Food as medicine and medicine as food; nutritional plants in medical prescriptions in the notebook of a Tamang healer: *Ferula asa-fœtida* L. and *Curcuma longa* L. in traditional medical treatment and diet in Nepal

EIGNER Dagmar¹, SCHOLZ Dieter²

¹ Institut f. Geschichte der Medizin, A-1090 Vienna
² Sandoz Forschungsinstitut, A-1235 Vienna

INTRODUCTION

Food and eating have powerful symbolic value among the hinduistically-influenced ethnic groups of Nepal¹. With food, the gods are worshipped, the ancestors sustained and through food the caste status is distinguished.

Similarly it is used to mark the main division in the spiritual hierarchy: higher spirits must be fed with ritually purer food; hence, many substances offered to the low spirits are considered unfit (impure) for the higher deities.

Food also plays a major role in the concepts of illness and curing². In the humoral theory of the ayurvedic medical system the contrastive values of hot and cold are connected with the qualities attributed to different food articles. Therapeutic actions are maximally effective only if appropriate dietary measures are taken to support the restoration of physiological balance³.

Furthermore, food and spices themselves constitute an integral part of traditional medical prescriptions. A notebook of a deceased Tamang shaman from the eastern hills in Nepal, received during a field trip in 1986⁴, consists of thirty five magic formulas and sixteen prescriptions⁵ based mainly on plant material. Of the twenty five plants used in the prescriptions, the following eight are also part of the common daily diet in Nepal: *Curcuma longa* L., *Ferula asa-fœtida* L., *Zanthoxylum armatum* DC., *Psidium guaiava* L., *Sesamum indicum* L., Rice, *Citrus aurantiifolia* (Christ.) Swingle and *Artemisia vulgaris* L. Honey and the spice *Battis masala* (a mixture consisting of thirty two ingredients) are also used. These traditional prescriptions use minute amounts of materials that are consumed daily in much greater quantities. Why? What are the additional benefits?

Using *Curcuma longa* and *Ferula asa-fœtida* as examples, an attempt is made to address this issue.

**CURCUMA LONGA** L.

It is a perennial herb that measures up to one meter high with a short stem and tufted leaves⁶. The parts used are the rhizomes, which are ovate, oblong, pyriform or cylindrical and often short branched. They are yellow to yellowish-brown in color.

**CHEMICAL CONSTITUENTS**

Moisture 13.1%; protein 6.3%; fat 5.1%; mineral matter 3.5%; carbohydrates 69.4%. The essential oil (5.8%), obtainable by steam distillation of the rhizomes, has the following constituents: α-phenandren 1%, sabinene 0.6%, cineol 1%, borneol 0.5%, zingiberene 25% and sesquiterpenes 53%. Curcumin (3-4%) is responsible for the yellow color. In addition, the monodemethoxy and bisdemethoxy derivatives of curcumin have been isolated from the rhizome⁵.

**MEDICINAL USE**

The rhizome is a household remedy in Nepal. The powdered rhizome is considered to be stimulating, carminative, purifying, antiinflammatory and anthelmintic. Externally the rhizome mixed with alum is also applied as a paste to wounds, bruises, inflammatory troubles of the joint, and sprains⁵. Current traditional Indian medicine uses it against biliary disorders, anorexia, cough, diabetic wounds, hepatic disorders, rheumatism and sinusitis —when translated into terms of modern medicine⁷.

**PHARMACOLOGICAL ACTION**

Turmeric powder applied over septic or aseptic wounds in rats and rabbits accelerates the healing process. Extracts exhibit anti-inflammatory activity after parenteral application.
the blood, the other against menstrual and abdominal problems. In the first one it is mixed with resin of a known resin, which has had to be wrapped around a cow. Everything is mixed together and eaten. In the second recipe, an additional minute.

Asa-jiœtida

This plant grows wild in Kashmir, Iran and Afghanistan. It has an unpleasant smell, is herbaceous and perennial and grows up to two meters high. The part used is a oleogum resin, obtained by incision from the root, and called indicum. Taste and smell are due to sulfur compounds. Disulfides as well as symetric tri- and tetrasulfides have been isolated. Umbelliferone, the farnesiferoles A, B and C, ferulic acid and the coumarins dehydroactiin and indicunz have been commonly used in Nepal for many centuries, especially in minute amounts as powder or as preparations.

USE IN THE NOTEBOOK

In traditional treatment, for use in liver disorders, but evidence for effect in humans is scarce. In A. Broed C. Juhlic aid, and the ammoride

MÉDICAMENTS ET ALIMENTS : L'APPROCHE ETHNOPHARMACOLOGIQUE

Glucuronic acid, galactose, arabinose and rhamnose have been isolated from the resin, which has also been used as a flavoring agent in many curries and dal dishes. It is also an important spice in many curries and dal dishes.

USE IN THE NOTEBOOK

Asa-jïœtida

In Nepal, Asa-jïœtida is consumed in amounts comparable to those in the daily diet. The daily intake of turmeric from curries and dal is much higher than during a treatment. Turmeric and its main chemical constituent have been studied extensively, indicating the effectiveness of this drug also in the ammoride.
1. THE AYURVEDIC HYPOTHESIS

In the ancient Indian ayurvedic system disease is thought to result from imbalances between the Tridoshas Vata, Pitta and Kapha of an individual. Food and medicine carry the qualities of hot, cold and neutral. These qualities influence the above mentioned imbalance. Unmodified spices and medicinal herbs are generally considered as hot or cold.

The village medical practitioners in general and, even more so, their patients have only rudimentary knowledge of the complex theories of the ayurvedic treatment. They maintain, however, a number of related ideas about the required diet in accord with this food classification system. Food is thought to enhance and facilitate the actions of medicines and to provide means for balancing their extreme qualities.

By adding spices (or food) to prescriptions, the healer is thus able to regulate the quality of the remedy for the necessary individual treatment.

2. THE BIOAVAILABILITY ENHANCER HYPOTHESIS

In ayurveda, black pepper (Piper nigrum Linn.), long pepper (Piper longum Linn.) and ginger (Zingiber officinale Rosc.) are collectively termed Trikatu, and are essential ingredients of numerous prescriptions, used for a wide range of disorders. Use of the same herbs for different ailments is intriguing unless they possess some unique activity that is useful in multidrug combinations. Several studies have now shown that Trikatu possesses bioavailability enhancing effects.

Curcuma longa is related to ginger. Both belong to the Zingiberaceae and contain compounds, which are quite similar from a chemical point of view. (Turmeric: the curcumin group, ginger: the gingerol, gingerdiol group). Therefore, it seems likely, that turmeric has a similar enhancer activity, which makes it a very useful additive to medical prescriptions.

Whether enhancement of bioavailability is a general effect of hot spices or not, is still an open question.

3. THE PSYCHO-DYNAMIC INTERACTION HYPOTHESIS

In which the distinction between naturally-caused illness and illness in which evil spirits play an essential role is an important concept in traditional medicine in Nepal. Spirits attack man because they are hungry. Correspondingly, most curing ceremonies involve ritual feeding.

The jhâki or shaman (a specialist for the treatment of evil spirit-caused illnesses) also applies herbal remedies (e.g. as described in the note book), but always combined with ritual actions and the recitation of magic words. Psycho-dynamic interactions occur between shaman and patient. Due to the ritual and social importance of food and the strong connection between wellbeing and food, it may be necessary for the healer (the patient generally does not know the ingredients of the preparation given to him during treatment), to have at least some amount of "good food" e.g. ghee, honey, turmeric or Asa-fetida in his remedy. In that way he feels more confident about its power. This additional security could be carried over to the patient.

We believe, that the relevance of these three hypothesis varies from case to case. They all contribute to the explanation of why food and spices are so often a part of traditional medical prescriptions.

“In fact, Asian cuisine is characterized by the adaptation of irritants. Consider for example, the importance of ginger, garlic, red onions, tamarind, turmeric and chili in both the medicinal and the culinary traditions of Asia. The issue is not, whether they are foods or medicines, but rather that they are all part of the same system, which strengthens and refreshes the body.”

REFERENCES

5. EIGNER D., SCHOLZ D., 1990, Das Zauberbuchlein der Gyani Dolma, Pharm ze, 19, 141.
9. EIGNER D., SCHOLZ D., personal observations.
15. BLUSTAIN H.S., 1976, Levels of medicine in a central Nepali village, Contributions to Nepalese studies, 3, 93.