, techniques and practices of Siddha medicine, a special Indian tradition native to the Tamil speaking areas of southern India. Thirdly, Folly describes and discusses the use of mercurial drugs for the treatment of syphilis in Siddha medicine, a matter of great concern for the discussion of when and how mercury and syphilis appeared and interacted in the Indian context.

Thus, the previously unheeded comments of a forgotten surgeon in a small and all but forgotten Danish colony on the subcontinent can open up new vistas into the fascinating world of colonial medicine in eighteenth-century India.

#### English Translation:

#### A. Notes on the Surgical Skills of the Malabar<sup>39</sup> Doctors, 1798 by T L Folly, Regimental Surgeon

Surgery is conducted by those who practise medicine, but they do not possess the slightest knowledge of the sciences that belong to it.<sup>40</sup> They understand nothing of anatomy, and it is disgusting to them to open a corpse, because they think it would defile them. Whenever they see it done by the Europeans, they are repelled. In all of India no dead body has yet been opened by Malabar doctors. It is often claimed that a person has been poisoned, but the corpse is never dissected to obtain the true cause of death, because the relatives of the deceased rarely permit it. Their doctors give a statement and everyone is satisfied. Besides, it would not make these doctors any wiser if they did carry out an autopsy.

A couple of years ago, a Malabar woman was brought to Tranquebar from the countryside. She was supposed to have been poisoned by her husband, and I, along with the officers of the Court, was ordered to inspect her. According to the external indications, the supposition could be well-founded, but when I was about to dissect her, the relatives and the husband started a commotion and opposed it. The Authorities thought it best to leave things be, and consequently the woman was burnt, and everything went silent. The poor, the lower castes, and the Muslims are not so stubborn in such cases.

A Malabar woman, who dies in labour without giving birth, is not burnt or buried with the foetus in the womb. A Rapedor<sup>41</sup> is called in and given a new knife, with which he

<sup>39</sup>Tamil doctors.

<sup>40</sup>The word "sciences" is a direct translation of the equivalent Danish word "*Videnskaber*" used by Folly in the original manuscript. By this

word Folly seems to refer to both theoretical knowledge (Danish: "*viden*") and practical skill.

<sup>41</sup>A Rapedor is an Indian barber/surgeon.

opens the abdomen. When he sees the foetus he does not touch the body anymore, but calls for the midwife, who pulls out the foetus and the placenta, and throws it away whether it is alive or not. The foetus is damned, since it has cost the life of the mother.<sup>42</sup>

Some years ago, I was called to a Malabar woman who had been in painful labour for three days. When I arrived she had been dead for about a quarter of an hour and the abdomen was still warm. As there was no violent haemorrhage, I thought the foetus might still be alive, and after much fuss I obtained permission to open her. The foetus was alive but weak, and it lay with its back to the mouth of the uterus. Had the midwife understood how to turn the baby, both mother and child would have been saved, but there is no midwife here who knows how to do that sort of turn. Afterwards, I did everything recommended for such foetuses, but it died the next day, in my opinion of neglect.

The Malabar doctors generally bandage fractures in such a way that nineteen out of twenty die of gangrene. In twenty years, I have received more than sixty Indians and many others with all sorts of fractures. They even bring them here from places outside the Danish territory, and if they are brought without having been in the hands of Malabar doctors, they are easily cured. In any case the injuries of the Indians heal easier and faster than those of the Europeans, unless they have other diseases, for instance venereal disease. However, when a fracture has been dressed by a Malabar doctor within twenty-four to thirty-six hours there is little or no staining. The following case will show their way of dressing:

In 1790, I was ordered to follow the officers of the Court to the village of Tillaly, a short mile from Tranquebar. I found a strong young man who had died the night before, and the inspection revealed that no violence had been inflicted on the body, except for the left arm, which was dressed on the forearm but severely swollen, gangrenous and full of blisters. The people in the house said that the man's brother had broken the arm with a blow six days earlier. I now wanted to remove the dressing but had to ask for help. The first cover was a kind of potter's clay, which was very dry and hard, and underneath this, I found a lot of thin bamboo sticks close by each other and closely wrapped in twine. Under this, the arm was wrapped in strips of linen which had been soaked in a kind of varnish oil. When all this had been removed with great difficulty the forearm was found festering, but only the radius was fractured, while ulna was intact. This seemed to indicate that when the brother had hit him the young man had held up his arm in defence. The brother was in custody, but after I submitted my statement he was sentenced with fines and released. Had it been under an Indian government, he would have lost his life, and thus two persons would have died because of ignorance. During the time I have been here, I have had five or six cases which had been dressed in the same way, and of these, only one, who also had a fractured forearm, was saved by amputation.

The Malabar doctors will have nothing to do with blood-letting, and they interpret strong inflammatory diseases in the wrong way. For instance they explain a lung or liver inflammation by winds of heated nature, and they think the same about arthritis and rheumatism. Assuredly, none of these doctors could open a vein, much less cut off a limb. They try to

<sup>42</sup> *"If a woman gives birth to a living child and dies immediately afterwards, relatives and friends come along, wail and cry, and everyone gives the new-born a slap, scolds and curses it, as the cause*

*of the mother's death. If it is a girl she rarely survives unless an old merciful grandmother takes care of her."*



remove abscesses and boils with leaves and herbs, and if that is ineffective, they allow it to burst by itself. Rarely do they open boils, but if they have seen Europeans doing it, they can do it like quacks. If an abscess becomes fistulous, they do not know how to treat it, and I have had many of these cases.

They heal fresh wounds and sores of all kinds with oils pressed from fruits and seeds. *Oleum Ricini*<sup>43</sup> is one of their favourite remedies. They also have a kind of oil which is so drying that it contracts and dries up a wound in forty-eight hours. However, this oil often has bad side effects because the wound does not heal under the dried skin and thus can break out in another place or cause other problems. A while ago there was a ship's captain here in Tranquebar, who for four or five years had had painful sores on the legs and especially on one foot. He suffered from venereal disease, was always at sea, kept a bad diet, and had never undergone proper treatment. I gave him the remedies I thought appropriate for his disease, and for his sores the appropriate ointments. He had learned to bandage himself and had some kind of French surgeon help him. Soon he began to recover and one leg, which had been crooked, became straight. The sores cleaned up and started to heal and he, who had been lying and sitting incessantly for fourteen months, now started to walk with a cane. However, impatient because the sores did not heal fast enough, he and his doctor were persuaded by a Malabar doctor to dress the wounds with the above mentioned oils. The treatment was continued for three or four days. One morning when I visited him, he told me joyously that all his wounds were healed, and that he thought now, he needed only a strong purge "to be rid of these damned pills", as he expressed it. Then he thought he was healed. However, three days later, I was summoned in haste. He had had strong vomiting and diarrhoea during the night, which continued, and the abdomen was hard and swollen. He suffered severe pain and cramps in one leg, cold sweats, contractions in the muscles of the neck, and almost all the signs of the onset of tetanus. However, his otherwise good constitution and the remedies used (of which opium and hot baths probably did the most) helped him through. All the sores were dry and covered with a hard, brown and shrunken skin. He remained here in Tranquebar for another month, but then had to go to sea, where his disease got worse again. His ship was seized by a French privateer and brought to Isle de France,<sup>44</sup> where he is now said to be treated by a French doctor, who has promised to cure him with the famous *Rob Anti-Syphilitique* by Laffecteur.<sup>45</sup>

Superstition is extraordinary strong among Indians, be they Christians, heathens<sup>46</sup> or Muslims. Their doctors are just as superstitious, or at least they know how to make use of the patients' superstition. For instance if the disease, whatever it might be, is not cured by their faulty method of cure, then it is said that the patient is possessed or bewitched. The doctor then has to have many Fanno or, if the patient is rich, Pagodas,<sup>47</sup> with which to buy stronger remedies, incense, etc. If this does not help, the patient has to have himself brought to some holy place, make offerings, etc. About six miles from Tranquebar, there is a

<sup>43</sup> Castor oil.

<sup>44</sup> The island of Mauritius in the Indian Ocean.

<sup>45</sup> "Rob Anti-Syphilitique" is French for "anti syphilitic juice" and the inventor was the chemist Sieur Pierre Boyveau-Laffecteur, c.1750–1812, who worked at French naval hospitals for thirty years.

<sup>46</sup> Probably Hindus.

<sup>47</sup> Pagodas and Fanno or Fanams were south Indian coins made of gold and silver respectively. See: <http://home3.inet.tele.dk/ujensen/word.htm> (accessed 8 May 2004).



Catholic church, Signora de Sauda (Our Lady of Health), and each year a crowd of people travel there from here as well as from other places. People of all religious sects seek to have their health restored by giving offerings to the church. The priest, who earns well from this, sends them back with clay pots, holy water and written notes they carry fastened to their arms and around their necks, etc. It is true that he gets advantages from this, but the poor patients assuredly do not, since the good Lady's miracles are rare. However, it is often the case that young barren women do not make this journey in vain. Nine or ten years ago, I was called to Nagapatnam<sup>48</sup> to see the priest, because he was paralysed in his legs due to a cold. I brought him to Tranquebar where he recovered and paid very handsomely for the cure. However, when I told him, that it surprised me that he came to me for help, since the patroness of his church cured so many patients, he answered: "You are a good man but a heretic. My Lady has cured many hundreds, but they must have a better and more firm faith than you."

### **B. Note**

The following is a very interesting case which shows, how contracting and harmful the prepared oils of the Malabars are. In March, a young Malabar woman of noble caste was brought here from the countryside. She had had her vagina damaged during her first childbirth, which had been very hard, and the Malabar midwives had treated her with oils. Six months later she came to me and I found the entire vagina closed from the urinal tract to the anus. I used the bistourie<sup>49</sup> three times, but to my surprise and embarrassment, I found a complete coalescence, and after a 3½ inch incision or as far as I could reach with the index finger, I was still not through. Yesterday, the 10<sup>th</sup> of May, and today, she has had a strong flow of thick, black and stinking blood from the vagina, which was so strong that I had to abandon the first dressing method and only use a bourdonnet.<sup>50</sup> However wrong my treatment might seem to learned people, I shall indeed present the result, whatever it might be. I will not say that such a case has ever before occurred in my limited practice, but I must confess that my embarrassment was great when I found only little or nothing about such a complete coalescence of the vagina in the learned surgical writings, of which I actually possess quite a few.

The 12<sup>th</sup> of May 1799.

### **C. About the Preparation or Sublimation of Mercury by the Malabars of which three Compositions are made, Tranquebar, 1798**

**By T L Folly, Regimental Surgeon**

The mercury used by the Malabar doctors here in Tranquebar, and on almost the entire coast, comes from India's southern peninsula, namely from Madurai,<sup>51</sup> Ramenaderam,<sup>52</sup>

<sup>48</sup> Nagapatnam, today Naggapattinam, was a former Dutch colony on the coast south of Tranquebar.

<sup>49</sup> A scalpel.

<sup>50</sup> "Bourdonnet" is French for a so-called "quilled suture" or "bolster".

<sup>51</sup> Present day Madurai, a city southwest of Tranquebar in the central part of the province Tamil Nadu.

<sup>52</sup> Possibly present-day Ramenathapuram, a city in southern Tamil Nadu.

and other places in the interior of the country. Every year travelling doctors arrive with many compounded remedies for sale. In December this year two of them, an old man and his son, came to Tranquebar. Both claimed to be doctors, and that the remedies or medicaments they had to sell were prepared by themselves. I let them come to me and had two of our Malabar doctors who speak Portuguese translate. The travelling doctors showed me the medicaments or composita [compounds] they carried with them, which were all contained in coconut shells wrapped in old rags, and all of it in a bag, which the son, a young, strong chap, carried on his back.

First I asked them about their mercury (Malabar: Rasam<sup>53</sup>) preparations, and they were as follows:

1. The first was the one they called two times burned (sublimated), which was used by them to treat all venereal diseases. By grating the mercury finely, the colour became light yellow, and by grating it with Kal. P. water,<sup>54</sup> it became dark blue. According to them it was afterwards sublimated in glass two times. I have named it Mercur: Dului-2° Subl: (Malabar: Rassacaporum<sup>55</sup>).
2. The second, which is burnt once, they called the strong mercury. Their statement about it was rather curious and suspicious to me. They said that they took some of the first mercury which was two times burnt, grated it finely, pulverised it with two times as much fine lime and sublimated it once again. This seems to be the pure sublimation and dyes the water red or orange. I have named it 2. Merc. Sublimate: cors: (Malabar: Rassacaporum satoo<sup>56</sup>).
3. The third was supposed to have been sublimated once from equal parts of mercury and auripigmentum.<sup>57</sup> The Malabar name for auripigmentum is Ponnareedarum, which is also the name of this type of sublimated mercury.

Even though I cannot be responsible for the sincerity of their statements, or for my interpreters' correct interpretation, I shall only give my questions and their answers:

Question: Which of these mercurial preparations do you use mostly in venereal diseases, and how do you use it?

Answer: The weight of one pagoda (55 gran<sup>58</sup>) weight of the one which is burnt two times is boiled in an iron spoon seven times, each time in fresh cow butter. Then it is pulverised on the stone (a hollow stone almost like the one our painters use to rub colours on) and to this is added Baschumbo (Radix Calamin: Aromat:<sup>59</sup>)

<sup>53</sup>In Siddha medicine mercury is called Rasam. See: [http://www.infinityfoundation.com/mandala/t\\_es/t\\_es\\_tiwarsiddha.htm](http://www.infinityfoundation.com/mandala/t_es/t_es_tiwarsiddha.htm) (accessed 8 May 2004).

<sup>54</sup>Unidentified substance.

<sup>55</sup>According to Gary Hausman, PhD, Adjunct Assistant Professor of Anthropology, University of North Carolina, this word might be a misspelling for the Tamil word "Raca karpuram", which is a white mercury sulphate created by sublimation of black mercury sulphide with ordinary rock salt (Sasmbasivam Pillai, *Tamil-English dictionary of medicine, chemistry, botany and allied sciences*, Madras, The Research Institute of Siddhar's Science, 1931 (republished in the 1990s), vol. 5, p. 954.

<sup>56</sup>According to Hausman this might be "Raca karpuram cattu", where "cattu" means essence and thus the name refers to the essence of the white mercury sulphide mentioned above.

<sup>57</sup>Auripigment, also called arsenic yellow or arsenic sulphide (As<sub>2</sub>S<sub>3</sub>).

<sup>58</sup>Old Danish apothecaries measures: 1 gran = 0.0621g, 55 gran = 3.4155g (Knut Birkeland, *Mål og Vægt*, Copenhagen, Høst og Søn Forlag, 1970, pp. 30–1).

<sup>59</sup>Possibly "Radix Calamintha Aromatia" i.e. the root of calamint or basil.

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and Jager sugar<sup>60</sup> of one pagoda weight in all, of which is made 16 pills. Of these the patient must take one pill in the morning and one pill in the afternoon, until they are all consumed.

Question: Does the patient's mouth not become wounded, the breath smelly, and does he not spit?

Answer: Yes, usually the mouth becomes sore or burned already on the 5<sup>th</sup> or 6<sup>th</sup> day, and there is a lot of salivation, but still the patient must use the pills for 7 days. Then we stop, because otherwise the patient cannot eat rice for many days.

Question: What do you do when the patient salivates very strongly, and his mouth, tongue, etc. are very sore?

Answer: He must wash his mouth with milk boiled with Malva<sup>61</sup> leaves (Malabar: Tutti), or we rub the mouth with sulphur dissolved in woman's milk, and he must drink a lot of Canchi (white water).<sup>62</sup>

Question: Do you purge the patient at this time?

Answer: Yes, occasionally.

Question: How long must the patient use mercury, and when do you believe him to be cured?

Answer: He must use mercury for 12 days, sometimes 15, and then we believe him to be cured.

Question: What do you do if there are still sores on the sexual organs or other places, and certain signs that the patient is not cured?

Answer: We then consider it a great venereal disease and give the patient another 15 days of the pills which are pulverised with ground Radix China (Malabar: Parin gepotte or Parengipaddei<sup>63</sup>). We give one teaspoon at a time with the pills, in the morning and the night, and otherwise one teaspoon 2 or 3 times a day.

Question: How and against what disease do you use the mercury which is only burnt once?

Answer: We use it against the disease where fingers and toes or their joints fall off, and where there are spots and shrinking wounds on the cheeks of the face as well, and sometimes the tip of the nose, and the lips become shrunken and eaten away (a kind of leprosy which seems to be combined with venereal disease). The weight of one gold Fanno (5½ gran<sup>64</sup>) is processed as the previous pills and divided into eight pills. Of these, one pill is taken every morning and one pill every night.

Question: Does this mercury also cause salivation or wounds in the mouth?

Answer: Yes, it attacks the mouth, and causes sores, but not as fast as the first kind.

Question: Against what disease do you use the mercury you say is sublimated with mercury and Auripigmentum (Malabar: Pannareedarum)?

<sup>60</sup>Most likely jaggery, a dark, coarse, unrefined sugar made from the sap of various palm trees or from sugar cane.

<sup>61</sup>Malva is Latin for Mallow.

<sup>62</sup>According to Hausman, "canchi" must be a misspelling for "kanci", which means rice water in Tamil, e.g. the starchy water left after boiling rice.

<sup>63</sup>Radix China is Latin for "China root", which, according to Hausman is also the meaning of the Tamil word "parenkippattei". Another name for the root is Smilax china or Sarsaparilla, a known emetic.

<sup>64</sup>0.34155g (Birkeland, op. cit., note 58 above, pp. 30–1).

Answer: We use it for fevers, especially for children, and above all for new-borns, when they have a cold, fever, etc. The weight of one gold Fanno (5½ gran) is finely pulverised with honey, Jager sugar, or milk from the mother. Of this, the child takes a portion according to its age, two or four times a day.

Question: But do you not think this remedy is too strong? Can it help the child, and what effect does it have?

Answer: It is not too strong or powerful, but you must not give too much of it. When Swami (God) wants it, then it will surely help. Otherwise it will give diarrhoea.

Question: From where do you get mercury and from whom do you buy it? Is it obtainable in this country?

Answer: We have earlier bought it in the south from the Dutch in Nagapatnam, and in Cochin on the Malabar Coast. No one sells it, save the white people. Now that the Dutch are gone, we have to go to Madras and other places to buy it, and it is often much more expensive than before. We always paid one Fanno for the weight of ten pagodas, now we have to give much more. In this country, there is no mercury.<sup>65</sup>

Further the old man said that sixteen years ago when there was a war in the country, mercury was so rare that he extracted it from Cinnabar (Malabar: Sadee Lingam<sup>66</sup>). I wonder if that is true.

Question: Of whom do you think taught your ancestors to burn mercury?

Answer: I (the old man) have learned it from my father, and he from his father, etc.

Question: But do you not think that the knowledge of burning mercury also comes from the white man, from whom you have obtained the mercury, and especially from the priests, who have lived so long among your ancestors?

Answer: We only know that high up in the mountains of the southwest, there lived nine masters, who have written a lot, and from them, we have our knowledge.

Here our conversation stopped and they travelled on to sell their pharmaceuticals. That these wandering doctors have prepared the mercury by themselves appeared very likely to me. Of the first kind, which was sublimated twice, they had three coconut shells of seven or eight pounds. And they sold the weight of two pagodas (108 gran) for one Fanno and eight skilling.<sup>67</sup> Of the second and third kind, they might have had three or four pounds each. These two kinds, they sold at a higher price, so the weight of 1½ pagoda cost one Fanno. They had a lot of other composita in addition to these, and among others, an iron preparation, which they said had been burned fifty times. They praised its use for boils and sores, stomach ache, diarrhoea, “sweet piss” (diabetes), “drippers” (Gonorrhoea), “white flow” (syphilis), and other diseases. I bought a composita, which according to them was sublimated with mercury, auripigment and gold (it probably does not contain much of the latter). They used this remedy for women in labour, because

<sup>65</sup>Here the important question of the origin of the mercury is answered. In the beginning of this part of the manuscript it was not clear whether the mercury was bought from foreigners or came from indigenous sources, but here the origin of the mercury becomes quite clear: it is imported.

<sup>66</sup>Hausman refers to Sambasivam Pillai, *op. cit.*, note 55 above, vol. 3, pp. 2005–7, where it says that “Cati linkam” is exactly “Mercurius sulpheratus rubber” or red mercury sulphate, which we call cinnabar.

<sup>67</sup>Skilling was a minor Danish coin.

it drove out the blood which was coagulated. It is to be given with ginger water and I got it all for four Fanno.

**The Process of Mercury Sublimation**  
**Translated from the Tamil author Agastyer's Manuscript<sup>68</sup>**

*Take a palam,<sup>69</sup> or the weight of 20 pagodas of Alum (Tamil: Sinakaram) and two palam or the weight of 20 pagodas of mercury [Tamil: Rasam]. Rub them together for 12 hours (Tamil: 4 Samam) with the juice of green saffron (Tamil: Pasu Mainasel<sup>70</sup>), of Tulasi leaves (Tamil: Tullasi Elei<sup>71</sup>), of Arkinsi root (Tamil: Arkinsi Ver<sup>72</sup>) and of lemon fruit (Tamil: Elum Bistam Parham<sup>73</sup>). Rub for three hours with every kind of juice in said order. Pour this mass into a glass flask<sup>74</sup> from Kasi (Benares: a famous holy city in Hindustan by the river Ganges). Wrap the flask with old rags on which is rubbed Kaliman,<sup>75</sup> put a stone or a piece of an old clay pot over the mouth of the flask, and wrap this too with the said rags. Place the flask in the sun and dry it all. Afterwards dig a fireplace in the ground, place a Tresille (Tamil: Saddi<sup>76</sup>) over it, pour sand into the fireplace to a height of two fingers width and press the flask into it, so that it stands upright. Now burn the flask with a lamp (Tamil: Tibam) for 4 Samam (i.e. 12 hours), with a Kamalam<sup>77</sup> for 4 Samam (i.e. 12 hours), and with a fire of wood for 4 Samam, in all one and a half days. Afterward let it cool, then break the flask, and then you have Rassacarpoorum.*

This was all I was able to find out. I gave the old man a pound of purified mercury, which pleased him. Furthermore, I promised him that if he kept his promise to come back next year, and bring me two books written by the nine great masters, in which especially their simples and composita were described, he would get all the mercury he wanted.

I wondered about these wandering doctors, who had some forty composita wrapped in a bag and lying between each other, wrapped in old rags and coconut shells. What would our pharmacists have thought of this?

In all probability the mercury was brought to the Indians by the Europeans, and the former have learned its many preparations from the latter. It is well-known that the Portuguese, Spanish and French, for more than 200 years have sent out missionaries, especially Jesuits. The skills of the Jesuits in all sciences are well-known, and they

<sup>68</sup> Agastya is one of the great masters and authors of the native Tamil medical tradition, called Siddha medicine.

<sup>69</sup> "A Palam is an Indian ounce of which 13 makes up one English pound."

<sup>70</sup> "Latin: *Curcuma Oblonga*: Linn:." [Turmeric].

<sup>71</sup> "Latin: *Acimun Basilium*" [Basil].

<sup>72</sup> "Latin: *Radix Alangium Decapetalum*"

(unknown), described by Dr Johann Peter Rottler, former missionary of Tranquebar.

<sup>73</sup> "Indian lemon fruit."

<sup>74</sup> "Kasi Kuppi is a glass or flask which is made in Kasi [Benares] of a shape somewhat like a urine bottle."

<sup>75</sup> "Kaliman is clay, or a lime prepared of small ground gravel stones, Jager sugar, egg white, sour milk, oil and butter. These ingredients are kneaded together and make up a kind of very strong plaster. Kaliman is also called Algemas and the rich European and Malabar houses are coated with it. Well prepared, it looks like white marble, but it is not as durable."

<sup>76</sup> "A clay pot of varying size and shape, which is normally used for cooking in Tranquebarian kitchens."

<sup>77</sup> "A deep metal plate which can be used as an oil lamp with ten wicks."

have been around the entire country. In all parts of Indostan, especially on this peninsula, there have been monasteries, churches and missionaries. For the time being, they are expelled from the country by the Indian princes, and in 1780–81, Hyder Aly<sup>78</sup> has had all their churches, schools, etc. in his country demolished, and expelled all Catholic clergymen. There are still plenty of them, where the Europeans have power.

There were still two great pharmacies in Goa, the capital for the Portuguese here in India, in 1779, and supposedly there had been more pharmacies before the Portuguese lost their many dependencies in India. The majority of the people, who are trained in the pharmacies, are natives, and before the Dutch and other nations took the Portuguese cities, they sent these apprentices to Goa from all over the country. In the year 1775, I was on the Malabar Coast as a surgeon on one of the Danish Asiatic Company's ships, and we took aboard about twenty Portuguese passengers. They were all from Goa, and among them were three doctors and three pharmacists. The others were monks, and they were all going to Bengal, where there is a Franciscan and an Augustinian monastery. About ninety years ago there was a famous Jesuit college here on the coast in Pondicherry,<sup>79</sup> and some old monks still live there. They sent compounded medical remedies all over the country, and of these their *Drogué Amere*, *Elixir Ameres*, *Theriac*, *Eau de Melig*, *Syrup Capilair* are still held in very high esteem by the residents of this country.

#### Remark<sup>80</sup>

I must confess that what I have written about the preparation of mercury, etc. by the Malabar might seem wrong to learned people. However, I must be excused for my lack of understanding the language, and especially for the discretion of the Malabar doctors who never tell the truth. If one asks them about the composition of some medicament, they believe they will lose their income if they tell the truth. Therefore they usually leave out one or two of the ingredients.

My remarks about the two travelling doctors from Ramenadaram, namely what they said about the nine great masters in the south, might possibly be true, since there has been a university for astronomy in Madurai. Furthermore, in Bengal, a province belonging to the English, there is a city called Kasi<sup>81</sup> where an Indian university still remains. The English government gives the entire income of this province, which amounts to twenty thousand rupees a year, to this university. From this university all their astronomical observations are sent out over all of India and their calculations of solar eclipses are said to be very precise. Their knowledge of medicine is the best in India and they are especially experienced in diseases of the eye, and even if their medicine is strong it often has a good effect. In the area of surgery they are said to have limited knowledge, but I hope soon to be able to report more fully on this.

Tranquebar, October 1799.

<sup>78</sup>Hyder Ali was the Islamic ruler of Mysore, the most powerful native kingdom in southern India at the time. In 1780–81 he was waging war on the English and he wanted to expel all Europeans from India (see Rasch, *op. cit.*, note 1 above, pp. 168–75).

<sup>79</sup>A French colony south of Tranquebar.

<sup>80</sup>This remark can be found only in Folly's original manuscript (Royal Library catalogue number: Add. 761e 4°) and not in the copy made at the Royal Academy of Surgeons in Copenhagen (Royal Library catalogue number: Add. 333a Fol.).

<sup>81</sup>Kasi was another name for Benares.



**Appendix**  
**Danish Transcription from the Eighteenth-Century Gothic Script**  
**a, Anmærkning Om Mallebar Lægernes Kundskab i Chirurgien. 1798.**  
**Af T L Folly Reg<sup>m</sup> Chirurgus.**

Chirurgien bliver udóvet af dem der Practicere Medicinen, men uden at beside den ringeste Kundskab af de Videnskaber der hórer dertil. Af Anatomien forstaar de ey det ringeste, og at Aabne en dód :/ Dissectio Cadaverum :/ er dem en Afskye, det vilde forurenige dem, og det jage dem paa flugten naar de seer det af Europæerne. I hel [*sic*]Indien er endnu ingen dódt legeme bleven aabnet af Mallebariske Lægere. Mangen gang heder det at et Menneske er forgivet, men at Aabne den den [*sic*] Dóde for at faae sand Kundskab, derom skeer ey, thi sielden bliver det tillaadt af den Afdódes slægtning; Deres Læger giver en erklæring og dermed er det nok; det vilde ey heller gióre disse Læger Klogere. For et par Aar siden blev en Mallebar Kone bragt ind fra Landet, som skulde været forgivet af hendes Mand; Ieg blev med Rettens Folk beordret at besigtige hende, efter de yderlige Kendetegn kunde formodningen være grundet; Men da Ieg vilde Aabne hende, begyndte Slægtninger og Manden at gióre Allarm, og satte sig derimod, Óvrigheden fandt for godt at lade det beroe, -"-"-". Hun blev Brændt og alting Stille. De Fattige og Lavere Kaster, og Mohrerne ere ey saa paastaaende i slike begivenheder. En Mallebar kone som Dóer i Barns Nód, uden at blive forlóst, bliver ey Brændt eller begravet med Fostret i Livet, en Rapedor /: Barber/ bliver Kaldet, han bliver leveret en nye kniv, dermed Aabner han underlivet og naar han seer Fostret, maae Iordemoderen trække det ud, han rórer ellers ey videre ved konen, naar Iordemoderen har trukket Fostret og Efterbyrden ud, kaster hun det hen, der maae være liv i det eller ey, [*sideskift*] det er fordómt da det har Kostet moderen Livet,<sup>82</sup> For nogle Aar siden blev ieg kaldt til en Mallebar Kone som i trende dage havde lagt i Fódssels Smarter, ved min Ankomst var hun dód, for et godt Quarter siden, underlivet var varmt, ingen blodstyrning havde yttert sig, ieg troede Fostret levede inu, og fik efter mange omstendigheder Lov at Aabne hende, og at tage Fosteret ud som levede mens var svagt, det laae med ryggen for modermundet /: havde Iordemoderen forstaaet at vende barnet havde de begge bleven ræddet, men her er ingen Iordemoder der forstaar vendingen:/ ieg lod gióre alt hvad der er anraadet om deslige fostere, men det dóde dagen efter, efter mine tanker af frivillig Forsómelse.

Fracturer forbinder de Mallebariske Læger giærne Saaledes at af 20 de 19 dóer af Koldbrand, ieg har i de 20. Aar haft alene af Indianer over 60. Fracturerede af alle sorter, de bringer dem endog fra fremmede stæder hertil, ere de bragte uden at have været i disse Umenniskers hender saa ere de lettelige helbredet, over alt heeler beskadigelser meget lettere og snarere hos Indianerne end hos Europæerne de maatte da have andre Sygdoms Matterede i Kroppen, for Eksempel stærk Venerisk. Naar derimod en Fractur har været forbunden af dem i en 24. eller 36 timer er der sielden eller ingen vædning, Fólgende Cassus vill tydeligere vise deres Forbindings maade.

I 1790 fik ieg en Order at fólg ud med Rettens Betientere til Tillaly, en liden Miil fra Byen; Ieg fandt et ungt stærk Meniske der var dód om Natten fór, ved undersógelsen fandtes ingen voldsom Behandling paa Legemet, uden at den venstre overarm var stærkt opsvulmet og Gangræneret og fuld af blærer, under armen indsvóbt, folkene i husset sagte at broderen havde slaet ham armen i tue—for en 6. dage siden; Ieg vilde blotte Armen men maatte sóge hielp; den fórste bedækning var en art af Pottemager Leer, som var ganske Tór og haard, da den med Móye var afpilled, fandtes undersamme smalle Bambus Staver som laae tæt ved hverandre og vare tæt omvikelet med Seilgarn, efter dette var Armen omsvóbt med lærets stremler der var dyppede i en art Fernis Olie, med Móye blev alt dette

<sup>82</sup> Fóder en kone et levende barn, og dóer strax efter, saa kommer Slægtninger- og venner, hylér og græder, enhver giver den Nyefódie et Klaps, skiælder

og bander det som aarsag i moderens dód, er det et Pige barn, lever det sielden det maatte da være at en gammel barmhiertig bestemoder tog sig af det.

bortaget, Underarmen fandtes mortificeret, og ved undersøgelsen allene Radius Fracturated, Ulna var heel, han havde ved det broderen slog ham holdt Armen for; Broderen sat i Arrest, ved indgieven Erklæring blev han dómt i bóder og lóssladt, havde det været under en Indisk Regering havde han mistet Livet, og altsaa tvende mennesker opofferet formedelst Vandkundighed; Næsten paa ligesaadan maade forbunden har ieg faaet i den tid ieg er her 5. og 6. og hvoraf kund en blev redet ved amputation, han havde liggeledes Underarmen fractureret.

Af Aareladning vill de Mallebariske Lægere intet vide, og de heftigste betændelse Sygdomme, erklærer de paa forkert og falsk maade, F: Ex: En Lunge eller Lever Betændelse erklære de for vinde af den hidsig Natur, det samme troer de om Gigt og Rheumatisme; der var visselig og ingen af disse læger der Kunde Aabne en Aare, uden meget mindre Afsette et Led. Abscesser og bylder, sóger de at fordeele med blade og Urter, gaaer det ey an saa lader de den bryde op af sig selv, sielden aabner de sammel[,] de maatte da have set det af Europæerne, og saa giór de det Fuskermæssig nok, er [sideskift] eller bliver en Abscess fistulós, saa ved de ey at ielpe dem, ieg har haft mange af dem og fornemlig af fistulóse Bubones.

Friske Saar, Geschvurer af alle Arter, heeler de med Olier udpresset af frugter eller Kiærner, Oleum Ricini er ene af deres yndlings middeler, de haver en art af Olie der er saa udtórrende, at det sammen trækker og tórrer et saar 2 gang 24 timer, men har gierne slette følger da Saaret enten Æder under sig, brækker op paa et andet sted eller foraarsager andre tilfælde; for nogen tid siden var her en Skibs Captain, som i en 4 a 5 Aar havde haft Onardtede Geschvurer paa benene, og fornemlig den ene fod, han havde tit haft Veneriske tilfælde, bestandig været til Sóes, holdt slet Diæt og aldrig brugt en ret Cur; Ieg gav ham de læge middeler ieg troede passede til hans Sygdom, og til hans Saar blev passende Salver etc. brugt; Af vanen havde han lært at forbinde sig selv, og tillige var en sort af Fransk Chirurgus hos ham der hialp ham, han begyndte at komme sig, det ene ben som var for krumt sammen trukken blev lige, Geschvurene rene og begyndte [*sic*] at heele, og han kunde gaee ved en stork [*sic*], da han næsten i 14 maaneder havde lagt og siddet bestandig. Utaalmodighed over at Geschvurerne ey vilde heele saa hastig, var Aarsag at han og hans Esculap- lod sig overtale af en Mallebarisk læge til at forbinde Saarene med en Olie som i en 3 a 4 dage blev continueret; En Morgen ieg besøgte ham fortalte han mig med glæde at alle hans Saar vare hele, og at han troede nu bare at burde brav Laxere, / : for som han sagte at faae disse F- [forbandede?] Piller og andet af Livet:/ og saa troede han at være frisk; Men 3die dagen blev ieg kaldet i hast, han havde haft stærk brækning og stoelgang om natten, hvilke continuerede, Underlivet var haardt og Ophovnet, han havde en heftig Pine og Kramper :/ spasms:/ i det ene been, kold Sveed, Trækninger i hals = [sideskift] -musklerne, og næsten alle tegn til begyndelsen af Tetanus, hans ellers gode Natur og de Midler /: hvoraf vell Opium og Varme bad gjorde det meste:/ som blev anvendt hialp ham igiennem, Alle Geschvurer vare tórre, overtrukne med en brun haard og sammen skrumpen hud, han blev her en Maanedes tiid endnu, men maatte gaee til Sóes, hvor hans Sygdom forværrede sig igien, Skibet blev af en Fransk Kaper opbragt til Isle de France, Hvor han nu skall lige [*sic*] under en fransk læge, der har lovet at currere ham, med den berómte Rob-Anti-Syphilitique af Laffecteur. Overtroe er hos Indianerne Overordentlig stærk, det maae nu være Christne, hedninge eller Mahumedaner, og deres lægere er det i lige hoy grad, eller ogsaa ved de at benytte sig deraf, Er det at en Sygdom, hvad det nu kan være, ey vill efter deres forkeert Cur methode helbredes, saa heder det Patienten er besat eller forhexet, Doctoren maae nu have saa mange fanno, eller hos rigere Pagoder, for at kióbe kraftigere lægemiddeler, Rógelser etc: Vill det ogsaa ey hielpe maae Patienten lade sig bringe til et eller andet hellig stæd, gióre offeringer o.-d.-l. [og des lignende]. En 6 Miil herfra er en Catholiske kirke Signora de Sauda /: Vor Frues Sundhed:/ hver Aar raiser saa vel her som andre steder fra en haaben Menisker derhen, af alle Religions Secter, som sóger at faae deres helbred ved at offere til kirken, præsten<sup>83</sup> som staar sig meget

<sup>83</sup> For en 9 a 10 Aar blev ieg hentet til Nagapatnam, Patienter besøgte kirken afforkóhlelse faaet en Lamhed til præsten af denne kirke, han havde i den tiid da mange i beenene; Ieg tog ham med til Tranquebar, hvor han

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got derved sender dem tilbage med leer Potter, helligt vand, skrevne sædler de bærer paa armene og hengende om halsen, o.d.l. at han har sin fordeel er sandt, men de stakkels Patienter visselig ey, da den gode Frues Miracler ere rare, (dog har man ofte haft próver paa, at unge ufrugtbare koner, ey har giort dene reisse forgjæves.) [sideskift]

### **b, Nota**

Ieg skulle være i stand at iemsende<sup>84</sup> en meget interessant Casuo- og viise hvor sammen tækkende og skadelig malebarenaes preparede Olier er. I Martz blev bragte fra Landet et ungt, Malebar fruentimmer af fornem kaste som efter hendes første Barselseng, der var meget haard—fik moderskeem beskadiget, de Mallebariske Iordemódre brugte Olier m.v. 6. maaneder efter kom hun her til mig- fandt heele moderskeem- oven fra Vandgangen- og lige ned til Kastet [?]- tillukket, 3de gange har ieg brugt Bistouriet og til min forundering- og ey ringe forleyenhed- fandt jeg en fulkommen sammengroning, og meere en 3½ tommes insnitte eller saa langt ieg kunde rekke med peye fingeren at ieg ey enu var igiennem. I Gaar den 10 May har hun haft og som nu continuerer- en stærk udflydes af moderskeem af et sort- stinkende og tyk blod, og som var saa stræk at ieg maatte tilside sette den forrige forbindings maade og kuns Applicere Bourdonets. I hvor feilleragtig min behandlings maade kan synes for Lærde, som skull ieg troeligen ved udfaldet i hvordan det ogsaa bliver anfóre det, ieg vill ey sige at sligt en Casus nogentiid er forrekommet i min indskrenkede Praxis, mens ieg maae tilstaae at min forlegenhed blev stor- da ieg kund lidet eller intet fandt anfórt- i de lærde Chirurgiske skrifter hvoraf ieg virkligen besidder nogle om slig en fuldkommen sammen groening af modderskeem.

Den 12. May 1799. [sideskift]

### **c, Om Mallebarenaes- preparation eller Sublimering af Quegsólv og hvoraf følger trende Compositioner Tranquebar 1798. Af T L Folly Reg<sup>m</sup> Chirurgus**

Den Mercurius som af de Mallebariske læger bliver brugt her og næsten paa heele Kysten, faae de fra Indiens sydlige halv Øe, egentlig fra Madure, Ramenaderam, og andre steder oppe i Landet.

Aarligen kommer reisende læger som have adskillige sammen satte Meiddeler /:composita:/ at sælge. I December dette Aar kom her til Tranquebar tvende, en gammelagtig Mand og hans Són, begge sagte sig at være Doctore og at de Middeler eller Medecamenter de havde at sælge vare af dem preparede; Ieg lod dem komme til mig og havde to af vore Mallebariske læger til tolk der taledede Portugisk. De visede mig deres medbragte Medicamenter eller Composita, som alle vare i Cocus Skaller indsvóbt- i gl: klude, og det altsamen indpakket i en Pose, som Sónnen en ung, stærk Karl bar paa Ryggen.

Det første ieg forlangte var deres Quegsólv /Mallebarisk: Rasam:/ preparationer, og som vare følgende.

<sup>1<sup>mo</sup></sup> Den første var den de kaldede 2 gange brændt /Sublimeret:/ og af dem blev brugt i alle Veneriske Sygdomme; ved at rive den fiin blev couleuren Lyseguul, og ved at rive den af med Kal. P. [?] vand blev samme Mórke blaae-, efter deres sigende var den Sublimered i Glass, og som meldt 2 gange; jeg har tegned den Mercur: Dului-2<sup>o</sup> Subl: /Mall: Rassacapoorum:/

*kom sig, og betalte Curen meget vell; men da ieg sagte ham, at da hans kirkes Patronesse Curerede saa mange Patienter, saa undrede ieg mig han sógte hielp andenstæds, han svarede mig, I er en god Mand*

*men en kiætter, min Frue har helbredet mange hundrede, men de maae have en bedre to fastere troe end I har.*

<sup>84</sup> Med et senere skiib.

- 2<sup>do</sup> den anden kaldede den stærke Mercurius, og som er engang brændt /Sublimeret:/. Deres usigende om den kom mig noget besynderlig eller fordægtig for. [sideskift] De sagte at de tog af den første Mercurius som var 2. gange brændt, rev den fiint, og melerede det med tvende gange saa meget fiint kalk og Sublimerede det engang, den lader at være den reene Sublimat, farver vandet Ródt eller stærk Orangenagtigt; jeg har tegned den 2. Merc. Sublimat: cors: /Mall: Rassacarpoorum satoo:/
- 3<sup>tio</sup> En Mercurius som engang skall være Sublimeret af Quegsólv og Aurigpimentum af hver ligge dele, Aurigpimentum heder paa Mall: Ponnareedarum, som den ogsaa er betegned.  
Omendskiónt ieg ey kan staae til Ansvar for Oprigtigheden af deres Usigende, eller for mine tolkes rigtige Udtydning, saa skall ieg dog anføre mine Spórgsmaal og dissers Svar.
- Spórgsmaal.- Hvad for en Sort af disse Mercurial Tillavninger bruger I helst og fórst i Veneriske Sygdome og hvorledes bruger i den.
- = Svar.- Den som er togange brændt /sublimeret/- 1. pagd /55 gran/ vægt, bliver i en jern skee kogt 7. gange, hver gang i frisk koe Smór, saa bliver den gnen [sic] paa steenen /:en huul steen næsten som vore Mahler bruger at gnie farver paa/ dertil kommes Baschnmbo /Rad: Calamin: Aromat:/ og Jager Sukker, af 1.pagd vægt tilsammen, hvoraf gióres 16- piller, her af tager den Syge 1. pille morgenen og 1. D<sup>o</sup> aften, til de ere forbrugte.
- Spór<sup>es</sup>- Mens bliver Patienten[s] mund ey Saaret, Aanden lugtende og Spytter han ikke.  
= Sv<sup>ar</sup>- Jo for det meste bliver Munden saaret eller brændt allerede den 5. eller 6. dag, og vand lóber af Munden /:Saliverer:/ men i 7. dage maae han dog bruge Pillerne, saa holder vi op, da den Syge ellers i mange dage ey kan Spisse Riis.
- Sp<sup>r</sup>- Naar den Syge Saliverer meget stærk, og som I siger meget Vand- lóber ham af Munden, hans Mund, tunge etc: er meget Saaret, den Syge Bliver Svag. Hvad giór i da.  
= Sv<sup>ar</sup>- Han maa vaske Munden med Melk, hvori- Malva blade /Mall: Tutti/ er kogt, eller og vi lader gnie Munden med Fruentimmer Melk hvori Svovel /Mall: Kendagum:/ bliver oplóst, og han maae drikke magen Canchi /viid vand:/ [sideskift]
- Sp<sup>r</sup>- Lader I den Syge Laxere i denne tiid.  
= Sv<sup>r</sup>- Jo imellem.
- Sp<sup>r</sup>- I hvor lang tid bór Patienten bruge Mercurium og naar troer i ham Cureret.  
= Sv<sup>r</sup>- I tolv dage sommetider i 15. og saa troer vii han er Cureret.
- Sp<sup>r</sup>- Men skulde der endnu være Geschvurer paa Fódsels lemmerne eller andre stæder, og visse tegn til at Patienten er ey Cureret, hvad giór I da?  
= Sv<sup>r</sup>- Vi holder det da for en stor Venerisk Sygdom, og give Patienten endnu i 15. dage, af Pillerne som meleres med til et fiint Pulver stódt- Radix China /: Mall: Parin gepotte eller Parengipaddei / 1. Teeskee fuld af gangen med Pillerne morgen og Aften, og ellers Alene en thee skee fuld- 2. a 3. gange daglig.
- Sp<sup>r</sup>- Hvorledes og i hvad Sygdom bruger I den Mercurius som er kuns engang brændt / sublimeret:/  
= Sv<sup>r</sup>- Den bruger vi i den Sygdom da finger og tærne eller deres led falder af, og hvor tillige ere Plætter og skrumpende Saar paa Kinderne i Ansigtet, og hvor somme tider Enden af Næsen, og lipperne bliver skrumpne og bortædes, /:en sort Lepra som efter anseende er blandet med Venerisk:/ En guld fanno /5½/ gran vægt bliver lavet som de forrige Piller, indelt i 8. piller. Hvoraf 1. pille tages hver morgen og 1. D<sup>o</sup> hver aften.
- Sp<sup>r</sup>- Foraarsager denne Mercurium ogsaa Spytning /Salivation/ eller Saarhed i Munden.

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- = Sv<sup>r</sup>- Jo den griber Munden an, og giór den Saar, men ey faa hastig som den anden.
- Sp<sup>r</sup>- Hvortil, og i hvad Sygdom, bruger I den Mercurium som I siger er brændt /sublimeret/ af Quegsólv og Aurigpimentum /Mall: Ponnareedarum:/ [sideskift]
- Sv<sup>r</sup>- Den bruger vii i Febere, fornemlig til Bórn, og frem for alle til Nyefódte, naar de haver forkóhelse, Feber, Slag-o-d-l- 1. guld fanno /5½/ gran vægt bliver gneeden fiin Meleret med honning, lager Sukker, eller Melk af Moderen, heraf gives der barnet efter dets Alder 2- a 4 gange om dagen.
- Sp<sup>r</sup>- Men troer I ey at dette meddel er for hefftig, kan det hielpe barnet, og hvad virkning giór det da.
- = Sv<sup>r</sup>- For stærk eller hefftig er det ey, man maae ey give for meget deraf, naar Squami /:Gud:/ vill saa ielper det visst, ellers giver det stoelgang.
- Sp<sup>r</sup>- Hvor faaer I Quegsólv fra, og hos hvem kióber I den? Er den her i Landet at faae?
- = Sv<sup>r</sup>- Vii have alletider faaet den i Syd fra Hollenderne i Nagapatnam, og i Cochin paa Mallebar Kysten, der er ingen som sælger den uden de Blanke folk, nu da Hollænderne ere borte saa maa vii reise til Madras og andre stæder for at kióbe den og mange gange meget dyrere en fór, vii betalte alletider for 10 Pagd: vægt 1. fanno, nu maae vii give meget meere. Her i Landet er ingen Quegsólv. Den gamle Mand fortalte at for 16 Aar [siden] da krigen var i Landet, var Quegsólvet saa rart at han har trukket det ud af Cinaberis /Mall: Sadee Lingam/ om det er sandt?
- Sp<sup>r</sup>- Af hvem troer I Eders Forfædere have lært at brænde /sublimere/ Quegsólvet.
- = Sv<sup>r</sup>- Ieg /den gamle/ har lært det af min Fader, og han af hans Fader, o-s-v- som ieg har kiendt som en ung dreng.
- Sp<sup>r</sup>- Men troer I ey at den lærdom at brænde Quegsólv, og kommer fra de Blanke, fra hvem I have Quegsólvet, og fornemlig fra Præsterne der have saa lenge boet i mellem Eders forfædre.
- = Sv<sup>r</sup>- Vii ved ey mere end at hoyt oppe i Sydvesten i Biærgene boede- 9. store Mestere, som haver skrevet meget, og af dem have vii vores Lærdom. [sideskift]

Hertil vores samtale de reiste med deres Pharmacis videre for at sælge deres Medicamenter.

At disse Omflakkende lægere- have selv prepareret den Mercurius kom mig meget troeværdig for, af den 1.<sup>te</sup> Sort- som var 2<sup>e</sup> gange Sublimeret havde de trende Cocus Skaller en 7. a 8. lb. og solgte 2. pag<sup>d</sup> /108 gran/ vægt for 1. fanno/8ss:- af den 2<sup>de</sup> og 3<sup>te</sup> sort, kunde de have af hver en 3. a 4. lb. disse 2<sup>de</sup> sorter- solgte de dyrere 1½ pag<sup>d</sup> vægt kostete 1. fanno. De havde endnu en haaben andre Composita, og blandt andere en Jern Preparation, som de sagde var 50. gange brændt; de roeste dens brug, for Bylder og Saar, Mave Pine, durklób, Sód Pisse /Diabetes/- for drippere, hviid flod-o-a-Sygdomme, det er ligedan Mf. Ieg tog nu et Compositum, som efter deres sigende skulde være brændt /:sublimeret:/ af- Quegsólv—Aurigpiment, og Guld, /:af det siste er vell ey meget deri:/ dette Middel brugte de for Barsel Koner, da det drev blodet som var stórknet med videre, det blev givet med Ingfer Vand, Mf ligeledes, ieg fik det alt for 4 fanno.

### **Processen af Quegsólv Sublimering Oversatt af den Tamuliske forfatter Agastysers Manuskript**

Tag to Palam <sup>a</sup>, eller 20. Pagd: vægt Allun /Tamul: Sinakaram:/ og to Palam eller 20 pagd: vægt Quegsólv /Tam: Rasam/ gnie disse sammen i 12 timer. /Tam: Fire Samam:/ med saften, af grón Saffran /Tam: Pasu Mainsel <sup>b</sup>:/ af Tullasi blade /Tam: Tullasi Elei <sup>c</sup>:/ af Arkinsi Rod: /Tam: Arkinsi

<sup>a</sup>Palam er en indisk Unze, hvoraf 13 udgiór et Engelsk Pund.

<sup>b</sup>Grón Saffran /:Pasu Mainsel:/—Curcuma Oblonga: Linné:

<sup>c</sup>Tullasi Blade, /:Tullasi Elei:/- Ocimum Basilicum.

Ver <sup>d</sup>:/ og af Lemon frugt /: Tam: Elum bistam Parham <sup>e</sup>:/ gnee i 3 timer med enhver slags saft i anførte Orden.

Kom da denne Masse i et Glass <sup>f</sup>, fra Kasi /: Benares: en berømt hellig stad- i hindustan ved Ganges floden:/ Omvind flasken med gamle Klude hvorpaa er smurt Kaliman <sup>g</sup>, læg en steen [sideskift] Eller et stykke af et gammel lær [sic] kar over Mundingen af flasken, og tilhyl det ogsaa med de anførte klude; Sæt saa flasken i Solen og tór det alt vell; Grav derpaa et Ildstæd i Jorden, sæt derpaa en Tresille /: Tam: Saddi <sup>h</sup>:/ kom i den Sand to finger bredde høyt, tryk deri flasken, saaat den staa opreist; brænd det derpaa med en Lampe /: Tam: Tibam:/ i fire Samam c: 12 timer, med Kamalam <sup>i</sup> /: et fad eller lampe med 10 væger :/ i fire Samen 12. timer, med brænde Ild i fire Samen, i alt halvanden dag, lad det derpaa blive koldt, slaave da flasken i stykker, (saa have's Rassacarpoorum). Det var alt hvad ieg kunde faae oplyst, ieg forærede den gamle et lb. rensed Quegsólv, som fornyede ham; Lovede ham naar [han] holdt sit løfte som var at han vilde komme næste Aar igjen, og bringe mig to bóger med- som af de 9. kloge mestre vare skrevne, og hvori fornemlig deres Simples & Composita vare Beskrevne, skulde han faae alt det Quegsólv hos mig han brugte. [sideskift]

Ieg gjorde mine Anmærkninger, over disse vandrende Esculaper, som havde nogle 40. tyve composita indpakede i en pose og liggende imellem hverandre, indsvóbt i gamle klude og Cocuss skaller, hvad vilde vore Pharmaceutiu ey have tænkt ved at see dette.

Efter alt Sandsynlighed er Quegsólvet bragt til Indianerne af Europæerne, og de have Lært dens adskillige preparationer af disse; det er bekient at Portugiserne, Spanier og Franske, har for mere end 200 Aar udsendt Missionairer fornemlig Jesuitere, disse sidstes kundskaber i alle videnskaber ere bekient, disse har været omkring i heele landet, og der har været i alle deele af Indostan, fornemlig paa denne halvøe, munke klostere kirker, og missionairer, fornærværende er de af de Indiske fyrster ind i Landet forjaget, Hyder Aly har ladet nedrive 1780–81 alle deres kirker, skoeler etc. i hans land, og forjaget alle katolske Geistlige, hvor Europæerne har overmagten ere der enu nok af dem.

I Goa hoved staden som Portugiserne haver her i Indien var 1779. endnu 2<sup>o</sup> store Apoteke, der skall have været flere fórend de mistede deres mange besidelser i Indien, de fleste der oplæres ere indfødte, og de har fórend Hollænderne og Andre Nationer fratog dem deres stæder som de havde over heel Indien, sendt disse Lærlinger overalt fra. I aaret 1775. var ieg paa Mallebar Kysten, som Chirurgus med et af Compagniets skibe, vi fik en 20. Portugiske Passagerer alle fra Goa, der var i blandt trende Lægere og trende Apottækere de andre vare munke, de skulde til Bengalen hvor der er et Franciscaner og Augustiner kloster. For henimod en 90 Aar var her paa Kysten i Pondechery et berømt Jesuiter Collegium og hvoraf endnu nogle Gamle munke Leve; de sendte over heele Landet Sammensatte Læge Middeler, og hvoraf endnu deres Drogue Amere, Elixir Ameres, Theriac, Eau de Melig, Syrup Capilair o.a.f., ere meget agtet af disse Lands beboere.

[det følgende findes kun i udgaven Add. 761e 4<sup>o</sup>]

<sup>d</sup> Arkinsi Rod /: Arkinsi Ver:/ Rad: Alangium Decapetalum (Rottler)

<sup>e</sup> Elum bitsam Parham/ den indiske lemon frugt.

<sup>f</sup> Kasi Kuppi er et glass eller flaske som giøres i Kasi eller Benares af denne form [tegnning af form som wrinkolbe] saaledes (?) aftegnet i Manuskripten.

<sup>g</sup> Kaliman/ det er leer, eller en kalk til bered af smaae stótte muur steen, lager Sukker, Egge hvide, Suur melk, Olie, Smór, dette æltes sammen og binder meget stærk og godt / denne sammen blanding er ellers det man kalder Algemas, og hvormed de rige Europæer

og Mallebare huusse er overstrøgne med, godt tilbered ligner det den hvide Italienske marmor, mens er som alt Luksus her i Indien af kort varighed.

<sup>h</sup> Sadi:/ er en Treselle, Leer kar, som allmindeligen bruges i vore kiökkener at lave mad i, de er af forskellig størrelse og form.

<sup>i</sup> Kamalam/, en af metal noget dyb tallerken, enten af Guld, Sólv, eller mestendels af Kaaber, hvorpaa Betel frem bydes paa, men bruges ogsaa til at fylde Olie i og i mitten læges trende væger.



**Anmærkning:**

Ieg tilstaaer at dette hvad ieg har anført om Mallebarenes Quegsølvs preparering med videre, vil for lærde findes ufuldkommen maaeskee og uret angives; men mangel på kundskab af Sproget, og endnu meere de Mallebariske Lægeres Tilbageholdenhed, da de aldrig siger den rette Sandhed: men man maae undskylde mig. Spørger man dem om en eller anden Sammenblanding, saa troer de, om de siger det rette, [at de] vil tabe deres Lykke deri. Deres Prexis, udelader gierne en eller to ingredienser af det Middelet er sammensat af; det som ieg har anført om de tvende omrejsende Læger fra Ramenadaram at de forregav om de 9 store mestre i Syden kan vel være mueligt, da der i Madura haver været et Lært Universitet fornemmelig af Astronomien. Der er i Benares i Bengalen, en Provins som tilhører Engellænderne, Kasi, en Stad hvor fornærværende et Universitet af lærde Indianere ere, dette Engelske Guvernement giver heele Indkomsten af denne Provins til dette Universitet som skal beløbe sig aarlig til en 20 tusinde Rupier, det er nu derfra deres Astronomiske observationer bliver sendt over alt i Indien, deres udregninger om formørkelser og andet skal være temmelig rigtig, og deres kundskab i Medicinen den bedste af alle Indianerne, I Oyensvaghed skal de være erfaren og deres Middeler de Anvende omendskiønt mange gange heftig og stærke saa dog ofte af god virkning.

I Chirurgien skal de af Engellænderne have faaet nogle locale Kundskaber, ieg haaber i sin Tiid at kunde berette noget fuldkommenere.

Tranquebar Octobr. 1799.