COPING WITH THE DISEASES OF MODERNITY

The use of siddha medical knowledge and practices to treat diabetics

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Introduction: questioning traditional medicines for treating new diseases

India is well known for its pluralistic medical system which is composed of biomedicine, improperly called ‘allopathy’ imposed by the British, and then supported by the Indian government, of homeopathy also introduced during British colonization, and of various Indian therapeutic systems, recognized or not by the present government. Ayurveda, yoga (including naturopathy), unani, siddha and homeopathy, and more recently in 2009, sowa-rigpa or amchi (Tibetan medicine) are supported by the department of AYUSH (Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy) of the Ministry of Health and Family Welfare founded in 2003 to replace the Department of Indian Systems of Medicine and Homeopathy. In contrast, a wide range of therapies including bone setting and home remedies used by various communities (tribes, villagers) are not recognized and are denounced by the government as unscientific, even though, it encourages research on them for identifying plants, their usage and medicinal properties, with the goal of developing new formulas for ayurveda and siddha.

Among these medical systems, biomedicine is the most attractive, and that, in spite of the creation of AYUSH, and the boomerang effect from the West which gives high value to traditional medicines, especially ayurveda. The ambivalent attitude of the Indian government to supporting Indian medicines in terms of funding for clinical and pharmaceutical research, and of allocating beds in hospitals and primary health centres as well as chairs in colleges, is a major reason. The government is aware of the high financial profit gained by Indian medicines, from medical tourism and marketing of medicinal plants and drugs. However, it is subjected to pressure from biomedical doctors and pharmaceutical companies, and from directives from international health agencies such as WHO, demanding that traditional medicines meet the same criteria and regulations applied to biomedicine with regard to standardization, innocuity
Coping with the diseases of modernity

and medical validation through scientific tools and clinical trials (WHO 2002). The strong expectation of patients for immediate cure in a context in which an episode of disease may put them at financial risk also favours biomedicine. Compared to biomedical medicaments, traditional ones are perceived as having no side effects (also Nisula 2006), but as working slowly. The choice of the medical system is, however, dependent on the availability of practitioners, biomedicine being mainly present in urban areas, on the particular situation of each of the Indian states, the reputation of the practitioner and the specific disease. Regarding the last criterion, Indian medical practitioners are consulted for joint and bone disorders, digestive and sexual troubles, snake bites, skin diseases, respiratory distress, and so on, a range of ailments for which they are traditionally well renowned and have a great deal of medicinal formulations. However, they are increasingly approached for the treatment of new diseases by patients who, very often, have been unsatisfied with biomedical treatment.

The new disease which the present chapter aims at exploring is type 2 diabetes and some of its allied disorders. These are examined in the field of siddha, the Indian medical system of Tamil Nadu and, more particularly, in the practices of traditional siddha practitioners (paramparaya citta maruntuvarkal), a class of medics who inherited medical knowledge from their ancestors or from well reputed practitioners. Several reasons justify these choices. First, the increase of diabetes over the last thirty years has caused it to become a major public health issue, and thus to examine how traditional medicine may contribute in diabetic care is of the utmost importance, notably when biomedical services are deficient, or when patients have still not been diagnosed and consulted for secondary disorders. Second, as traditional siddha practitioners have not inherited the knowledge of treating diabetes in terms of diagnosis, medicinal formulas and food prescription, how they approach this disease and its allied disorders is relevant in demonstrating their capacity to adapt their knowledge and to convolve different medical systems in order to respond to patients’ needs. Third, as an important part of the therapy in Indian medical practice concerns diet, exploring diabetes will allow for examining how food recommendations are prescribed by practitioners and how they are received by patients. Lastly, the choice is to compensate for the scarcity of studies on siddha practice, on the one hand, and on the treatment of diabetes by Indian medicines that has been explored especially from the viewpoint of the anti-glycaemic potentiality of plants, on the other (Chacko 2003; Kaushik et al. 2010).

This ethnographical study is based on the practice of two traditional practitioners, Jeyananda and Rattinammal, whom I have selected, from among the twenty I observed during my five-year research on siddha medicine, because of their high involvement in coping with diabetes that obliged them to innovate, and because of their great difference in approaches to this disease and its treatment. While Jeyananda’s approach could be defined in terms of modernity as it blurs the differences between siddha and bio-medicines, Rattinammal’s practice is rather close to the siddha tradition, but not in terms of authenticity as it mixes some medical systems and adjusts them in order to treat these ‘new diseases’ and to fit in with contemporary changes in lifestyle. The chapter is structured according to the diverse aforementioned points: prevalence and causes of diabetes in contemporary India; definition of siddha medicine and its practitioners; approach to diabetes and its treatment by siddha practitioners; and diet and food recommendations in siddha medicine. It will show how Jeyananda and Rattinammal respond to the new demands from their patients and face many obstacles, which may damage the identity of their medicine and weaken its reputation. Their practices question too what is the ‘tradition’ in the field of medicine since the knowledge on which the practices are based is not just inherited and fixed, but is in constant re-composition and adaptation.
Diabetes: prevalence and cause

Type 2 diabetes has increased substantially in India since the 1980s. It appears more and more precociously and, as in developed countries, affects even obese adolescents in cities (Ramachandran et al. 2003; Bhardwaj et al. 2008). Diabetes rarely occurs alone. It is associated with being overweight or obese, having dyslipidemia, high blood pressure, and provokes a range of secondary diseases such as, inflammatory disorders, renal failure, retinopathy and diabetic ulcers. The study of Mohan et al. (2008), assessing the increase in the occurrence of diabetes between 1972 (the first study) and 2003–2005, shows that in thirty years diabetes has increased from 2.1 per cent to 7.3 per cent in urban areas and from 1.5 per cent to 3.1 per cent in rural areas. In Tamil Nadu, Chennai Urban Rural Epidemiology Studies (CURES) reveals a sharp increase in its prevalence: 8.3 per cent in 1989, 11.6 per cent in 1995, 13.5 per cent in 2000 and 14.3 per cent in 2004 (Mohan et al. 2006). It also affects the rural population of Tamil Nadu with a rise of 2.2 per cent in 1989 to 6.36 per cent in 2003 (Ramachandran et al. 2004).

Type 2 diabetes may have an endocrinal origin (hyperthyroidism, syndrome of Stein-Leventhal), but its main cause is the rapid change in food and lifestyle. Indians are particularly prone to developing this disease as they are handling a food transitional stage defined by Barker’s hypothesis (1995): undernourished at the foetus stage (low birth weight LBW), they develop diabetes when they are exposed to high caloric consumption. According to an estimate by UNICEF and WHO in 2000 (Wardlaw et al. 2004), India accounted for 7.8 million LBW babies per year; Angus Deaton and Jean Drèze (2009) have shown that the consumption of a large part of its population has shifted rapidly to more high-energy foods rich in fat and carbohydrates. As a result, the metabolism, earlier adjusted to store calories to cope with irregular food intake, is struggling to adapt to regular, large supplies of food energy.

The common explanation for diabetes’ prevalence in India is the high consumption of junk food and fast food, implicitly assimilated as pizzas or hamburgers, and soft drinks. Western types of fast food are becoming increasingly available in towns, but are consumed mainly by the well-off population who eat them mostly as snacks, shared with friends or family members. In contrast, Indian fast food, quite often fatty and imbalanced (reheated biriyani, fried noodles, fritters, etc.), is cheap and consumed as meals by all socio-economic categories. However, the major cause of food-related diabetes is the daily diet which is imbalanced and little varied. The three daily meals are composed of a large amount of cereal, rice or wheat according to the food pattern of the region, served with some pulses and vegetables, and possibly with small pieces of meat, fish or egg according to both economic means and food pattern. This diet, composed of 65 per cent to 85 per cent of carbohydrates depending on the social-economic status of the family, is too rich in calories compared to the daily needs of people with low levels of physical activity, and too low in micronutrients, notably when polished rice is the staple food, as in the South Indian states. Such a diet induces malnutrition at two levels: metabolic disorders and deficiencies in micronutrients reflected in the fact that 79 per cent of children aged between six and thirty-five months and 55.5 per cent of women suffer from iron deficiency anaemia (IIPS 2007; Mittal 2007).

The green revolution policy is partly responsible for the change in food. It was initiated to compensate for food shortages, when India faced the threat of an embargo on cereals by the United States, in retaliation for India’s position against the Vietnam War. Cultivation of high-yield varieties of wheat and rice and of sugar has been specifically encouraged and their production has allowed the country to be self-sufficient, and wheat, rice and sugar, to be distributed at a subsidized price through the public distribution system. In contrast, cultivation of other cereals such as millets, pulses, beans, vegetables and fruits, has been
neglected so that their prices are very volatile, constantly in tension between availability and demand, the strategy of traders and recourse to the international market. Millets, the traditional cereals of South India for thousands of years, were progressively depreciated when rice became increasingly available, first, during British colonial rule when rice was imported from Burma into the towns, and then, under the pressure of the green revolution. Labelled as ‘country food’, millets were abandoned for rice, the ‘Brahman food’, on plates and progressively in the fields. Let us add that the quantity of legumes in meals is largely dependent on the state food pattern, very poor in Tamil Nadu, where the consumption of vegetables and fruits is very low: vegetables constitute side dishes; fruits are supplementary and festive foods, often associated with medicinal properties.

Development of public and private transport, mechanization of work, increase in incomes and urbanization of society, are factors responsible for the reduction of physical activity and, consequently, for the development of diabetes and obesity. Women are specifically affected by inactivity due to the fact that, in traditional families where financial resources are considered sufficient, they are not expected to take a job or to go out alone after marriage. Apart from cooking, mostly done sitting on the floor, they spend little time on housework. They consider preparation of food as a dull and repetitive task, and are reluctant to experience new dishes, even with the recent development of cookery books, TV food programmes and food websites. Many housewives prefer to spend their spare time watching television, sleeping, talking to neighbours or doing small chores, such as making flower garlands or supervising children’s school work. The urbanization of Indian society which spurs the transformation of the family, including the nuclearization process, boosts changes in food. In liberal milieus, women take jobs, and consequently, have less time to prepare meals. This transforms food habits which are stimulated by higher incomes and by media influence. Ready-to-eat or processed foods from supermarkets and specialized shops (pre-fermented dough for idli or dosai), street vendors entering homes, and eating-out in different types of restaurants are constantly increasing. Children, particularly from the upper and middle classes, participate in the transformation of eating habits; they are more receptive to advertisements in the media and more open to innovation. Compared to urban people, those living in villages are less exposed to the change in foodstuffs and food habits. They have less access to ‘new’ foods, but they have adapted gradually to the urban model of consumption, notably to eating rice instead of millets and consequently they are developing food-related disorders (Balagopal et al. 2008), and when the disease causes disability, they approach biomedical or Indian medical practitioners, according ease of access, reputation and familiarity.

Siddha medicine and its practitioners

Siddha medicine is par excellence the traditional medical system of Tamil Nadu as it is used by Tamil communities in India and overseas, and its corpus is written in Tamil. Its medical concepts and pharmacopoeia are very close to those of ayurveda; the major differences concern philosophical and spiritual foundations (anti-brahmanical ritualism, Śāktism, ascetism) and its roots in alchemy from which iatrochemical processes have been elaborated to prepare medicines. Like ayurveda, physiological concepts of siddha medicine are based on the principle that everything in the universe is composed of five elements, ether, air, fire, water and earth. Food and respiration supply the basic elements which, converted into juices, generate successively the seven bodily constituents (tāttukkal): chyle, blood, muscle, fat, bone, marrow and semen. The balance of tāttukkal and, concomitantly, of the three tōṣakkal: vāta ‘air’; pitta ‘fire’; kapa ‘phlegm’, depends on the appropriateness of diet and
rules of conduct (Uthamaroyan 2005; Wujastyk 2001). Siddha texts are attributed to the 
\textit{cittarkaḷ} (yogis; from Sanskrit \textit{siddha} ‘realized, perfect’), eighteen according to the \textit{Tamil} tradition, \textit{who} also developed alchemy, astrology, philosophy, yoga and magic (Ganapathy 1993; Venkataraman 1990). Because of its roots in alchemy and esotericism, siddha has acquired a doubtful reputation which prevented it from being taught during a period when the scientific validity of Indian medicines was being debated (Sébastia 2010; Weiss 2009). This branch of medicine was minimally taught at the School of Indian Medicine at Madras, established in 1923, assimilated to ayurveda, and it was only in 1964 that a siddha college was founded at Palayamkottai (southern Tamil Nadu). This led to siddha medicine being predominantly practised by traditional practitioners as compared to ayurveda. According to the AYUSH report for 2007, the percentages of registered non-qualified (traditional) practitioners of siddha and ayurveda medicines were respectively 54 per cent and 48 per cent.\footnote{The statistics do not include the numerous traditional practitioners who are unregistered due to the suspension of the registration process established in 1933, consequent to the notification No.V. 26211/4/1976, dated 10 September 1976, added to the Indian Medicine Central Council Act, 1970 (IMCC) (Sébastia 2010). The number of unregistered traditional practitioners in both branches of medicine is difficult to estimate, but is certainly higher in siddha as its training centres are less numerous, compared to ayurveda that benefits from a large private and governmental sector. Moreover, traditional practitioners do not approve of the training provided in siddha governmental hospital-cum-colleges as they consider their own knowledge as superior and more authentic. Under the continual pressure of students who have demanded that the curriculum of governmental siddha colleges incorporate more biomedical subjects and concepts, the practice and knowledge of siddha medicine have declined; some of its specialities, such as \textit{varma} therapy\footnote{Under the continual pressure of students who have demanded that the curriculum of governmental siddha colleges incorporate more biomedical subjects and concepts, the practice and knowledge of siddha medicine have declined; some of its specialities, such as \textit{varma} therapy, medicine preparation or pulse reading being rarely taught. However, compared to traditional practitioners, those trained in colleges are better prepared to cope with the diseases of modernity. As their curriculum incorporates the study of contemporary diseases, which they study from the point of view of diagnosis using both siddha methods and clinical tests, and the pharmacognosy of siddha \textit{material medica}, they treat them in the same manner as biomedical doctors: they prescribe medication developed by ayurveda and siddha manufacturers, which patients buy in medical shops specializing in Indian systems and they use the diagnostic tools of biomedicine. In contrast, traditional siddha practitioners have had to adapt to the increasing number of patients with contemporary diseases, notably diabetes.} for osteoarthritis or \textit{pakkavātam} for hemiplegia. Traditional practitioners have not studied these siddha texts and thus, if they were not benefiting from the experience of their ancestors, they would not know how to treat diabetes.}

The recourse to siddha medicine: case of diabetes

Siddha texts categorize the disease corresponding to diabetes under \textit{nirilivu} Tamil, ‘fault-water/urine’ or \textit{matumekam} from Sanskrit, ‘sweet-disease’ for which they provide some description, diagnosis and treatment. Siddha practitioners, however, never use these terms but those of ‘sugar disease’ or \textit{cakkarai uyarvu} (sugar-increase/high), non-technical terms with which patients are familiar and which reflect the dominance of biomedical concepts over traditional ones, and the modernity of this disease as those traditionally treated by siddha practitioners continue to be mentioned by their Tamil terms: \textit{vātanōy} for osteoarthritis or \textit{pakkavātam} for hemiplegia. Traditional practitioners have not studied these siddha texts and thus, if they were not benefiting from the experience of their ancestors, they would not know how to treat diabetes. How some practitioners are able to cope with this disease and its allied disorders is what I want to show through the case studies of Jeyananda and Rattinammal.
Coping with the diseases of modernity

Jeyananda and Rattinammal's treatment: a combination of medical systems

Jeyananda is fifty years old. He lives in a small village in Kanniyakumari district where he practises siddha and *varma* therapy. He studied siddha medicine from the age of fourteen with his father and grandfather, both renowned *ācārai* according to the term used in this region to refer to proficient practitioners. After studying homeopathy for one year, he founded a hospital on land belonging to his family that he runs with his wife Neela who holds a Bachelor of Siddha Medicine and Surgery degree.

The ‘Jeyananda Siddha and Ayurveda Hospital’, with its waiting room, consultation room, in-patient wards, laboratory, X-ray room, pharmacy and canteen, differs very little from the numerous biomedical hospitals established in the region of Nagercoil. The use of biomedical tools in the practice of traditional medicine has often been mentioned (Nisula 2006). It has been explained in terms of biopolitics, a Foucaultian concept of the power of the rational and scientific knowledge (on the bodies) which has its roots in Indian colonial history, but continues today to undermine traditional medicines (Langford 1995; Wujastyk and Smith 2008). It is the hegemony of biomedicine that Jeyananda tried to thwart when he decided to ‘biomedicalize’ his practice:

I introduced them [X-ray, lab] to give trust to the patients. Nowadays, patients do not come to us when they are ill or injured. They go directly to allopathy doctors. Only if they do not get any relief they come to us. The two new floors that I am adding to this hospital are for allopathy. My idea is to get more patients interested in siddha. As patients will come for allopathy, they will be able to consult first siddha and then choose.

Despite Jayanenda’s lament on the lack of interest in traditional medicines, he and Neela receive eighty to a hundred patients daily from various socio-demographic categories. Among this clientele, patients with diabetes represent 10 to 15 per cent and some of them end up being hospitalized.

Compared to Jeyananda’s, the clientele of Rattinammal is very small, less than six patients a day, but half of them are diabetics. Rattinammal is eighty-six years old. She belongs to a *raja vaittiyar* family, a lineage of highly reputed practitioners who traditionally served a king. She acquired her knowledge from her mother and grandmother, and from another practitioner well versed in alchemy. After practising in a village, she settled down in her daughter’s house in Madurai when her husband died. Her practice is not commercially oriented; it aims to give *cevai*, that is, to help the community, according to the ethics of siddha medicine. Rattinammal has never tried to use biomedical tools. Rather, she practises siddha medicine according to the ‘tradition’, but by combining it with other medical systems, Bach flower remedies and homeopathy, that she considers to be complementary to siddha medicine. She is also very aware of the decline of interest in siddha medicine. However, she puts her energy into transmitting her knowledge to her patients and to anyone who approaches her to learn about siddha.

Jeyananda medication: juggling with tradition and modernity

Patients with diabetes approach siddha practitioners either to change their medication from biomedicine to siddha drugs, or to be treated for disorders for which siddha practitioners are traditionally consulted, such as dry itchy skin, nausea, tiredness, frequency of urination,
foot ulcers, kidney stones and osteoarthritis. Mindful that these symptoms may be those of diabetes, and combining this with knowledge acquired from the media, biomedicine practitioners, pharmaceutical representatives, patients, and so on, Jeyananda prescribes blood and urine sugar tests to patients aged forty and over, to evaluate the level of sugar or to detect an abnormality when the patient has not yet been diagnosed; this is not uncommon as awareness of this disease is weak, and preventive measures deficient (Venkataraman et al. 2009). He also reads the pulse, an important siddha diagnostic method to detect the imbalance of vāta–pitta–kapa, and sometimes checks blood pressure with the sphygmomanometer. He claims to be able to detect high blood pressure through pulse reading, but uses the instrument ‘to reinforce the confidence of patients’. Indeed, he uses it often at the request of patients who are not aware of the specificities of bio- and siddha medicine.

Jeyananda’s therapy for ‘blood sugar’ is a combination of tradition and modernity. It takes into account the constitution of the patient and the balance of vāta–pitta–kapa, and aims to purify the blood and improve digestion. For this, Jeyananda prescribes his own medicine. He provides anti-glycaemic tablets that he buys from ayurvedic and siddha pharmaceutical representatives to reduce ‘sugar’ level, if the patient so wishes. He records on the patient’s medical card the pulse reading laboratory results, including sugar level, blood pressure, and medication so that he can check the efficacy of his treatment during follow ups. Aware of the risk associated with diabetes, Jeyananda advises patients treated with biomedical medication not to discontinue it. It will rather be reduced progressively after the efficacy of siddha medicine has been checked. The ayurveda and siddha market for anti-diabetic drugs is well developed so that Jeyananda is able to try different products and analyse their effects according to the constitution of the patients and their health. He argues that siddha drugs work well up to a sugar level of 2.0g/l, but not if people are using insulin. In that instance, he refuses to treat them. When secondary disorders caused by diabetes such as, osteoarthritis and hemiplegia or diabetic ulcer are severe, he hospitalizes the patients for forty-eight days (a number auspicious in Hindu tradition) and provides them with therapy including marketed tablets and his own products: medicated oil taken with kāśāyam (highly concentrated decoction), and cūraṇam (powdered dried plants) taken with honey. In addition, patients with osteoarthritis are prescribed two sorts of massage daily; those with hemiplegia, two massages daily and three talaiŋkal (poultices of cockerel blood mixed with cūraṇam) during their stay. For diabetic ulcers, Jeyananda treats them with his own products that he uses for applying to affected wounds and for lancing carbuncles: a medicated oil for external wounds and a paste of crushed green leaves for opening ulcers.

Consultations are free of charge, but patients have to pay for expensive medicines. Medicaments from pharmaceutical companies are removed from their wrapping and put in unmarked packets so that patients cannot differentiate them from those dispensed at the hospital. Jeyananda explains his recourse to the market and his process for selling them:

All formulas of medicines I am producing come from my ancestors. At that time, there were very few patients with sugar. I remember that once my grand-father gave a leaf to a patient that he suspected to have sugar; his tongue turned back and my grand-father told me: he has cakkarai nōy. But I do not know the plant and how he treated this.

Nowadays, there are many patients with sugar but I have no time to develop any formulas. To collect plants in order to prepare medicines is also a problem. Nobody wants to do this job which is too hard. Plants also are disappearing because of urbanization. So, I buy medicines from some pharmacies, I try them, and
when I observe they work well, I give them to patients. However, patients have no confidence in the medicaments from the market. To be sure that they will take them, I give them in the same way that I give ours.

Patients who turn to traditional siddha practitioners quite often consider marketed medicines as having poor efficacy because they are allegedly made with adulterated ingredients and by machines that overheat them thereby destroying their potency. Conversely, they hold traditional practitioners’ medicines in high regard as they are supposed to be produced according to those inherited formulas that made the reputation of practitioner families. By repackaging the commercial drugs under his hospital’s name, Jeyananda can retain his clientele and maintain his family’s reputation.

**Rattinammal’s medication: a clever mixing of medical systems**

Unlike Jeyananda, when Rattinammal was confronted twenty years ago by the increase in patients with sugar, she decided to develop formulas. She used oral and textual sources: her hereditary know-how and diverse sources of medical knowledge that she had acquired throughout her life, and texts and manuscripts, especially those attributed to Pōkar, the famous alchemist-cittar. She developed a cūraṇam which she called cakkaraicūraṇam, a combination of thirty-one ingredients, among which thirteen are commonly used by practitioners and siddha/ayurveda pharmacies for their anti-glycemic properties. She prescribes this medicine to be taken in the morning and two other drugs: in the evening, a cūraṇam of two plants for purifying the blood, and at noon, pañcamūlikai cūraṇam (five medicinal cūraṇam plants) for regulating the function of the ‘five king organs’. She explains:

Sugar is due to rise of pitta when the liver fails. Pancreas fails and each of the king organs [kiṇruppācān], lung, heart, liver, pancreas and kidney, are affected. These five organs cooperate with each other so that any disease will not come, but if one organ fails, all will fail. That is the reason I give this medicine, not only for sugar, but also for curing the five organs and purifying the blood. If the patient has BP (blood pressure), cholesterol, kidney problems, he will be cured.

To increase the efficacy of her cūraṇam, Rattinammal adds muppu. Muppu is a particularly emblematic substance in siddha medicine as it is related to the alchemical knowledge of practitioners. It is comparable to the philosopher’s stone of the alchemists. Generally translated as ‘three salts’ (mu-uppu), it is considered as a universal salt containing catalytic power, necessary for the purification of metals and minerals used after calcination in the preparation of drugs against degenerative diseases. It is a panacea (Venkataraman 1990). Its original formula is not known, but some traditional practitioners involved in alchemy are proud to exhibit their muppu as proof of their erudition. This substance is made from pūnīr (earth-water), a salt highly valued by siddha practitioners well versed in alchemy, which appears on the full moon nights of April and May in some secret places. In the past, Rattinammal used her mother’s recipe to prepare muppu. But she is now too old to collect pūnīr and has elaborated her own panacea from the combination of three salts. While she admits that her mother’s muppu is more in keeping with tradition as it uses pūnīr, she considers her own formula to be very effective.

In addition, Rattinammal provides her family medicines to treat certain diseases that, after taking the pulse, examining and questioning the patient, she associates with diabetes:
Sugar disease is often associated with vāta or with kapa or with vāta-kapa. To treat a sugar patient, I check his condition and I treat sugar disease, vāta and kapa separately. If I treat only sugar without treating vāta and kapa, sugar disease will not be cured.12

Ratinammal’s explanation reflects the holistic dimension of disease commonly attributed to Indian medicine and the sensibility of its practitioners who deal with it in its complexity in the treatment. The psychological disposition of her patients is another aspect that Ratinammal pays particular attention to. In comparison with her family practice, one of her innovations has been the integration of the Bach flower remedies. She discovered this therapy at the age of twenty, when she attended a lecture by an English disciple of Dr Bach. Bach remedies are supposed to help with mental and emotional disorders. They are given by putting a few drops of flower extract on the tongue. However, Ratinammal uses another technique: associating principles of siddha medicaments favouring the combination of multiple ingredients deemed necessary to enhance efficacy, and of homeopathy based on the action of active principles in infinitesimal dosage, she gives her patients small vials of granules that she has impregnated with four or five different flower essences. Although Ratinammal knows the Western origin of Bach flower therapy,13 she considers it as an integral part of siddha medicine, because both systems use flowers and have a holistic approach. Her awareness of psychological impact in treatment is in accordance with the principle of siddha medicine which, like ayurveda, ‘frequently frames illness as socio-psychosomatic distress and understands patients as part of an enclosing social, climatic, or cosmic field’ (Langford 1995: 330). In contrast, Jeyananda pays less attention to the patient’s socio-psychological disposition as the large number of patients who attend his hospital does not allow more than five to ten minutes on each patient. However, he devotes more time to patients when he feels they need to be reassured about the efficacy of his treatment and the prognosis, or to be informed about the disease.

How to heal diabetic ulcers has also been a great challenge for Rattinammal. During one of my visits, she was consulted by a woman with diabetes who had an injured toe. This casual visit gave me the opportunity to follow the entire treatment. The woman explained that the doctor had informed her that only surgery could save her foot. The fear of amputation, or of surgery in general, as I frequently noticed at Jeyananda’s hospital and at other siddha clinics, is one of the reasons why patients turn to traditional medicine.

After having removed the bandages, Rattinammal collected some leaves from her garden that she crushed to extract the juice. She washed her hands and the wound with the juice, which is supposed to be antibacterial. She removed the dead skin, opened the wound that she filled with an ointment and bandaged it. The ointment she prepared extemporaneously is a mixture of nīm oil (Azadirachta indica) which is antiseptic, copper sulphite, alum for disintegrating dead skin, and two cūraṇam for regenerating blood vessels, tendons and nerves and inhibiting pus formation. The dressing was changed daily and, when the wound was becoming less purulent, she replaced nīm oil with aloe vera juice, which is also thought to have some antibacterial properties, but fewer than nīm oil. After a ten-day treatment, when Rattinammal considered the flesh of the wound to be well irrigated, she applied rāṇa kaḷimpu, an ointment her mother had used for treating wounds. To adapt rāṇa kaḷimpu to the treatment of diabetic ulcers, Rattinammal added one plant of the cakkaraī cūraṇam. She then gave rāṇa kaḷimpu to the patient for continuing the treatment at home. During the wound treatment, Rattinammal supplied some medication to complement the patient’s insulin treatment and also two vials of Bach remedies: one to remove the fear of amputation, and the other to instill, confidence in the treatment. Every day during the treatment, Rattinammal tirelessly recommended the woman to follow her diet strictly.
Treatment of patients with diabetes who change to siddha drugs is a heavy responsibility for siddha practitioners. Jeyananda and Rattinammal are confident of the efficiency of their medicines, but they stress that without compliance with food rules the efficiency is reduced. They never advise discontinuation of biomedical treatment unless they are sure that the patient is motivated enough to faithfully follow their recommendations on medication and diet. As Rattinammal explained to me: ‘Patients must cooperate with us, without cooperation we cannot treat them’. Confidence in the doctor and his medication and adherence to his recommendations are indeed key factors in the treatment of diseases in general. These factors are even more important in traditional medicines that need a higher resolve on the part of patients, and for treatment of diabetes that requires the patient to follow the therapy strictly. They admit that they cannot compete with biomedicine if patients do not seriously follow their prescriptions. As Rattinammal complains:

Now people have no patience, no faith. They do not want to make any effort to change their habits. They want to eat whatever they like: rice, large amount of rice with meat, fish, oily snacks … They do not want to change anything. They take some medicines and they continue eating as before. But with our medicines, this is not possible; our medicines work only with appropriate diet.

**Diet: a fundamental therapy allied to medication**

Food is intrinsically related to health and disease as is well illustrated by the Indian adage ‘food is medicine and medicine is food’. The belief in the link between health and food is particularly strong in India, and more specifically in traditional medicine because of its elaborate taxonomy of foods which is based on the constitution of the body and its metabolism. On the principle that everything in the universe is composed of five basic elements (*pañcapūtta* or *kaṭṭukkal*): ether, air, fire, water and earth, the basic elements of food supplies which, converted into a juice (*rasam*), produce body constituents (*tāttukkal*). These constituents are essential for the development and maintenance of the human body. However, the ratio of basic elements varies according to the composition of foodstuffs. A diet made up of inappropriate food for the constitution of the body causes an imbalance of *tāttukkal* and, concomitantly, of *vāta–pitta–kapa*, which results in diseases, whereas a diet that includes foodstuffs capable of compensating for deficiencies and restoring the balance of *tāttukkal* will form part of the treatment of disorders. In addition to the functions of regenerating and balancing *tāttukkal*, food provides the digestive fire which is necessary for the formation of *tāttukkal*. Food, moreover, possesses various qualities that play a role in physiology and digestive metabolism. One of these qualities is tastes, or *arucuvaikkaḷ*, which are of six categories: sweet, or *inippu*, sour, or *pulippu*, salty, or *uppu*, pungent, or *karppu*, bitter, or *kaippu*, and astringent, or *tuvarppu*. These tastes can act in opposition; regarding the treatment of diabetes, it is worth mentioning that plants with a bitter taste have the property of inhibiting a sweet taste; some of these oppositions are used in ayurveda and siddha formulas. Food is also classified as heavy/light, cold/hot, solid/liquid, soft/hard, minute/gross, and so on. The heavy/light group is particularly important because of its action on digestion. Light foodstuffs may be consumed in large quantities without any damage to health, while heavy foodstuffs are difficult for the digestive fire to metabolize. Another quality of foodstuffs is potency (*vīriya*) which defines their power to act in the body. (Thirunarayanan n.d. Uthamaroyan 2005).

Rattinammal and Jeyananda’s dietary advice takes into account both traditional knowledge and contemporary food habits. In the medical text, *Patārtta guṇa cintāmaṇi* by C. S.
Uthamaroyan (2005: 246–247), two meals a day are recommended for good health. However, practitioners provide dietary prescriptions on the basis of four meals a day according to the contemporary food pattern. Advice on mealtimes which have an important place in medical texts is also omitted. However, they advise patients with diabetes to reduce the quantity of food. It is stipulated in siddha medical texts that the stomach must not be full so that there is room for air, which, associated with digestive fire, enhances digestion (Uthamaroyan 2005) and that excess food increases vāta–pitta–kapa in the body. Jeyananda and Rattinammal know the theoretical corpus that is the foundation of the food taxonomy. Nevertheless, their dietary prescriptions for patients with diabetes that follow the rules of pattiyam/apattiyam ‘do/don’t’, are not individualized. They encourage patients with diabetes to reduce cereal intake, avoid sugar, sweets and oily items and to increase intake of pulses, green leaves and vegetables. They strongly emphasize the consumption of millets, sorghum and whole grain, and of certain Indian vegetables such as bitter gourd and spices used in medicines for their anti-glycemic proprieties (cumin, turmeric, asafoetida). They recommend consumption of dairy products that lower pitta in the body since pitta is considered to increase the likelihood of diabetic conditions, but discourage meat intake that enhances it. To sum up, they strongly encourage their patients to return to traditional food. Their recommendations are relevant because millets, sorghum, pulses and vegetables are rich in micronutrients and fibres that help to prevent or control diabetes as well as combating micronutrient deficiencies that affect a large part of the Indian population regardless of socio-economic status (Singh 2007). Nevertheless, practitioners must explain at length and repetitively in order to convince patients of the beneficial effect of dietary prescriptions on their health, and find arguments to thwart complaints such as ‘only rice is available to us (in ration shops); how can I buy kampu or ragi (pearl millet; finger millet)?’ ‘Doctor, we cannot pay for vegetables, pulses, milk, they are too expensive’. ‘It takes too long to prepare ragi and it is difficult to eat it at the office’. ‘I have too much work, how can I manage to prepare food for me and food for my children? My children want only rice, they don’t like vegetables, they don’t want bitter gourd.’

Patients’ responses regarding prescriptions are well founded. As I mentioned at the beginning, the cereals available in ration shops are rice; the price of vegetables is very volatile and, according to season, too high for patients who have to face expenditure, not only on food but also on medicine, education, and so on. Indian vegetables and green leaves are cheaper, but they are depreciated compared to ‘English vegetables’. The bitter taste of various vegetables is also an obstacle. As some have high anti-glycaemic proprieties, such as the renowned bitter gourd, pharmaceutical companies transform them in cūraṇam and sell them in capsules. However, unwillingness to change food habits is the main obstacle. A study on biomedicine conducted in 1999, quoted by K. Venkataraman et al. (2009) shows that only 37 per cent of diabetic patients are compliant with dietary prescription. Compared to biomedical practitioners, siddha ones possess a valuable therapy for controlling food-related diseases, as diet is an intrinsic part of the treatment. But the lack of compliance with diet may be a drawback as the efficacy of medication depends on it.

Perspectives and issues

Jeyananda’s and Rattinammal’s medical practices mirror the great heterogeneity of knowledge and know-how that I was able to observe during my eight-year research on siddha. Indeed, among the practitioners I visited, four who run large hospitals use biomedical diagnostic tools similar to Jeyananda’s (X-ray, laboratory, sphygmomanometer) and have recourse to marketed drugs to supplement their own. In other words, they correspond to the
class called ‘lay practitioners’ by Kalpana Ram who ‘hope(s) to soften, if not abolish, the invidious distinctions between the polarized and hierarchical categories of “indigenous” and “cosmopolitan”’ (2010: 200). Not all practitioners, however, accept that siddha is intertwined with biomedicine as that would weaken its own identity. Like Rattinammal, they are likely to provide medicaments based on iatrochemistry, to elaborate new formulas from texts, and to use other therapies that share some characteristics with siddha, such as homeopathy, naturopathy, Bach flower remedies, magneto-therapy, and so on. They are also very involved in the promotion of their medicine in addition to dealing with patients, students and interested persons. The differences in practice depend largely on the personality and ambitions of the practitioner, and also on his/her knowledge, inherited as well as acquired and experienced, that give him/her the capacity to mobilize different medical sources to treat and adapt to the new context of health and diseases.

The complaints of Jeyananda and Rattinammal about the difficulty of treating patients with siddha medicine are justified. People demand quick relief. They make frequent consultations when their disease is at a very advanced stage or when they have not been cured by biomedicine after a long time. These are the issues often confronted by traditional siddha practitioners. They result from the hegemony of biomedicine, scientificity and rationality, over empiricism, experience and know-how. Patients are not the only issue. Among the obstacles that weaken the position of traditional siddha practitioners are: the difficulty of producing their own medicines as medicinal plants are being reduced due to pressure exerted by urbanization; the decreasing quality of medicinal products from specialized shops; the lack of interest of their children in continuing the family profession; the competition from biomedicine and ayurveda; and the non-recognition by institutionalized siddha practitioners. Nonetheless, during my observations of Jeyananda, Rattinammal and others, I noticed how well they healed diabetic ulcers, in spite of the often advanced stage of the ulcers. They rarely advise their patients to revert to biomedicine, which would probably mean amputation. Patients with joint and back pain, osteoarthritis or hemiplegia are also very satisfied with the results of the treatment. On the other hand, it is impossible for me to judge the efficacy of medications on blood sugar as it is not the role of ethnographical studies to make such evaluations. In my reading of the patients’ records at Jeyananda’s hospital, I noted a progressive decrease of sugar levels in patients treated with anti-diabetic tablets from ayurveda or siddha pharmacies. Such observations are impossible with Rattinammal as there are no clinical test records. She never pays attention to the laboratory analyses of her patients, and never advises going to the laboratory to check sugar levels. It is worth mentioning that although Jeyananda prescribes blood sugar tests, his interest in the results is limited. Like Rattinammal, he evaluates the efficacy of his treatment by checking the pulse and questioning the patient on his/her symptoms and health. His lack of concern with sugar tests shows that he prescribes them only to ‘reinforce the confidence of the patient’. Jeyananda and Rattinammal have no doubt of their ability to treat patients with diabetes, nor of the efficacy of the medicaments provided by them or from pharmaceutical companies. The effectiveness of a medicine, as the World Health Organization demands, are nonsense to them. Their long experience and knowledge of the practice of medicine inherited from several generations has conferred on them the skill necessary to be confident in the treatment. It is noticeable that a large number of the medicinal plants Rattinammal uses for preparing her curanaṅkaḷ are well known for their anti-diabetic properties and are used in siddha and ayurveda formulas such as Momordica charantia, Aegle marmelos, Phyllanthus emblica, Terminalia chebula, Gymnema sylvestre, Azadirachta indica, Elipta alba, Cassia auriculata, Eicostema axillare, Glycyrrhiza glabra, Myrica nagi, and so on (Canmukavelu 1993; Chacko 2003; Goyal 1998; Grover et al. 2002; Masilamani et al. 2000;
Pandey et al. 1996; Sood et al. 2005; Veluchamy et al. 2004). Dietary prescriptions of traditional siddha practitioners, influenced by their own consumption pattern that privileges traditional food, are also a useful tool to treat, as well as to prevent, diabetes. Even though the dietary prescriptions meet with reticence from some patients, they are consistent with the advice on medicinal and nutritional properties of plant foods in the treatment of food-related diseases (sugar from the borassus palm, millets, pulses, vegetables) which, today, are profiled in the media and arouse interest among the middle class and patients with diabetes. Therefore, there is no doubt that traditional siddha practitioners contribute to the prevention and detection as well as the treatment of diabetes and its allied diseases. Not only do they complement health services which are deficient in rural as well as in urban areas, but also, they treat patients at affordable prices. Although medication may be expensive at the beginning, as the treatment aims at rectifying the imbalance of vāta–pitta–kapa, therapies for treating allied diseases and hospitalization are cheap. Practitioners are also aware of the financial situation of patients so that they adjust the price of the treatment to their means. This is an enormous advantage for the treatment of diabetes whose chronicity and the price of medication often force patients to disrupt their treatment or go untreated.

Notes
1 Homeopathy was founded by the German, Samuel Hahnemann, but it expanded rapidly in India after its introduction in the first part of the eighteenth century because of its material medica and some of its concepts which echo Indian medicine. Traditional medicines are, in essence, allopathic, and the term allopathy for distinguishing biomedicine from traditional medical systems is incorrect. Unani is a combination of Greco-Arabic and Indian medicine.
3 In India, ‘millet’ is a generic term used for different varieties of pulses, namely sorghum (Sorghum vulgare), pearl millet (Pennisetum glaucum), finger millet (Eleusine coracana), foxtail millet (Setaria italica), barnyard millet (Echinochloa colona), proso millet (Panicum miliaceum), kodo millet (Paspalum scrobiculatum) and small millet (Panicum sumatrense).
4 Historical studies on cereal consumption in South India are rare. One may consult the archaeological research of Dorian Fuller (2011) and of K. R. Krishna and Kathleen D. Morrison (2010) on the domestication of cereals.
5 This appellation echoes the fact that rice has long been the privileged staple food eaten by Brahmans in South India. Two explanations can be given. First, Brahmans were supported by the rulers who developed irrigation for rice crops in deltaic regions. The epigraphy of many Brahanical temples shows that paddy (rice with hull) was offered to feed the deities, the Brahmans and the temple servants. Some major temples also stored paddy in the past. Second, the white colour of polished rice corresponds to the sattva guṇa (Sanskrit: sattva quality), according to Sāṃkhya philosophy which classifies all the elements of nature into three qualities: sattva-rajas-tamas. Sattva refers to purity, perfection and whiteness; it is the quality par excellence of Brahman ethics. In contrast, rajas which refers to vitality, energy and redness corresponds to the Kṣatriya ethics and tamas which refers to obscurantism, impurity, wildness and blackness corresponds to the identity of Śudra and Avarṇa (untouchable).
6 Idli (steamed cake) and docai (a kind of pancake) are southern Indian foods. The dough is prepared by grinding grains (rice or millet with husked horse gram) soaked in water for one night for developing fermentation.
7 Iatrochemistry is the use of chemistry for healing. It is based on the alchemical principle that the body is constituted of chemical elements which intervene in the health of the person.
8 This chapter uses the transliteration rules according to the Tamil Lexicon, University of Madras (1982). In the perspective of homogeneity, the transcription of Sanskrit words is privileged over that of Tamil words.
9 See the document entitled Organization of Health Care in India by Leo S. Vaz on www.whoindia.org/ContentPages/127626072.pdf (retrieved on 23 February 2014).
10 Varma therapy comprises acupressure on vital points for treating bone and joint pain, muscular dystrophy and neurological disorders, and massages using medicated oils and fresh plants. This therapy is a part of varmakkalai (art of vital points) which consists in two opposite arts: that of causing harm or death by touching the vital points throughcilampam (Tamil martial art using long sticks orcilampam and various weapons), and that of healing by pressing injured vital points.

11 Compared with the usual statement that traditional medicaments are cheap, I have noticed that those prescribed are often expensive (400 rupees (around £1.95) or more according to the ailment) because the number of different medicaments is high. The preparation of medicines is certainly expensive, notably when they require manpower and high-cost products.

12 Ratinammal’s explanation of the relationship between blood sugar and imbalance ofvāta–pitta–kapa differs from that given by institutional siddha doctors. Basing their explanation on medical texts, they identify the presence of diabetes by vitiated kapa which results in deterioration of the seven constituents of the body (Masilamani et al. 2000; Shankar and Aggarwal 1986; Shankar and Singhal 1995).

13 Bach flower therapy was developed in the 1930s by Edward Bach, a British homeopath. Bach elaborated his treatment from the fact that flower petals contain all the healing power of the plant. He used it, primarily, for counteracting negative emotions which could cause depression, anxiety, insomnia and stress. According to homeopathy’s principles, Bach remedies are based on the ‘water memory’ so that the flower extracts are highly diluted in water. Ratinammal is able to buy her Bach remedies in Madurai, which means that this treatment is well known. It is used by practitioners involved in alternative medicines such as naturopathy, homeopathy and herbal therapy. In the field of siddha medicine, I met another woman traditional siddha practitioner who used this therapy.

References


Coping with the diseases of modernity


