

## AUSADHA MATRA, ANUPAN AND AUSADHA SEVAN KALA

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वक्रतुण्ड महाकाय सूर्यकोटि समप्रभ।

निर्विघ्नं कुरु मे देव सर्वकार्येषु सर्वदा॥

श्रियं स दद्याद्भवतां पुरारिर्यङ्गतेजः प्रसरे भवानी ।

विराजते निर्मलचन्द्रिकायां महौषधीव ज्वलिता हिमाद्रौ ।

**Ausadha matra (Dose)**

Therapeutical propriety depends upon the dose (of the therapy) and time (of administration). Success of treatment depends upon the (observance of this) propriety. A physician, proficient in the principles of propriety is always superior to those who are acquainted with the dose of drugs only.

While administration of medicines matra has to be decided by observing the following aspects.

Proper dose is very important to achieve the desired result because if the dose is too large it may cause harmful side effects, and if it is too small it would not be effective. So the dose may be regulated that, the drug may produce the desired effects but may not harm the tissues. It should be decided according to the condition of disease and the patient.

It is not possible to prescribe a fixed dose of medicines (Uniformly for all patients). Dosage of medicines varies depending upon the following factors:

\***Kala** or time including the season when the drug is administered.

\***Agni** or the power of digestion of the patient.

\***Vayas** or the age of the patient.

\***Bala** or the strength of the patient.

\***Prakriti** or the physical constitution of the patient.

\***Dosa** or the nature of the dosa involved in the causation of the disease.

\***Desa** or the nature of the desa involved in the habitation of the patient.

A suitable dose of a medicine is to be fixed by the physician.

Keeping the above points are as bellow:

### **Small dose**

The physician, acquainted with tradition, should administer mrdu (less potent) medicines in smaller doses to the following categories of patients:

\*Those who are emaciated.

\*Those who have less power of digestion.

\*Those who despise (do not like taking) medicines.

\*Young children.

\*Pregnant women.

\*Old people.

### **Large dose**

To strong persons having more of aggravated dosas, the physician should administer strong medicines in a large dose.

Sarangadhar has suggested dosages according to age and preparations. According to him for one month old age child the dose should be one rati (125 mg) which is to be given in the form of confection with milk, honey, sugar and ghee. The dose is to be increased at the rate of one Ratti per month up to one year. Thereafter, the increase should be maintained up to the age of seventy, then decrease gradually in regressive manner, this is for powders as well as pastes but in the cases of decoction it should be four times.

### **According to preparation the dose has been suggested as follows**

- |            |           |
|------------|-----------|
| 1. Swarasa | – ½ pala  |
| 2. Kalka   | – 1 karsa |
| 3. Curna   | – 1 karsa |
| 4. Kwath   | – 1 pala  |
| 5. phanta  | – 2palas  |
| 6. Ghrta   | – 1 karsa |
| 7. Taila   | – 1 karsa |

8. Hima – 1 pala
9. Awaleha – 1 pala
10. Asava – Arista – 2 Karsa
11. Gutika – 1 karsa per day
12. Rasausadhi – 1 Ratti – ½ Ratti

In kalpas of single drugs particularly for rasayan use, a specific dosage is prescribed in which at first the dose is increased in gradual progressive manner and then decreased in the same but regressive manner. The dosage of Bhallataka Rasayana has been fixed in this way.

The dose of a drug cannot be fixed rigidly because there are so many factors which influence the doses e.g. age, condition of patient, severity of the disease, natural tolerance, acquired tolerance, idiosyncrasy route of administration, degree of absorption and rate of elimination.

### Doses proportionate to age

Calculation of child dose: The dose for a child from adult dose can be calculated by any one of the following formulas:

Youngs rule:  $\frac{\text{Age in years}}{\text{Age in years} + 12}$

If the adult dose is 60 mg and the age of the child is 4 years.

The dose for the child will be  $= \frac{4}{4+12} = \frac{4}{16} = \frac{1}{4} \times 60 = 15 \text{ mg}$ .

Dillings Rule:  $\frac{\text{Age in years}}{20}$

e.g. If the adult dose is 60 mg. And the age of the child is 6 years. The dose for the child will be  $= \frac{6}{20} = \frac{3}{10} \times 60 = 18 \text{ mg}$

Because of quicker and easy calculation Dillings rule is considered better.

### Doses proportionate to surface area

The calculation of child dose according to surface area is more appropriate rather than the methods based on age. This method is more complicated than the methods based on age but tables have been provided by which dose for a child can be calculated. This method is based on the following formula:

$\frac{\text{Surface area of child} \times 100}{\text{Surface area of adult}}$

Age	Percentage of adult dose
One month	10
2 month	15
4 month	20
1 year	25

3 years	35
5 years	40
10 years	60
12 years	75
16 years	90

### Anupan

यथा तैलं जले क्षिप्तं क्षणेनैव प्रसर्पति । अनुपानं बलादङ्गे तथा सर्पति भेषजम् ।।  
(च. सू. म. ६.५)  
अनुपानं हितं युक्तं तर्पयत्याशु मानवम् । सुखं पचति चाहारमायेषु च बलाय च ।।  
(च. सू. २७.३२६)

The word meaning Anupana is that a drink taken with or after medicine intake and also it is considered as "a fluid vehicle for medicine".

Anupan is a very important factor which helps in absorption, assimilation as well as efficacy of the drug. It should be decided according to the constitution of the patient as well as condition of dosa. In vataja conditions singdha - usna; in pittaja conditions Madhura- sita and in kaphaja, ruksa - usna anupana is recommended. The main anupanas are cold and warm water, honey, ghee, butter, sugar, jaggery, milk etc. The pharmaceutical preparations like swarasa, phanta, kwatha, hima, arka etc are also used as anupana. One drugs particularly rasausadhi may be useful in fever (jwara) when given with Ardraka swarasa (jinger swarasa) and in internal hemorrhages (Raktapitta) with vasa swarasa.

Usually anupana can be selected on the basis of drug, patient, disease likewise.

1. According to drug – Such as warm water after ghrta.
2. According to patient – Such as alcoholic preparations for debilitated and honey water for obese.
3. According to disease – Such as milk in Raktapitta, Ardraka in jwara.

If we are administering anupana along with curna, avaleha, gutica, kalka, anupana dose should be three, two and one pala respectively for diseases of vata, pitta and kapha. Anupana makes the medicine to spread all over the body rapidly.

### Sahapana

Sahapana means, the liquid form which is taken with main drug and which can facilitates easy disintegration, easy absorption and uniform distribution of medicine all over the body hence

that liquid form is called sahapana.

### **Anupana karma (Action)**

\*Tarpayati (Bring about refreshment).

\*Prenayati (Pleasure).

\*Urjayati (Energy).

\*Brumhayati (Nourishment).

\*Paryapti (Spreads).

\*Bhukta mavasadayatui (It pushes food downward).

\*Annasanghatam (Break downs food into small particles).

\*Mardhavam (Softening).

\*Kledayati.

\*Jarayati (Digesting).

\*Sukha parinamitamasuvyayitam (Proper assimilation and instant diffusion of the food).

### **Usnodaka anupana**

Usnodaka anupana is hot/warm water as after drink is ideal for oleation therapy (Drinking fats), except in oils of bhallataka and tuvaraka. Some others opine, that yusa (Soup of pulses) and amla kanjika (Sour gruel) are needed after drinking fats.

Cold water – As after drink is ideal always after consuming honey and food prepared from flour of grains, so also after consuming curd, payasa (Milk pudding), wine and for those suffering from poisons.

Paya (Milk) and mamsa rasa (Meat soup) as after drink are ideal for those who partake food prepared from rice, green gram etc. pulses, also for those who are fatigued by war, long distance walk, exposure to sun, heat exhaustion, effect of poison and wine (Alcoholism); Dhanyamala (Fermented gruel of corns) or whey of cruds is the best after drink for foods of masa etc; madya (Wine) is best for persons habituated to wine and all kinds of meats; for those who are not accustomed to wine, water or juice of sour fruits are best.

Ksira (Milk) is like nector for persons exhausted from sunlight, long walk, speaking and woman (Sexual activity).

Sura is ideal for the emaciated and madhudhaka (Honey water) for the corpulent (Obese).

For healthy persons, different kinds of liquids consumed in the middle of the meal is said to

be ideal that which is unctuous and warm is suitable in vata aggravation, that which is dry is suitable in kapha aggravation, that which is sweet and cold is best in pitta aggravation; for those suffering from bleeding diseases (of diseases caused by blood and pitta), milk and sugarcane juice as after drinks are beneficial; for those suffering from poison, asava (Fermented infusion) prepared from arka, selu and sirisa is beneficial.

Badaramula (Fermented liquid prepared from badara fruit) is the ideal after drink for foods prepared from articles of the earlier groups (Suka, sami and kudhanya).

Dhanamla (Fermented liquid prepared from corns) is best for foods from pulses.

Pippalyasava is best for food prepared from meat of swift running animals and those living in marshy regions.

Toya (Water) is best suited for all kinds of foods. Rain water is the best among all after drinks or any other kind of water which is habituated to any person, that water itself is beneficial to him; hot water is ideal in aggravation of vata and kapha and cold water in aggravation of pitta and rakta.

सर्वेषामनुपानानां माहेन्द्रं तोयमुत्तमम् । सात्त्यं यस्य तु यत्तोयं तत् तस्मै हितमुच्यते ॥  
उष्णं वाते कफे तोयं पित्ते रक्ते च शीतलम् ॥ (सु.सू. ४६/४३३-४३४)

### Anupana guna

दोषवद् गुरु वा भुक्तमतिमात्रमथापि वा । यथोक्तेनानुपानेन सुखमन्नं प्रजीर्यति ॥  
रोचनं बृंहणं वृष्यं दोषसङ्घातभेदनम् । तर्पणं मार्दवकरं श्रमक्लमहरं सुखम् ॥  
दीपनं दोषशमनं पिपासाच्छेदनं परम् । बल्यं वर्णकरं सम्यगनुपानं सदोच्यते ॥  
तदादौ कशयित्पीतं स्थापयेन्मध्यसेवितम् । पश्चात्पीतं बृंहयति तस्माद्वीक्ष्य प्रयोजयेत् ॥

Foods which cause aggravation of the dosas, which are hard for digestion and foods consumed in more quantity get digested easily by the after drinks mentioned so far. It helps taste, stoutness the body, is aphrodisiac, splits the lumps of the dosas is nourishing, softens (the tissues), relieves fatigue and exhaustion, confers happiness, kindles digestion, mitigates the dosa, best for relieving thirst, bestows strength and colour; these are the effect/benefits of suitable after drinks, used appropriately.

स्थिरतां गतमक्लिन्नमन्नमद्रवपायिनाम् । भवत्याबाधजननमनुपानमतः पिबेत् ॥  
 न पिवेच्छ्वासकासात्तौ रोगे चाप्यूर्ध्वजत्रुगे । क्षतोरस्कः प्रसेकी च यस्य चोपहतः स्वरः ॥  
 पीत्वाऽध्वभाष्याध्ययनगोयस्वप्नान्न शीलयेत् । प्रदूष्यामाशयं तद्धि तस्य कण्ठोरसि स्थितम् ॥  
 स्यन्दाग्निसादच्छर्द्यादीनामायाज्जनयेद्बहून् ॥ (सु.सू. ४६/४३८)

If take the anupana at the beginning of the meal produces emaciation of the body, if take in the middle it maintains the body and if consumed after the meal it produces stoutness, hence it should be used considering the desirability (of either leanness or stoutness).

When a person does not consume anupana, the ingested food stays for a long time in the stomach without getting moistened and gives rise to many diseases. The person suffering from dyspnoea, cough, diseases of parts above the shoulders, tear in the chest (lungs), excess of salivation and loss of voice should not consume anupana. After consuming anupana, the person should not indulge in long walk, speaking, study, singing or sleeping; these vitiate the dosas residing in the stomach, throat and chest and give rise to nasal catarrh, weakness of digestive power, vomiting and many other diseases. Water boiled and cooled is best suited for persons suffering from burning sensation, diarrhoea, diseases of pitta and rakta origin, fainting, alcoholism, poison, thirst, vomiting giddiness.

दाहातीसारपित्तासृग्मूर्च्छामिद्विषात्तिषु ॥  
 श्रुतशीतं जलं शस्तं तृष्णाच्छर्दिभ्रमेषु च । अरोचके प्रतिश्याये प्रसेके श्वयथौ क्षये ॥  
 मन्देऽग्नावदरे कुष्ठे ज्वरे नेत्रामये तथा । व्रणे च मधुमेहे च पानीयं मन्दमाचरेत् ॥  
 (सु.सू. ४५/४४-४६)

Drinking of water should be moderate in disease such as loss of taste, common cold, more of salivation, dropsy, consumption, dyspnoea, enlargement of the abdomen, leprosy (and some other skin diseases), fever, eye diseases, ulcers and diabetes mellitus.

### Anupana dravyas

Susruta mentioned that sitajala, asava, Dravya Pradhana Madhya, yusa, phalamla, dhanyamla, milk, mansa rasa (Essence of meat) and for whom the anupana which is useful and suitable, that can be administered to them in prescribed dose. Vyadhi (Disease), kala (Time), Dravya (Drug), type of the food taken, all these should be taken into consideration and by using intelligence of physician anupana has to be selected and administered.



The best anupana is Mahendra jala or antariksajala (Water collected from rain directly and preserved in clean vessel). Susruta mentioned specific anupanas for specific disease conditions. Water may be taken in absence of the proper anupana as after-drunk in all cases and that kind of water should be consumed the person habituated from his birth. Hot water is good in diseases which have their origin in the vitiated blood, or in the deranged pitta.

### **Time of anupana administration**

The anupana which is taken before meals causes emaciation to body. If anupana is taken in the middle of the food it maintains physiological condition of the body. The anupana which is taken after food, nourishes and strengthens body.

### **Restrictions has to be followed after intake of anupana**

Longwalk, a lengthy conversation, singing, sleeping and reading. In Ayurvedic system water and honey are used as common anupana.

### **Ausadha sevanakala (Time of medicine administration)**

The following times have been prescribed for administration of drugs:

1. Abhakta (On Empty Stomach)- The drug exerts strongest action if given on empty stomach hence this should be prescribed for strong persons and in disorders due to aggravation of kapha.
2. Pragbhakta (Before Meal)- This is useful in diseases due to apana vayu and also for toning up the intestinal muscles.
3. Madhyabhakta (During Meal)- This is prescribed in diseases due to samana vayu and gastrointestinal disturbances particularly paittika ones.
4. Adhobhakta (After Meals)- After lunch the drug should be given in diseases of Vyana Vayu and after dinner in those of Udana Vayu. This strengthens the upper part of the body, is used in its disorders particularly kaphaja ones and also for Brimhana.
5. Samabhakta (Mixed with Food)- This is prescribed in children, delicate persons and those having aversion to medicines, anorexia and in diseases spread all over the body.
6. Antarabhakta (Between Meals in Day)- The drug is taken first afternoon after the midday meal is digested and sufficiently before the evening meal. This is used in persons having good digestion and in disorders due to Vyana Vayu. The same is applicable in relation to meal in night.
7. Samudga (Before as well as After Meals)- Avaleha, Curna etc are used along with light



meal in hiccough, trembling, convulsions, disorders of thigh, upper and lower parts of the body.

8. Muhur muhur (Off and On)- It does not matter whether the patient has taken meal or is empty stomach, the drug is to be given off and on as in cases of dyspnoea, cough, hiccough, thirst, vomiting and poisoning.
9. Sagra (With First Morsel)- The medicine is mixed with the first morsel of meal and is taken as much. Curna, Vatika, Leha etc. are used in this way for the purpose of dipana and vajikarana. Hingwastaka curna is well known example of this. This is useful in disorders of Prana vayu.
10. Grasantara (Between Morsels)- This is useful in disorders of Prana Vayu particularly in heart disease.
11. NISA (In the Night at Bed-Time)- This is useful in disease of head, mouth, eye, ear, nose and throat. Vamana and Dhuma are used in this way.

Sarangadhara has made it concise in five including all the subdivisions in the same.

ज्ञेयः पञ्चविधःकाले भैषज्यग्रहणे नृणाम् । किञ्चित् सूर्योदये जाते, तथा दिवसभाजने ॥  
सायन्तने भोजने च, मुहुश्चापि, तथा निशि ॥ (शा. सं. प्र. २.३)

Medicines are generally administered in the morning specially so the kasayas (Decoctions). Sunrise (Morning), the time of midday meal, night meal, frequent intervals and bed-time: these are the five suitable times for the administration of medicines.

## CONCLUSION

When we treat the patient, our main focus should be on matra, anupana and ausadha sevanakala. It is not possible to prescribe a fixed dose of medicines uniform for all patients. Dosage of medicines varies depending upon the kala, agni, vayas, bala, prakriti, dosa and desha.

Matra should be decided according to the condition of disease and the patient's strength. Anupana is varies in different diseases. We are taking different Anupanas according to different diseases. Morning, the time of midday, night meal, frequent intervals and bed-time: these are the five suitable times for the administration of medicines. So this is most important in Ayurvedic science.