Āma A Reconsideration

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he concept of disease is well defined by the classical Ayurvedic texts and there are several instances where in the same connection that the word *āma* appears. Specifically, certain disease manifestations are attributed to the presence of *āma*, i.e. it is a cause of signs and symptoms of pathology. In public venues, indeed, even in didactic settings, speakers will usually state that this stuff, whatever its chemical constituents, is the cause of disease. Further, the presenter almost always declares that *pañcakarma* is the treatment for these diseases. It has been this writer's experience to note that students trained here in the West as well as *vaidyas* trained in India are heard to make these proclamations about āma.

About two or three years ago a scholarly work on the topic of āma came to my notice — Concept of *Ama in Ayurveda*, by Dr. M. Srinivasulu.¹ Here we find a fine presentation of the entire concept of āma - definition, signs and symptoms, causes, and treatment. But here, too, there is something troubling with the definition of āma - more details in a moment. The author characterizes diseases into two categories — sāma and nirāma — those involving āma and those not. This dichotomy will serve as an important reminder to the student that statements that declare that āma is the source of all disease, even when made by experts, are incorrect. But why all the fuss? Well, first of all, we need a differential diagnosis and then we can treat the implied cause. If you don't have the right diseases, your therapy may miss the mark. So this is the point - the classical writers were clear that pañcakarma is not a treatment for āma conditions. This is because pūrvakarma, which employs oil, exacerbates the sticky quality of āma and this combination effectively blocks the release of āma. In other words, adding oil internally will augment

the condition of *saṅga* (impaired flow especially of wastes) and presenting symptoms.

This article will present an overview of the topic, keeping in mind the fact that there is a need for a consensus on the concept of āma and therefore its treatment. The



concept of āma has numerous definitions and we will explore its meanings with an examination of some quotations from the ancient Samhitās. The word āma literally means "uncooked." Interestingly, the word for stomach (and small intestine or SI) in Sanskrit is called the vessel of uncooked (food) — $\bar{a}ma \bar{a}ya$. Thus for the ancient authorities the stomach/SI unit is ground zero in the development and spread of āma through the physiology. First, note the quotes from Vāgbhaṭa, Caraka, and Suśruta on the definition of āma followed by quotes on its signs and symptoms and then a quote from Caraka describing its etiology. Finally we will take up the issue of treatment in general.

Defining the Concept of Ama

ușmano 'lpa balatvena dhātumāddamapācitam dușțamāmaśayagatam rasamām pracakșate \ anye doșebhya evāti dușțebhyo 'nyonya mūrcchanāt kodravebhyo visasyeva vadantyāmasya sambhavam \\

The first $dh\bar{a}tu$ ($\bar{a}h\bar{a}rarasa/rasa$), which by the weakness of the (digestive) fire, remaining uncooked and becoming vitiated accumulates in the stomach and small intestine is called \bar{a} ma. According to others \bar{a} ma is said to be created by the mixing of increased *doṣas*, as poison arises from mixing different kinds of *kodravas* (inferior quality grains).²

Caraka says there are two types of āma disorders in Sūtrasthānam³ and in

Vimānasthānam, he suggests that all dosas vitiated from an excess quantity of food mix with the undigested food and produce āma. Caraka describes the two types of āma condition: alāsaka and visūcikā. In the former, stasis obtains and is hardly curable. In the latter, vomiting or/and diarrhea may be present and is/are curable. In Cikitsāthānam,⁵ he uses the word poison (*visa*) to refer to indigested food that is subject to fermentation. It mentions in the next verses (45-49) how this toxin mixes with the dosas to produce specific symptoms. It also mixes with rasa to produce its symptoms. In Vi.II he uses the terms āma pradoșa (aggravated āma condition), āmadoșa, and āmavișa (a toxemia condition from fermented āma).

Vāgbhaṭa gives additional meaning to āma when it combines with dhātus and *malas* with the use of the word sāma and in naming diseases involving āma, doṣas, and *dūṣyas* combined.⁶ Suśruta states that āma is used to designate completely undigested food, *vidagdha* for half digested, *viṣṭabdha* for digested but with disturbances such as formation of wind, colic, constipation, etc. and *rasaśeṣa* for indigestion of *āhāra rasa*.⁷

Srinivasulu summarises the concept of āma,

Thus an indigested food particle, bacteria, virus (infection), intermediary metabolic end products, accumulated substances in metabolic rearrangements and synthesis, exogenous of tissues (auto immune), free radical or any



antigen (foreign) substances come under panorama of āma. Hence āma is multifaceted in its *svarūpa*....⁸

Śloka Summary

From the above *sūtras* āma is:

- 1. Undigested food in the stomach or circulating through *rasa dhātu* anywhere in the body and which combines with doṣas, tissues (*dhātus*) and wastes (malas) sāma condition.
- 2. Increased doṣas in the body mixed with one another *sannipāta* (*nirāma*?)

The following modern notions have been added to these definitions by others, that āma is:

- The toxins that accrue from unusual/improper food combinations, e.g. *kodrava* is a cheap grain, eaten by the poor, and said to destroy the *ojas* of the body *śaring*.⁹
- 2. Accumulated waste in the body.
- 3. The end product of metabolic activity in the cells.
- 4. Environmental toxins/poisons in air, water, and food (this includes heavy metals, petrochemicals, etc.).
- 5. Wastes of parasites, bacteria, etc. (these may be reactive with food/organ-related antibodies, e.g. thyroid tissue antigens may cross-react with Yersinia antigens).
- 6. Unprocessed thoughts, feelings, emotions.
- 7. Unfulfilled desires.

There is considerable interest in xenotoxins herbicides, pesticides, insecticides, bacteriocides/antibiotics, petrochemical byproducts, heavy metals, rGBH, asbestos, rocket fuel, and so on. These may qualify as āma or not, depending upon how they are experienced and accumulated in the body. One emerging theme is that āma also includes electromagnetic disturbances — our cellphones, wiring in our houses, etc. It is becoming increasingly clear that we

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are disturbed by all manner of energetic forms, but how to diagnose and treat them?

The concept of doṣa has a threefold functional role whereas āma has none. According to Śārṅgadhara¹⁰ Ayurveda gives three meanings to doṣa. One of its functions is to sustain and govern the bodily processes or dhātus, while the other two functions are detrimental to physiology — to vitiate (doṣa) and to pollute (mala). The distinction that should be inferred is that wastes and doṣas have functional import while āma has no physiological functionality.

Signs and Symptoms of $\bar{A}ma$

Āma produces its own signs and symptoms and may mix with the doṣas, dhātus, and malas to produce other signs and symptoms. Often it is the effect of some imbalance which can further manifest as a complication such as in indigestion leading to toxemia. Āma is in two locations: *sāmata* (in rasa dhātu, etc.) and *sāmadoṣa* (mixed with the doṣas).

- Signs and symptoms of āma according to Caraka¹¹: stasis of food, malaise, headache, fainting, giddiness, stiffness in back and waist, yawning, body aches, thirst, fever, vomiting, griping, anorexia, improper digestion of food. Ama with pitta produces burning sensation, thirst, disorders of the mouth, acid gastritis, and other pitta disorders. When combined with kapha it gives rise to phthisis (wasting away or atrophy), coryza (cold), prameha (diabetes) and other kapha disorders. When combined with vāta and affecting urine, feces, and rasa and other dhatus it causes disorders of urine, abdomen, and tissues, respectively. (Note from this sūtra that āma is not that same as dosa according to Caraka as he describes the effects of their mixing.) Stool containing āma sinks in water due to heaviness....
- Signs and symptoms of āma according to



NASYA

Vagbhata²: Obstruction of the channels, loss of strength, feeling of heaviness of the body, inactivity of *anila* (vāta), lassitude, loss of digestive power, expectoration, accumulation of wastes, anorexia, exhaustion are the symptoms of malas with āma.

Causes of Āma

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Causes of \bar{a} ma, according to Caraka are: Agni gets deranged by fasting, eating during indigestion, overeating, irregular eating, intake of unwholesome, heavy, cold, rough, and contaminated food, faulty administration of emesis, purgation, unction, emaciation from disease, faulty adaptation to place, time, seasons, and suppression of natural urges. Agni thus deranged becomes unable to digest even the light food and food being undigested get acidified and toxic (*sūktatvam*).¹³

The weak *agni* burns the food incompletely which goes either upwards or downwards. When it moves out downwards either in ripe or unripe

condition, it is known as the disorder of *grahaņī* or small intestine. In such patients often the entire food is half burnt and the stool is frequent, constipated or liquid. There is the presence of thirst, anorexia, an abnormal taste in the mouth, excessive salivation and a feeling of darkness, edema of feet and hands, pain in bony joints, vomiting and fever. Eructations have metallic or fleshy odor and a bitter, sour taste.

Pathogenesis (Samprāpti) of Āma

Food in excessive quantity is said to vitiate all dosas, according to experts.

- Caraka says "When after taking solid food up to the saturating point, and liquids up to the same, vāta, pitta, kapha situated in stomach pressed too much by the food in excessive quantity get vitiated all simultaneously. These vitiated dosas entering into the same undigested food get located in a portion of the belly and cause distension of abdomen and suddenly being eliminated through upper or lower pathway produce separately these symptoms in the eater - vāta produces colic pain, harness in belly, body ache, dryness of mouth, fainting, giddiness, irregularity of digestion, stiffness in sides, back and waist, constriction and spasm in blood vessels. Pitta produces fever, diarrhea, internal heat, thirst narcosis, giddiness and delirium; kapha produces vomiting, anorexia, indigestion, fever with cold, lassitude and heaviness in body. Not only the intake of excess quantity of food gives rise to āma but also food and drink which are heavy, rough, cold, dry, disliked, distending, burning, unclean, antagonistic, and taken untimely and while afflicted with emotional disturbances such as passion, anger, greed, confusion, envy, bashfulness, grief, conceit, excitement, and fear."¹⁴
- Vāgbhaţa says the causes of *āmadoşa* (āma) are eating excessive quantity of food, food

disliked, that which causes flatulence, which is overcooked or uncooked, not easily digestible, dry, very cold, contaminated, which causes burning sensation during digestion, is dried up or soaked in excess water; eating when afflicted by grief, anger, and hunger, etc.¹⁵ Vāgbhaṭa also says that consuming suitable and unsuitable foods mixed together (*samāśana*), large quantity of food before previous meal has digested (*adhyāśana*), consuming more or less food at improper time (*viṣamāśana*) will cause death or dreaded diseases (having caused āma).¹⁶

Caraka describes two conditions of āma — visūcikā (movement of wastes is accelerated) and alāsaka (āma/wastes/food do not move in either direction).¹⁷ In addition to the symptoms above there is vomiting and diarrhea of the āmadoşa visūcikā. In alāsaka etiological factors are — weak digestion, suppression of flatus, urine, and feces, intake of solid, heavy, very rough, cold, and dry foods. These lead to increase of kapha and subsequent blocking of vāta (elimination). Here all the symptoms of āma above may present plus nothing comes out upwards or downwards. The āma tends to move outward and promote stiffness over the entire body (dandalāsaka), which is incurable. These toxic conditions are known as āmavișa (toxemia from āma). They are exceedingly incurable because of its genesis and contradictory management (such as need for pācana and dīpana or fire-containing substances and the need for sustenance while having no agni to digest the āma, medicine and food).

Thus far we have presented the classical position — up to the treatment of \bar{a} ma conditions. Reading in Caraka we get guidance on broad treatment guidelines for the various disease entities (disease models). In his discussion of the features of *samprāpti*, the term *vidhī* emerges.¹⁸ Its import requires the practitioner to make a basic determination of disease causation — especially, internally *vs*. externally caused. Internal cause is always the doṣas. External causes include spirit

possession, mental disorders, infection, and various other and sometimes climate-oriented themes (dust, wind, lightning, etc.). It's important to make this fundamental determination in order to effect proper therapy. Throughout his Samhitā, Caraka gives the specific instructions for treating various causes. The internal causes (*doṣas*) are treated with removal of cause, balancing, cleansing (PK), and rejuvenative therapies. Now we will include the specifics for the others.

Treatment of Mental Diseases

The classical writers have given some interesting counsel regarding treatment of mental disorders. Recall, that Ayurveda consistently maintains that there is an entity called mind, that is material and separate from the body. The fact that it is material and separate means that it is capable of producing effects - psychosomatic, e.g. in conjunction with spirit the mind creates — pain, happiness, the body, objects of the creation, etc. Caraka counsels that sometimes a disease (say unhappiness) does not strictly exist in the body. Caraka states that it may be possible to influence this state by perfecting the physiology of the body. Which is to say, that when the body is working well, we tend to be happier. Because the mind can create energetic conditions that also influence the body, disease may ultimately result from poor mental states. And the converse is true, too: physical states influence how we feel. With the understanding in mind the following classical citations are offered as guidance for treating the mind, according to Ayurveda.

 Treatment of mind is secured best by restraining the mind from desire from unwholesome objects.¹⁹



- Also, Caraka advises one remain in contact with experts, and to know properly the Self, place, clan, time, strength, and capacity; and one should follow properly the goals of life — *dharma*, *artha*, *kāma* — and keep company of wise and pursue knowledge of Self.²⁰
- Caraka declares that treatment of mind is with knowledge (*jñāna*), specific knowledge (*vijñāna*), restraint (*dhairya*), memory (*smṛti*) and concentration/ Selfabsorption (*samādhi*).²¹

Spiritual Treatment

- mantras, herbs, gems, mangala (rites) including oblations, bali/offerings, homa/sacrifices, niyama/vows, prāyaścitta/ceremonial penitence, upavāsa/fasts, svastyāyana/prostrations, praņipāta-gamana/pilgrimages.^{22,23}
- worshipping Lord Śiva, Pārvatī, Viṣṇu, Brahmā, Aśvins, Indra, Agni, Himalaya, Gangā, and the multitude of Māruts.²⁴

Treatment of Infection/Parasites

The topic of parasites receives an entire chapter in Caraka's Vimānasthānam.²⁵ He describes the bloodbased type as minute, round, legless, invisible, and so on. In general, Caraka²⁶ advises extracting them, destroying their favorable environment, and avoiding etiological factors. In some cases, the specific action (prabhava) anthelmintic must be employed, in other cases removal by hand or instrument is necessary. In yet other cases, elimination therapy is sufficient for removal. The use of pungent, bitter, astringent, alkaline, hot drugs and measures contrary to kapha and feces destroy the source environment. Notably, these protocols seem most apt for the parasitic worms and probably not for bacterial and viral infections. From the modern perspective of public health mandates, treatment of both the host and the vector are seen as strategically necessary. This might mean eradication through pesticides (DDT was used for decades) and habitat destruction (drainage of wetlands) as with mosquitoes and their wet larval stage habitat.

Treatment of **Āma**

A modern analysis (revisiting of the forms of āma) of this topic has been necessary and from this rethinking of the meaning of āma, we are inclined to expand the actual substances that fall into this category. Generally it is sticky and accumulates in channels of distribution and elimination, blocking these functions. For this reason, and from the fact that the ancient authorities had diverse opinions about its representative forms, there are numerous treatment options. In general, however, it seems to this writer that one element of the theme of treatment is common — agni and heat. Ama arises mostly because agni is degraded in some way and is unable to transform the ingested substance. This element alone - agni - is responsible for transforming, both the good and the bad substances. Below are some descriptions from the classical literature on treatment. Please note that langhanam (reducing), dīpana, and pācana actions are sought initially in most cases of āma. These may be followed by traditional cleansing routines (PK) after the channels have been rid of their sticky blockages.

- Vāgbhata says that in case of sāma condition first use drugs with dīpana and pācana (burning and digestive) qualities which increase hunger. Then follow with oleation and fomentation and purificatory (PK) therapies.²⁷
- Suśruta says treatment of āma is done with lightening therapy; for *vidagdha* (āma half digested), emesis is useful; in *viṣṭabdha* (āma is digested but with disturbances such as formation of wind/gas, colic, constipation) fomentation is useful; and for *rasaśeṣa* (indigestion at the level of āhāra rasa) one should sleep. In vidagdha vomiting therapy with hot saline water is indicated, or the patient should abstain from food

until normalcy is restored. In āma the patient, whose body is light, should be treated with lightening measures until restored to normalcy in terms of disorder and strength.^s

Caraka describes treatment of āma conditions in special features section²⁹ and in the treatment section.³⁰ For alāsaka (stagnant type) it should be eliminated by emesis with use of hot, salty water and application of fomentation and suppository, keeping patient on a fast. In the moving type of āma condition (visūcikā) reducing/lightening measurers are adopted in the beginning and thereafter a thin gruel is given as is done after purgation therapy. As this type includes increased dosa/s (āmapradosa), drugs that eliminate the adhered dosas and kindle agni should be administered. With āmavișa contrary treatment makes this condition incurable — hot water exacerbates the toxic condition but cures āma; cooling therapies calm the poison condition but exacerbate the āma condition.

A final point on this topic relates to the fact that āma exists in the gastrointestinal tract (GIT) and/or in the tissues and organs. Strategies for treatment of tissues and their channels must take into consideration drug affinities and their capacity to operate on the appropriate tissue agni. Often this entails the use of drugs with a prabhava for a specific disease. Sometimes this treatment conflicts with the dosic involvement; drugs with heating energy tend to increase pitta, for example.

The foregoing brings us to heart of the topic: what is our concept of āma? If it is only undigested or poorly digested food found residing in the stomach/SI or in tissues, then treatment is given according to the authorities as delineated above. If we include infectious agents, we have some controversy — treatment of parasites involves avoidance of cause, expelling the creatures, and balancing the local area of infection. Note that Caraka gives a different recommendation for this externally caused disease than for the treatment of toxicity. Can Srinivasulu's hypothesis that infectious agents are āma be correct? What about heavy metals such as mercury, arsenic, lead, and so on? Modern writers describe them as either poisons (vișa) or toxins (āma?). But Caraka remarks at length on poisonings, which are not technically to be considered a disease or disease process. In the case of poison, pain comes first and then a dosic disturbance and conversely for dosic disorders. Poison sources include vegetables, minerals, and animals (such as snakebites). Toxic effects are often mistaken for diseases.³¹ Yet there is some functional similarity with such as mercury poisoning. It and other metals seem to accumulate in tissues, nerves, muscle, fat, bone, etc., and are said to produce signs and symptoms of disease. The fact that they act as if sticky (accumulate in body) is consistent with our concept of āma. They adhere to the cell membrane very tenaciously. This statement also applies well to a host of environmental toxins - petrochemicals, PCB's, benzene, etc. Are they poison or āma — the diagnosis is important because treatment is different for different disease categories/models.

One theme with regard to poisons involves exposure — whether chronic, acute, minute, or extensive. The manifestation of heavy metal poisoning is protracted in case of minute or chronic minute exposure. This situation produces a slow onset and a gradual progression of symptoms, which obscures awareness in the patient of the advance of symptoms. On the other hand, we are all familiar with children and chemical poisonings they occur all too frequently and with sudden and severe symptoms. Does our concept of (environmentally sourced) āma depend upon dosing?

Another aspect of this issue deals with the classical proscription for PK when āma is present. Do heavy metals behave the same with pūrvakarma? Some years ago as a beginning student of Ayurveda, I came across a study conducted in Germany touting the chelation benefits of PK. Researchers claimed that a chelation

effect had been observed (decreased serum levels of metals and so on) in a post-therapeutic assessment. The specifics elude the writer, but the data nonetheless made a lasting impression.

Another aspect of toxicity concerns recent debates about electromagnetic field effects on human physiology. Vd. R.K. Mishra teaches his students that they are harmful and that they are a kind of poison. Here again the concept of dosing seems pertinent and what about treatment? What are the specific guidelines for this disease-causing agent?

The dialog above has been conducted with the thought in mind that the medical science of Ayurveda should be able to build a clear concept of the entities that comprise the ancient term of āma. Since treatment depends upon our diagnosis and our ability to promote health depends upon proper treatment we need to be clear about our reasoning and conceptions. This writer suggests that this be a topic for a working committee within NAMA or some similar body within the Ayurvedic community. Success with this project would help advance the status of Ayurveda from being a philosophical system to being a science.

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