

Āma—A Reconsideration

by Michael Dick

The concept of disease is well defined by the classical Āyurvedic 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, what ever its chemical constituents, is the cause of disease. Further, the presenter almost always declares that pancakarma 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 Āma in Āyurveda, by Dr. M Srinivasulu, Chowkhamba Sanskrit Series Office, Varanasi, India, 2005. 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 by even our experts that declare that āma is the source of all disease to be 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 disease your therapy may miss the mark. So this is the point—the classical writers were clear that pancakarma is not a treatment for āma conditions. This is because purvakarma, 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 sanga (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 saṃhitās. The word āma literally means “uncooked.” Interestingly, the word for stomach (and small intestine) in Sanskrit is called the vessel of uncooked (food)--āmāśaya. 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 Sushruta on its definition followed by quotes on 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 Āma--

uṣmano 'lpa balatvena dhātumāddamapācitam
duṣtamāmaśayagatam rasamām pracakṣate
anye doṣebhya evāti duṣṭebhyo 'nyonya mūrchanāt
kodravebhyo viṣasyeva vadantyāmasya sambhavam Aṣṭ. Hṛd. Su. XIII.25-26

The first dhātu (āhārasa / rasa), which by the weakness of the (digestive) fire, remaining uncooked and becoming vitiated accumulates in the stomach and small intestine is called āma. According to others āma is said to be created by the mixing of increased doṣas, as poison arises from mixing different kinds of kodravas (inferior quality grains). Aṣṭ. Hṛd. Su. XIII.25-26

Caraka, says there are two types of āma (disorders) (Su. XIX.3) and in Vi. II.7-13 suggests that all doṣas vitiated from excess quantity of food mix with the undigested food and produce āma. Caraka describes the two types of āma condition: alasaka and visūcikā. In the former stasis obtains and is hardly curable. In the latter vomiting or/and diarrhea may present and is curable. In Ci. XV.44 he uses the word poison (viṣa) to refer to indigested food that is subject to fermentation. It mentions in the next verses (45-49) how this toxin mixes with the doṣas to produce specific symptoms. It also mixes with rasa to produce its symptoms. In Vi.

II he uses the terms--ām Pradoṣa (aggravated āma condition), āma doṣa, and āma viṣa (a toxemia condition from fermented āma).

Vāg. AH Su. XIII.27 gives additional meaning to āma when it combines with dhātus and malas with the use of the word sāmā and in naming diseases involving āma, doṣas, and dūṣyas combined.

Sushruta. Su. XLVI.499, 502-503 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.

Srinivasalu summarizes the concept of āma (p. 34): “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 swaropa....”

Sloka Summary

From the above sutras 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) (sāmā condition)
2. Increased doṣas in the body mixed with one another -- sannipata (nirāma ?)

The following modern notions have been added by others to these definitions

3. Toxins accruing from unusual/improper food combinations (Kodrava is a grain of cheap nature, eaten by the poor, and said to destroy the ojas of the body Śarṅg. Ch 4.21)
4. Accumulated wastes in the body
5. The end product of metabolic activity in the cells
6. Environmental toxins/poisons in air, water, and food (this includes heavy metals, petrochemicals, etc)
7. 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)
8. Unprocessed thoughts, feelings, emotions
9. Unfulfilled desires

There is considerable interest in xenotoxins--herbicides, pesticides, insecticides, bacteriocides / antibiotics, petrochemical by-products, 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 theme that is also emerging deals with electromagnetic disturbances--our cell phones, wiring in our houses, etc.. It is becoming increasingly clear that we are disturbed by all manner of energetic forms, but how to diagnose and treat them?

The concept of doṣa has a three-fold functional role whereas āma has none. According to Śarṅgadhāra (Ch. 5.23-24) Āyurveda gives three meanings to doṣa. One of its functions is to sustain and govern the bodily processes (dhātu), while the other two functions are detrimental to physiology—to vitiate (doṣa) and to pollute (mala). Nowhere in the classical literature is there a statement of a functional role for āma. (beneficial). The conclusion that should be inferred is that wastes and doṣas have functional import while āma has no physiological functionality.

Signs & Symptoms of Āma

Āma produces its own signs & symptoms and may mix with the doṣas, dhātus, and malas to produce other signs & 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 of two locations: sāmāta (in rasa dhātu, etc.) and sāmadoṣa (mixed with the doṣas). Signs and symptoms of āma (Ca. Ci. 15.45-49, 94):

stasis of food, malaise, headache, fainting, giddiness, stiffness in back and waist, yawning, body aches, thirst, fever, vomiting, griping, anorexia, improper digestion of food. Āma 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, coryza, prameha and other kapha disorders. When combined with vāta and affecting urine, feces, and rasa and other dhātus it causes disorders of urine, abdomen, and tissues, respectively. (Note from this sutra that āma is not that same as doṣa according to Caraka as he describes the effects of their mixing.) Stool containing āma sinks in water due to heaviness...

Aṣṭ. Hṛd. Su. XIII.23, 24 gives the following account: 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 symptom of malas with āma. The opposite are the nirāma doṣas.

Causes of Āma

Causes of āma according to Caraka are: Agni gets deranged by fasting, eating during indigestion, over-eating, 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 (śuktatvam) Ca. Ci. 15.42-44.

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 grahani. In such patients often the entire food is half burnt and the stool is frequent, constipated or liquid. There is presence of thirst, anorexia, abnormal taste in mouth, excessive salivation and feeling of darkness, feet and hands edema, pain in bony joints, vomiting and fever. Eructations have metallic or fleshy odor and bitter, sour taste.

Pathogenesis (samprāpti) of Āma:

Food in excessive quantity is said as vitiating all doṣas according to experts. 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 vitiating all simultaneously. These vitiating doṣas 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 (Ca. Vi. II. 7, 8)

Vāgbhaṭa says the causes of āmadoṣa (āma) are eating: excessive quantity of food, food disliked, that which causes flatulence, which is over-cooked 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. (AH Su.8.31-33). Vāgbhaṭa also says that consuming suitable and unsuitable foods mixed together (samaśana), large quantity of food before previous meal has digested (adhyśana), consuming more or less food at improper time (viśamāśana) will cause death or dreaded diseases (having caused āma) (AH Su.8.33-34).

Caraka describes two conditions of āma—visūcikā and alasaka (Vi. II.10-13) In addition to the symptoms above there is vomiting and diarrhea of the āmadoṣa--visūcikā. In alasaka 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 even over the entire body; this (daṇḍalasaka) is incurable. These toxic conditions are known as āmaviṣa (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 the food).

Thus far we have presented the classical position—upto the treatment of āma 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 samprapti the term vidhi emerges (Ni. I.11.1). Its import is to require the practitioner to make basic determinations 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 (doṣa) are treated with removal of cause, balancing, cleansing (PK), and rejuvenative therapies. Now the specifics for the others.

Treatment of Mental Diseases:

The classical writers have given some interesting counsel regarding treatment of mental disorders. Recall, that Āyurveda 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 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 Āyurveda.

- Treatment of mind is secured best by restraining the mind from desire from unwholesome objects. Ca Su 11.54
- 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. (Ca. Su. XI.46,47).
- Caraka (Su. I.58) declares that treatment of mind is with knowledge (jñāna), specific knowledge (vijñāna), restraint (dhairya), memory (smṛti) and concentration / Self absorption (samādhi).

Spiritual Treatment:

- mantras, herbs, gems, mangala (rites)—including oblations, bali / offerings, homa/sacrifices, niyama/vows, prayaschitta/ceremonial penitence, upavāsa/fasts, svastyāyana/prostrations, pranipātā-gamana/pilgrimages. (Ca Su 11.54, & Ni. VII.16-17);
- worshipping Lord Śiva, Pārvati, Viṣṇu. Brahmā, Aśvins, Indra, Āgni, Himālaya, Gaṅga, and the multitude of Maruts (Ca. Ci. II.310-316).

Treatment of Infection / Parasites:

The topic of parasites receives an entire chapter in Caraka's Vimanasthanam VII. In verse 11 he describes the blood-based type as minute, round, legless, invisible, and so on. Generally, for infections/parasites

Caraka (Vi. VII.14, 15) advises their extraction, then destruction of their favorable environment, and avoidance of etiological factors. In some cases the specific action (prabhāva) anthelmintic must be employed. In some cases removal by hand or instrument is necessary. In other cases, elimination therapy is sufficient for removal. 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, etc. 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 re-thinking of the meaning of āma, we are inclined to expand the actual substances that fall into this category. Generally it's 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. Āma arises mostly because agni is degraded in some way; it's unable to transform the ingested substance. This element alone--agni--is responsible for transforming, both the good things and the bad things. Below are some descriptions from the classical literature on treatment. Please note that langhanam, 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.

- Vāgbhaṭa (AH Su. 13.29) says that in case of sāma condition first use drugs with dīpana and pācana (digestion stimulating and burning) qualities and which increase hunger. Then follow with oleation and fomentation and purificatory (PK) therapies.
- Suśruta (Su. XLVI.505-507) says treatment of āma is done with lightening therapy; for vidagdha, emesis is useful; in viṣṭabdha (āmāis digested but with disturbances such as formation of wind/gas, colic, constipation) fomentation is useful; and for rasaśeṣa (indigestion at the level of ahara rasa) one should sleep. In vidagdha the patient should be vomited with hot saline water or he should abstain from food till normalcy is restored. In āma the patient, whose body is light, should be treated with lightening measures till restored to normalcy in terms of disorder and strength.
- Caraka describes treatment of āma conditions in special features section (Vi. II) and in the treatment section (Ci. XV). For alasaka (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 (visūcikā) of āma condition reducing/lightening measures are adopted in the beginning and thereafter thin gruel is given as is done after purgation therapy. As this type includes increased doṣa(s) (āmāpradoṣa) drugs that eliminate the adhered doṣas and kindle agni should be administered. With āmaviṣa 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 GIT or/and 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 prabhāva for a specific disease. Sometimes this treatment conflicts with the doṣic 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? A differential diagnosis guides specific treatment. If it is only undigested or poorly digested food found residing in the stomach/SI or in tissues then treatment is given by the authorities as described above. If āma includes infectious agents we have some controversy—treatment of parasites involves avoidance of cause, expelling the creatures, and balancing the local area of infection; not dipana, pācana, langhanam. Caraka gives a different recommendation for this externally-caused disease than for the treatment of toxicity (āma). Can Srinivasulu's hypothesis that infectious agents are āma be correct? What about heavy metals such as mercury, arsenic, lead, and so on? They are described by modern writers as either poisons (viṣa) 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 doṣic disturbance follows and conversely for doṣic disorders. Poison sources include vegetables, minerals, and animals (such as snakebites). Toxic effects are often mistaken for diseases. Ca. Ci. 23.18 Yet there is some pathophysiological similarity with such as mercury poisoning. It and other metals seem to accumulate in tissues, nervous, muscle, fat, bone, etc. and are said to produce signs and symptoms of disease—pain and/or organic disturbance. 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.. The diagnosis is important because treatment is different for different disease categories / models.

One theme with regard to poisons involves exposure—chronic, acute, minute, extensive. The manifestation of heavy metal poisoning is protracted in case of minute or chronic minute exposure. This situation produces slow onset and a gradual progression of symptoms, which obscures awareness in the patient of advance of symptoms. 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 interfere with purva karma's oleation? 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 made a lasting impression, none-the-less.

Another aspect of toxicity concerns recent debates about electromagnetic field effects on human physiology. Vd. RK Mishra teaches his students that they do 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 Āyurveda should be able to build a clear concept of the entities that comprise the ancient term of āma. Our science is not benefitted by the casual use of the term āma—nor by using English equivalents toxins and/or poisons; especially since these terms are also used to describe the term doṣa. As described above the treatment requirements for different causal entities are unique. 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 defining āma be a topic for a working committee within NAMA or some similar body within the Āyurvedic community. Success with this project would help advance the status of Ayurved from being a philosophical system to being a science.

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