IMPORTANCE OF GUNA AMONGST RASAPANCHAKA

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ABSTRACT

In Ayurvedic pharmacology, physiological and bio-chemical effects of drugs and their mechanism of action in the body are explained with the help of pharmacodynamic principles namely rasa, guna, virya, vipaka and prabhava in terms of bodily components like tridosha (vatta, pitta and kapha), dhatu (different tissues), mala (morbid factors including urine, feces etc.) srotas (channels both macro-micro vessels) and agni (enzymes & hormones). Ayurvedic classics identified that every substance (diet/drug) is constituted by panchamahabhutas (penta-elements). Every mahabhuta’s molecule is ascribed with certain attributes (guna). The conglomeration of bhuta molecules forms certain rasa (taste), which helps not only to identify the predominance of mahabhuta of a particular substance, but also to predict its activity when administered. The aim of the present paper is to identify and emphasize the role of gurvadi gunas which are the only contributing factors for the drug activity. Information deposited in Ayurvedic classics with regards to principles of drug action (pancha gunas of dravya) were compiled, reviewed and analyzed. A critical review of the principles of drug action promulgated by Acharyas of Ayurveda indicates that guna (attribute) of panchabhautic drug molecule otherwise also named as virya initiates drug action and biotransformation (vipaka) may modify such attributes. The taste (rasa) serves as a tool for identification of drug’s structural arrangement of panchmahabhuta and need not be considered as the principle which initiates the drug activity. Any drug activity should be explained by Gurvadigunas of the Dravya.

Keywords: Rasa, Guna, Virya, Vipaka, Dravya, Ayurvedic Pharmacology

INTRODUCTION

All the Dravyas are composed of five Panchamahabhutas (elementary substances) which are considered as the causative factors (karana) for the formation of all dravyas.\textsuperscript{1} Charaka defines dravya as the substrate of guna (quality), karma (action) and samavayi karma (inherent cause).\textsuperscript{1} Drugs perform actions with their respective properties namely Rasa, Guna, Virya, Vipaka and Prabhava which may be referred either as Panchapadarthas or Pachagunas.\textsuperscript{2}

Charaka explain that drugs act either by guna prabhava (by the influence of attributes) or dravya prabhava (inexplicable nature of dravya) or by both.\textsuperscript{1} While explaining the drug activity, Charaka refers about the salient aspects of drug action like Karma (action), Virya (factor responsible for the manifestation for activity), Adhishtana (site of action), Kala (time of action), Upaya (Mode of action) and Phala (therapeutic effect).\textsuperscript{1}

In this context, guna should be interpreted as “Sabdadinam gurvadayo dravay...
tah”. Dravya’s attributes are sabda (sound), sparsha (touch), rupa (vision), rasa (taste) and gandha (smell) and also the twenty qualities beginning with heaviness etc., and ending with liquidity.\(^3\) Basing on this reference it can be concluded that different activities of dravya are either by guna or by dravya (prabhavaja). Stable gunas are referred by another synonym ‘Virya’ while explaining drug activity. Every dravya is formed by panchamahabhutas and every mahabhuta is attributed with certain gunas.\(^1,4\)

The phases of ingestion, digestion, metabolism, egestion and excretion are common for both diet and drugs which are orally administered. According to Ayurvedic classics a substance (diet or drug) has to pass through all these phases by performing the activities with the help of inherent principle namely rasa, guna, virya, vipaka and prabhava (rasapanchaka).\(^4\)

**MATERIALS AND METHODS**

The conceptual part about rasapanchaka delineated in Ayurvedic classics like Charaka Samhita, Sushruta Samhita, Astanga Sangraha and Astanga Hridaya along with authentic commentaries made by Chakrapani Dutta, Dalhana, Hemadri, Arundutta, Indu, Shivdas Sen etc. have been thoroughly reviewed for analyzing the principles of drug action.

**DISCUSSION**

A. **Rasa (Taste):**

Charaka quotes that physician who is well equipped with the knowledge about rasa and dosha can be successful in treating diseases.\(^1\)

The enumeration of permutations and combinations of rasa and dosha helps to prefer the type of drug with a particular panchbhautilc combination/configuration for the therapeutic application of dravya in the management of diseases. In fact this enumeration should be considered as the classification of dravya based on rasa. The references mentioned about rasavarga\(^5\) and rasa skandha\(^6\) appear to be based on vipaka and rasaprabhava instead of rasa alone. Since the panchbhautilc combination is not directly perceived by pratyaksha pramana, Acharyas preferred rasa as a tool which is directly perceivable.

Sushruta quotes that dravyas (substances) are inferred by rasa.\(^5\) He further observes that rasa also helps in identification of panchbhautilc combination viz. madhura rasa containing dravya, if possessing guru guna it is presumed that parthiva dominance is more in it and similarly snigdha guna of madhura rasa indicates dominance of Jalamahabhuta.\(^5\)

The measurable parameters like taste-threshold\(^7\) may help to assess the ratio of panchbhautilc composition of a particular substance.

**Madhura:** \(ap+ pruthvi – snigdha- sheeta-guru.** The actions like jivaniya, tarpana, brimhana, balya, keshya, kanthya are exhibited through gunas of individual dravyas only.

**Amla:** \(pruthvi + agni – snigdha- ushna-laghu- ushna and laghugunas are contributed by dominance of agnimahabhuta.** The action of deepana, pahana, hridaya etc. of amla rasa are due to dravya predominant of pruthvi and agnimahabhuta and they initiate these activities irrespective of its rasa i.e. amla or otherwise. Dravya dominant of ushna and laghuguna acts as deepaniya even if it possesses any rasa other than amla rasa. This peculiar behavior is documented.
with the concept of vichitra-prat�ayarabdhaty.
In this concept the explanation of drug action is elaborated with the help of guna of the dravya when the drug’s activity cannot be explained by rasa. Acharya Charaka has attributed certain gunas with their relative degree of variations in different rasas. \(^1\)

**Avyaktarasa**

Sushruta\(^5\) quotes that the water is considered to be of good quality which is odourless, tasteless which quenches thirst, is pure, cool (sheeta), transparent, light (laghu) and pleasant. Here, the action of water is explained by its shita and laghugunas though it is tasteless.

**B. Guna (Properties):**

Charaka enumerates 41 gunas namely Indriya guna (5), Gurvadi guna (20), Paradi guna (10) and Atmaguna (6).

**How to assess guna?**

Acharya Sushruta candidly admits that identification of these panchbhautic gunas of dravya is through their action by inference.\(^5\) Gunas are susceptible for changes when subjected to different samskaras.

Charaka furnished that identification of rasa, virya and vipaka by nipata (contact) and adhivasa (inherent residing) and nishtakarma.\(^1\) All these parameter clearly reflect the concept of ingestion/application (nipata), metabolism (vipaka) and concentration of the drug in bodily tissues (virya) till excretion of the drug from the body. The observation made by Charaka and Sushruta if taken together forms assessment of guna i.e. by nipata, adhivasa and nishtakarma (kriyaparisamapti). Gunas refer to dravya (substance) the characteristic physico-chemical qualities of each bhuta group.\(^4\)

Certain gunas on contact with tongue subjected to initial digestion and exert certain actions. These activities are attributed to rasa. A drug when applied externally either on the skin or on mucous membrane also undergoes paka by locally available pitta/agni moieties and initiates its activity. This phase is attributed to virya (nipat at cha upalabhyate).

Gunas when further subjected to paka and vipaka (digestion and metabolism) induce certain activities by virtue of their concentration in different bodily structures (Do- sha-Dhatu-Mala,srotas,agni etc.).This phase is identified as adhivasa. In last phase the drug molecules are synthesized which can initiate important activities before their excretion from body. At this stage dravya completely gets metabolized and activity thus produced by release of potent gunas named as virya is attributed to vipaka. These actions should be attributed to guna/virya and vipaka should be given a status of modifying principle of drug activity.

**Shadupakrama**

Sushruta imparts more importance to rasa among other principles of drug actions (virya, vipaka and prabhava) with an analogy of relationship atma and deha and describes rasa as atma (soul) of the dravya.\(^5\) In fact guna is soul of the dravya which alone is capable of initiating drug action. Dravya is of greater importance than to several qualities, such as rasa, guna, virya, vipaka and prabhava, for the latter depends (or arise) exclusively out of composition and properties of the former i.e. Because the dravyas are composed of five mahabhuta. The drug action is initiated by energized molecules of panchmahabhootas and the energy is labeled by term virya (potential guna). Any drug action should be explained by these molecules viz. pruthvi molecule,
Apya molecule etc. by the principle of Samanya- vishesha siddhanta. All the treatment modalities fall under Shadupkramas i.e. Langhana- Brimhana- Snehana- Rukshana- Swedana and Stambhana and mode of action employed in these therapeutic procedures are explained by gunas of panchmahabhootas only but not by rasa or vipaka.\(^3\)\(^5\)

C. Vipaka (Transformation):

Rasa indicates the constituent panchnahautic of the dravya and vipaka modifies these constituents by transformation into potential forms. Avasthapaka (gastrointestinal digestion) involves a more breakdown of complex substances into their simpler components, while vipaka is takes place in dhatu tissues initiating bio-chemical reaction (oxidative and non-oxidative) which ultimately helps in the synthesis of molecule capable of producing different actions.\(^3\) The activity of nisthapaka is interpreted in terms of the effects seen on dosha, dhatu and mala. All these effects (nisthaphala) perceived are explained with help of paired gunas namely snigdha-ruksha and guru-laghu (Sushruta).

In vipaka, transformation of dravya and its guna takes place but not that of rasa. Sushruta advocates the classification of vipaka by panchbhautic constitution of dravya and named after guna such as guru and laghuvipaka. In the light of this observation vipaka can be redefined as “the process in which drug/ dravya metabolises leading to transformation of guna of panchmahabhutas. Nobody so far confirmed the taste of amalaki, guduchi etc. after their completion of metabolism. The drug activity of metabolized molecules may behave like dravyas dominant of madhura, amla and katurasas. It appears that these schools of Charaka and Sushruta have adopted different nomenclature for the process of transformation (vipaka). Charaka also explained the activity of madhuravipaka, amlavipaka and katuvipaka by snigdha and rukshagunas. Guna when potentiated gets the status of virya. Neither Charaka nor Sushruta have furnished the definition of vipaka, but Vaghbata defined rasaparinamatma in the process of vipaka. Sushruta is very explicit about vipaka paribhasha and explained that dravyaparinamana in vipaka and declined the role of rasa in vipaka.

Thus, while madhura vipaka is invariably associated with shita virya, amla and katu vipakas are, associated with ushna virya. By the same token, the end-products of kayagnipaka characterized as madhura vipaka are to be expected to exhibit guru, snigdha, mridu and shita gunas. Similarly, the end products of kayagnipaka characterized as amlavipaka, are to be expected to exhibit laghu, ruksha, tikshna and ushna gunas. Of the intermediate metabolites that are amla and katu, the latter is considered to be relatively more powerful than the former. The snigdhaguna of the former i.e. amla kind of metabolites, is obviously responsible for the difference.\(^4\)

D. Virya (Potency):

Virya (potential guna) restricts the role of rasa and vipaka while explaining the drug action. Arundutta has noted that rasa is not stable because it undergoes changes under the influence of jatharanala (agni). Such is not the case with gunas viz guru and the rest. The inter-relationship that is stated to exist among virya, guna and rasa and of them, the uniqueness of virya has been stressed by Shivadassen. He observes: shakti...
is virya. It alone is capable of performing powerful actions. These actions do not suffer from any limitation due to non attachment of viryas to rasa. Virya is intimately correlated to gunas viz; ushna, sheeta etc. Since virya inheres inseparably (samavya in dravya), it is considered to be complimentary to rasas. Prof C. Dwarakanath has interpreted Shita and Ushnavirya as potential and kinetic energies respectively and categorized twenty gunas into these two groups.

E. Prabhava

If the actions of rasa and vipaka in terms of guna are not explained, they should be categorized under prabhavajanya karma (rasaprabhava and vipakaprabhava). It is also referred as Achintyashakti (inexplicable energy). Chakrapani quotes that Danti root soaked in water loses its purgative principle. The analysis of this observation clearly identifies the principle responsible for purgative property which is water soluble and the drug administered without that may fail to initiate such activity. Once the drug action is explained basing on active molecule (Utkrishta dravyamsha) the concept of Prabhava loses its existence from the list of principles of drug action.

F. Assessment of activities of rasapanchaka of equal strength

Where rasa, virya, vipaka and prabhava of a substance are of equal power and strength (balasamyata), in such case, the vipaka may supersede actions ascribed to rasa, virya supersedes the actions of both rasa and vipaka; and prabhava may supersede the actions ascribed to virya. Arundutta explains this concept with the following examples. E.g. (a) Vata prakopa by Honey which is madhura rasa is explained by katuvipaka and resultant vataprakopa. Snigdha-guna and shitagunas of honey are modified into ruksha, laghu and ush nagunas during metabolism resulting in the outcome of diametrically opposite gunas to translate their activity on vata. So in this case vipaka acts as modifying principle for alteration of activity. (b) Action of Anupamamsa’s rasa and vipaka (madhura) are superseded by ushnavirya. In this context also ush naguna is produced by vipaka and sheetaguna gets modified and transformed into ush naguna. (c) Sura which is amla rasa, amlavipaka and ush navirya in attributes promotes the secretion of milk (galactogogue) and this activity is attributed to prabhava. In this case snigd haguna may be contributing for this activity by dominating laghu and ush nagunas. Energized in intensity and contributes to dhatu and updhatuposhana due to vipaka (a samskara) by increasing the power of snigdha -guna. One’s we explain the drug action in the light of guna and its energized forms the concept of prabhava loses its identity. The achinty asakti becomes chintyasakti. Substances in which mutually conflicting and incompatible gunas (rasa, virya, vipaka) coexist, in such case the numerically homologues among them combine to counter act the action or power of less active qualities. This concept is explained with example of milk which is sitavirya instead of increasing vata, it alleviates by domination of snigdha and guru gunas. In this context also activity of milk against vata is explained in terms of its guna. In case of Amalaki and Guduchi the activity on tridosha is explained by their rasa, virya and vipaka but the activity can be explained by their gunas only.

G) Mutual relationship of rasapanchaka

Acharya Sushruta initiated discussion on relative importance of rasa, virya and vi-
Vipaka while mentioning that vipaka is not possible without virya. Virya is not possible without rasa, rasa is not possible without dravya, and finally established that dravya is the most important component of drug action. A careful analysis of this chapter clearly indicates that Sushruta has not furnished gunapradhanyahetu. It can be well explained that rasa, virya and vipaka concepts reflect the indices or transformation of guna in the body.

He further states the origin of drug and tastes is simultaneous and interdependent, just as the origin of body and soul is simultaneous and interdependent. Even those eight guna named as virya belong to the drugs and not to the rasa because gunas themselves are without any guna, drugs only can be metabolized in the body and not the six rasas. Hence dravya should be regarded as the most important; the rest (rasa, virya, vipaka) are dependent upon the drug.

Observations made by Sushruta require elaboration to understand the relative importance of these principles. According to him “virya engenders vipaka. Sushruta conceptualized vipaka basing on guna like guru and laghu, unlike Charaka who preferred rasa oriented vipaka theory. He further opines that rasa is the factor for formation of virya. Sushruta’s view is not clear about this concept. Charaka and Sushruta have mentioned that each rasa is possessing three gunas viz. Madhura rasa possessing snigdhashita and guru gunas etc. At the same time it is declared that the gunas cannot act as substratum for another guna and included the gunas attributed to rasa are in fact gunas of dravya only. In the light of this no possible explanation can be given to substantiate that rasa acts as the source for virya. It would be quite apt to quote ‘viryam nasti vina gunat’.

Significant clarification offered by Hemadri related to rasa-guna-vipaka and virya “That evokes tastes perception is rasa and all the rest are gunas. Particular taste (vishista rasa) that occurs as the result of kayagnipaka is vipaka and produced guna at this stage is virya.” The concept of Hemadri appears to be in agreement with Acharyas of Ayurveda and religiously interpreted that rasa is undergoing paka. It is more appropriate to replace rasarupantara (transformation of rasa) with guna rupantara (transformation of guna) and rasaparinamana with dravya parinamana.

CONCLUSION

Rasa (taste) of substances reflects specific modes of panchabhautic structure of the elemental units of substances. Rasa which is devoid of any guna has to act through its prabhava. Ultimately rasajanya karma should be categorized under prabhavajanya karma only. Drugs with avyakta rasa (unmanifested taste) also include certain activities in body by their inherent gunas.

The drugs that are administered other than oral route viz. Suppositories, enema, nasal administration, external applications do act by their inherent gunas but not by rasa, a principle which is devoid of any guna. The specific configuration of mahabhuta molecules are contributing for the formation of rasa and rasa as such is not participating in the formation of molecules.

Guna represents panchbhutic mode of substances. Gunas which contribute for drug action are also referred by the term virya. These gunas can be assessed by nipata (at tongue level or site of application) or by
their concentration in the tissues/cells (adhi
tas). Assessment of gunaprabhava can be
made by nipata, adhivasa and nistakarma
and Acharyas conveniently used the terms
like rasa, vipaka and virya for identification
of guna only. Charaka advocates for admin-
istering dravyas possessing gunas (gur-
vadi) which are antagonistic to the gunas of
vitiating doshas that are involved in the pa-
thogenesis of any disease.

Kayagnipaka/vipaka helps to synthesize
the potent dravyansha (energized drug mo-
lecule), the sole factor for the activity of the
drug. So, vipaka should be considered as the
modifying factor of drug action (pharmaco-
kinetic principle) and need not be given a
status of causative principle of drug action.

In the final analysis one fact emerges
that panchmahabhutas which are in abstract
form may be identified by rasas and synthe-
sis of their active gunas in the body by vi-
paka. Keeping in view the role of rasa and
vipaka in the different phases of drug ac-
tivity, Acharyas might have concluded that
certain drugs act by Rasa; some by gunas;
some by vipaka; some by virya and some by
prabhava. But the concepts namely shadup-
krama, rasa and vipaka are well discussed in
terms of guna only and it may be concluded
that guna (virya-a synonym) is the only
principle which helps to explain the drug
activity in a most rational way and it is to be
assessed objectively through dravyakarma
(drug action). It appears to be quite apt to
say “Ena Kurvanti Tat Gunam” The word
guna, in this context refers to sabdadi and
gurvadi gunas only.

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