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OVERVIEW ON AYURVEDA PRAKASHA - A TEXT OF INDIAN ALCHEMY

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Abstract: Ayurveda Prakasha is one of the important ancient texts on ancient Indian Alchemy written by Shrimad Madhava Upadhyaya in circa 16th-17th century AD. Three commentaries are available on this text. It is a summarized book along with some of its own important contributions. Subject matter of the text contains total 1693 verses which are divided into 6 chapters. There is elaborate description of Dhatushuddhi (conversion of base metals into noble metals) and Dehavada (therapeutic usage of metals and minerals) of Mercury (Parada), processing of mercury, its use in along with description and processing, therapeutic aspects of Minerals, Metals and poisonous herbs and their conversion into therapeutically useful forms.

Keywords: Ayurveda Prakasha, Indian Alchemy, Jarana, Parada, Rasa Shastra

Introduction

Rasashastra is a branch of Ayurveda which holds the importance in Ayurvedic therapeutics. Ayurveda Prakasha ((AyP) is an important text in this branch and there is dearth of comprehensive review on this text. Hence an attempt has been made to provide a brief but all encompassing review. Texts written in earlier era of ancient Indian life sciences including ancient Indian system of medicines, Ayurveda, Rasa Vidya etc, incorporated mineral origin drugs, their processed bi products, medicinal formulations mainly for therapeutic purpose. They were extensively studied, evaluated, practiced for Dhatushuddhi around 10th century A.D.^[1] Later era showed increased trend of use of drugs of mineral origin in therapeutics and was extensively used in Ayurvedic treatment. This caused to touch height of excellence of Ayurvedic treatment during 13-14th century AD (*Rasendra Sara Samgraha*, 1994).

The Indian alchemy had two characteristic streams; gold making and elixir synthesis. The two faces of the alchemical practice, the metallurgical and the physico-religious, were

superimposed to get a single picture wherein mercury and its elixirs were used in the so called transmutation of the base metals into noble ones, as well as for internal administration for purifying the body, rejuvenating it and taking it to an imperishable and immortal state.

Numerous alchemical texts were written in different era on Indian Alchemy. Some texts are such that the alchemical ideas form only a part of them, while some other texts are wholly devoted to alchemy. Many books were written in different era on Indian Alchemy. "Ayurveda Prakasha" is one of the important texts among them.

Prediction of period

The book was written in the era when Rasa Shastra had already experienced peak of excellence of its golden era in terms of Dhatushuddhi as well as Dehavada and when still Dehavada was practiced widely. Subject matter of the text deals with mainly of Rasashastra but this is the first text in which, the title instead of 'Rasa' prefix it starts with Ayurveda'. It indicates that this text is written in the time when Rasashastra completely became a part of Ayurveda and

1. Ph.D. Scholar, 2. Ph.D. Scholar 3. Asst Professor, 4. Asst Professor, 5. Associate Professor, 6. Professor & Head,

Rasashastra descriptions are found in main stream Ayurveda literature. The name of the script suffixed as *Prakasha* indicates that this book belongs to the period of *Bhava Prakasha*, *Arka Prakasha* text. Description of *Firanga* which is included as separate chapter under disease treatment in texts *Bhava Prakasha*, therefore their period may be considered as same (*Ayurveda Prakasha*, 2007).

The author compiled the subject matter from various classical texts like *Rasa Ratna samucchaya*, *Rasa Paddhati*, *Rasa Ratnakara*, *Rasa Prakasha Sudhakara*, *Rasa Hridaya Tantra*, *Rasa Chintamani*, *Sharangdhara Samhita*, *Rasaraja Lakshmi*, *Harita Samhita*, *Bhava Prakasha*, *Raja Nighantu*, *Rasa Manjiri*, *Laghuyoga Tarangini*, *Yoga Tarangini*, *Bhalukitantra*, *Vishnu purana*, some un named texts and given opinion of Acharya Nagarjuna, Shri Narayana, Garut, Gauri, Devendra giri and Guru sampradaya. According to some scholars (**Bhanuprakash, 1997; Ayurvediya Rasashastra, 2005; Ayurveda ka Vaigyanika Itihas, 2009**)

Ayurveda Prakasha belongs to 17th century. Hence its period is considered as circa 16-17th century AD. There is no mentioning of *Ayurveda Prakasha* by P.C.Roy in his text History of Hindu Chemistry (**Virupaksha Gupta K.L. et al., 2011**)

Author details and commentaries

Ayurveda Prakasha was written by Shrimad Acharya Madhava Upadhyaya of Sarasvata kula, a resident of Saurashtra. The author of this work is different from the author of *Madhava Nidana* and other 21 Authors with similar name. Another text “*Pakavali*” written by *Madhavopadhyaya* is also available. Original text was published by Acharya Yadavji Trikamji through *Ayurvediya Granthamala*. Later on this was edited with Hindi commentary by Vaidya Somadeva Sharma, the *Arthavidyotini* and *Artha Prakashini* Sanskrit & Hindi commentaries respectively by Shri Gularaja Sharma Mishra

through *Chaukhambha Orientalia* publications Varanasi (*Ayurveda Prakasha*, 2007).

The pattern of classification of Mineral drugs (*Rasavarga dravya*) is found unique in nature.

Subject matter

Subject matter of the text is divided into 6 chapters which contain total 1693 verses.

1st Chapter : Suta Sadhanadhyaya

This chapter is dedicated for *Parada* (Mercury). *Dosha*, *samskara*, drugs (individual and group with description), used in *Parada samskara*, formulations required for (*Vida*, *Satva*, *Bija grasa*, *Druti* etc), *Parada bandha*, *murcchana*, *Bhasma* etc., methods of consumption of Mercury and its formulations, *Anupana*, *Pathya-Apathya* (wholesome and unwholesome diet), *Rasajirna lakshana* and its treatment, *Rasajirna Lakshana* (in *Dehavada* and in *Dhatuvada*), *Hemavati vidya* (fabrication of artificial gold from various minerals and Mercury) are mentioned.

Two classifications (3 and 5 types in each) of *sagandha murcchna* and 5 types of *Dhatu Pishti* are mentioned. Features of acceptable Mercury, *Bandhana*, *mruta suta* and short, easy methods of *Parada samskara* are mentioned. Property of *Dantagre Kachakachabhava* (lack of metallic sensation in the teeth) for properly prepared *mruta suta* is explained. Different types of *Kupi*, method of plastering of *Kupi*, *Yantra* (Assemblies). *Sahasra vedhi Parada*, description, types, examples and uses of *vida*, features of *Tapta khalva*, uses of various types of *Abhraka*, features of *Garbha druti* are mentioned. Different types of *khota*, various effects of sequential *Grasana* on *Parada* and 26 types of *bandha* are quoted by Author. Author explains *Samukha Jarana*, 2 Types of *Abhraka Jarana*-*Patrabhraka Jarana*, and *Abhraka Satva Jarana*, features of *Garbha Druti* and uses of various types of *Abhraka* in this chapter.

Distinctive features

Author has given much importance on *Jarana* and *Bija Grasa* in *Parada* for *Dhatuvada* as well as *Dehavada*, *Kshetrikarana* (pre-procedure of administration), *Gandhaka Jarana*, and sequence of *Jarana*. Author quotes 2 sequences of *Jarana*- for *Dhatuvada*- Author focused on compulsion of *Gandhaka Jarana* and *Abhraka Jarana*. Four different types of *Yantra* i.e. *Valuka*, *Kacchapa*, *Kurma*, *Bhudhara Yantra* etc are mentioned for *Jarana*. the author prohibits the usage of mercury without processing with sulphur (*Parada Gandhaka Jarana*). He permitted to use of mercury after eight *samskara* and *murcchana* with *Gandhaka* till disease cure (Short term use) only. For disease treatment Author advised to use *Shodhit*, *murcchit*, *Gandhajirna*, *Svarnadi Dhatujirna* and *mruta* or *Amruta Parada* (with double the quantity of *Gandhaka*). For *Rasayana* after *Jarana* with *Gandhaka* it is advocated to subject *Parada* for *Jarana* along with *Satva* of *Svarna*, *Abhraka* etc *Dhatu* and then subject it to *Marana*. *Nirgandha Murcchana* is said to cause complications.

Duration of *mercury* administration is stated as 40 days, 6, 12, 36 months and for whole life in the form of intermittent 40 days cycle. Suitable quantity of mercury for processing is explained. three methods of *Jarana* is told. It is advised to take *Gandhaka* rather than *Kajjali* for *Jarana*. 3 types of *Antardhuma* method of *Gandhaka Jarana* are mentioned which are considered as *Rasa Sindura*. Author considered *Jarana* of *Parada* with *Gandhaka* (*Antardhuma vipachana*) as mandatory before using it in any formulation. *Murcchana* and *Jarana* are said as synonymous. *Ariloha Marana* for *Grasa* is accepted in *Lohavada*. He accepted failure to prepare *Druti* and difficulty in processes of *Sarana*, *kramana*, and *Jarana* for preparation of *kotivedhi Parada*. *Swedana* in *dolayantra* is mentioned as a method of *Jarana*. Author quoted 2 types of *Parada Bhasma*-

- (1) *Urdhvaga- sindura, karpura Rasa*
- (2) *Tala Bhasma* -6 different methods.

He opined that for *Kshetrikarana snehana*, *swedna*, *virechna* and *kitapatana* should be done in sequence and *Rasa kalpa* should be administered after consumption of *Abhraka Satva pradhana yoga* for up to 6 months or 1 year and after ensuring disease free for above stated period. It is advised to consume *Abhraka Bhasma* for 1 month before *kshetrikarana*. Consumption of *Hema Jirna Parada Bhasma* in the dose of 1, 2, 3, 4 *pala* is said to increase the longevity of life respectively. He had focused on *Yogavahi* property of *Parada*. He mentioned *Bida gutika* for *Grasa* and *Jarana*, *Shambhavi Mudra* for *Rasa Marana* and explained different benefits of formulations of *Parada* prepared with respective proportions of *Gandhaka* for *parad Jarana*. *Agnisthayeeekarana of Parada* is quoted as necessary for *jarana* of *Svarna* and *Rajata*.

He further opines that *Antardhuma vipachit Parada* if processed for *Jarana*, it becomes *Sahastravedhi* and capable for *Vedhana* of *Rajata*, *Tamra* and *Abhraka*. It is mentioned that after *Murcchana samskara*, *Parada* becomes devoid of 7 *doshas*. He has given optional methods of processing and mentioned substitute drugs for processing of mercury in their unavailability. Author has mentioned to wash *Parada* with *Kanji* after each *Samskara*.

It is mentioned that *Bandhana process* increases threshold of *Parada* for heat. *Grasana* of *Rasavarga dravya* in *Parada* is included under *Mardana samskara*. Explanation of *Srushtyambuja* is given and *Laghuputa* is also mentioned for *Bodhana samskara*. While mentioning features of acceptable *Parada*, it is permitted to use *Dhumra* (Black along with Red) and *paripandura varni* (Yellowish white) *Parada* rather than *chitra* or *karbura varni* (different colours). *Abhraka Satva Jarana* is quoted as best for *pakshakartana* of *Parada*.

It is emphasized to avoid *Kachakitta* for *Dhatuvada*. It is mentioned that *Druti* of *Bija* in *Parada* can be achieved easily with *Amladrava*, *tapyasatva* and *vyomasatva*.

Quantity for *Grasa*, different effects of sequential administration of *Grasa* on *Parada*, importance of *Abhraka*, *Loha*, *Tamra Jarana* for *Dhatuvada*, different effects after *Jarana* of various *Rasavarga dravya*, importance of *Tikshna Loha Jarana* for preparation of *Swarna*, Four types of *Swarna Grasa* as per quantity of *grasa* are mentioned for preparation of *Shatavedhi Parada* and it is stated as an essential stage before *Sarana samskara*. It is mentioned that *Chatuha shashti Jirna Parada* with *Swarna* becomes *Dhumavedhi*, *Sparshavedhi*, *Avlokavedhi* and *Shabdavedhi*. *samajirna-Shatavedhi*, *dwiguna jirna- Sahastravedhi*, *Ayutvedhi*, *Lakshavedhi* and *Kotivedhi* respectively. *Nyunajirna parada* is used for *patralepana (Dhatuvada)*. Author quoted different types of *khota* as per different classics, *Bahya Druti*, *Sarana* and reference of *Jarana* for seven times for preparation of *kotivedhi Parada*. Simultaneously the author accepted difficulty in preparation of *Sarana* and *Jarana* too.

Different methods of preparation of *Jarana*, *Vedhana*, *Ranjan* through *Khota Bandha*, definition of *Bandha*, and 26 types of *bandha* are mentioned. *Kshetrikarana* and complications of consumption of *Parada* (failure of *deha kramana*) without preceding *Kshetrikarana* are mentioned. After *Kshetrikarana* it is mentioned to consume *Parada* which is *Jarita* with 1/4th part of *Abhraka Satva*, 1/2 part of *kanta Loha Bhasma* and equal parts of *Tikshna Loha Bhasma* and then use *Arota (shuddha Parada)*. For *Kshetrikarana* it is stated to follow *snehana* (3 days), *Swedana*, *virechana* and *kitapatana* in sequence or to undergo at least *virechana*. *Agnisthayee Parada* is mentioned as capable for converting lower metals into *Swarna* and *Rajata*.

Mentioned method of consumption of *Parada kalpa*, doses of *Parada* as 1 *valla* (2 or 3 *ratti*), animal dose- 12 *masha* and doses of *Jirna Parada* as per other texts as 1 *gunja* to 1 *masha*, and dose of *Hema jirna*, *Rajata Jirna* and *Tamra Jirna Parada* is quoted as 1, 2 and

3 *gunja* respectively. The text describes benefits of consumption of *Hema*, *Rajataa*, *Shulva*, *Tikshna Jarit Parada* in increasing doses for longevity. Features of *Rasa Jirna*, *Rasa Ajirna* and its treatment are mentioned. It is mentioned that *Parada* consumed by wrapping in betel leaf doesn't causes *Vidabandha* which is treated with *Kana* and *Amruta*.

ChurnaRatna churna yoga by *Putapaka* method is distinct entity mentioned in the text. *Chumbaka Loha* is said to be useful for *Parada karma*.

2nd Chapter : *Gandhakadi Uparasa sadhanadhyaya*

Detailed description of 20 *Uparasa*, *mishraka gana*, *Amla varga*, *Dravana varga*, *sneha varga*, *panchamrta*, *yantra*, *Bhavana*, *Putra*, *Bhasma Pariksha* are given. Six drugs under *Sadharana Rasa*, 9 under *Dhatu* and 7 under *Upadhatu* explained in *Rasa Dravya* classification. Fourteen formulations of sulphur are mentioned. Uses of *Shukti* as per its type, definition of *Dhatu*, description, *vida dravya* explained in detail.

Distinctive features

Highest numbers of drugs among then available texts i.e. 20 are included under *Uparasa*. *Chumbaka* is mentioned under *Uparasa* by this author only. *Gandhaka* is considered as *Satvasvarupa* and *Sutendra viryaprada*, *Sutajita*. *Kurmaputa vidhi* is mentioned for *Gandhaka Shodhana* (with *ghrita*, *kanji* as liquids for *Dhalana* apart from commonly used *Godugdha*). *Bhrungaraja shodhita Gandhaka* is said to be comparatively much safer. *Visha hara* property and *Gandhanashana vidhi* of *Gandhaka* are mentioned. Duration of consumption *Gandhaka* is mentioned as from 1 month - 6 month. *Marana* of *Hingula* is mentioned.

Total dose of *Abhraka* is mentioned as 100 *Pala*. *Marana* of *Abhraka* with only one *Putra* and use of only *Tankana* for *marana*, making *Abhraka* devoid of lustre by *Dhalana* and *pesana* processes, criteria for selection of

Abhraka i.e. from depth of 1 *purusha* below the earth surface, *satvapradha* character of *Abhraka* are contributions of the text. *susukshma* is specifically mentioned as examination criteria for *Abharaka Bhasma*. *Haratala* is mentioned as *Rasayana*, *Stripushpaharaka* and *Visha hara*. *Nirdhuma pariksha* for *Haratala Bhasma* is mentioned first time.

It is mentioned to consume *Haratala* in repeated cyclical manner. Author has mentioned *Godanti* type of *haratala* and order of bitterness of types of *Haratala* as *Pinda>tabaki>Godanti>bugadadi* *Haratala* which are different from common trend in other texts. He had further quoted reference of *Haratala Bhasma* prepared from 441 *Bhavana* with different drugs as per *Siddha* tradition which has broad spectrum of applicability.

“*Surama*” is named as synonym of *Srotonjana*. Common method of *Shodhana* and *Satvapadana* of *Anjana* are quoted. Four types of *Bodarshrungam* (*Murdarshringi*) with its source as *Gurjar mandala*, is given and considered it as *Satva* of *Sisaka*. Four different types of *Chumbaka* or *Kanta Loha* are mentioned. *Vahnijara* is termed as variety of *Kshara* and said to be useful for *Parada Jarana*. Common dose of various *Dhatu*, method of *Somamruta* (*Loha Bhasma*) is mentioned.

Author elaborated controversy regarding *Kankushtha* and mentioned it as plant origin from Himachal Pradesh and mentioned its two types as *Nalika* and *Renuka*. Author quoted reference for importance of *Agnisthayee Rasaka* in *Dehavada* and *Dhatuvada*. Oil is used for the *Swedana* for *Manahshila Shodhana*.

3rd Chapter- *Suvarnadi Dhatu Upadhatunam utpatti nama lakshana Guna Shodhana Marana pratipadanatmakam Adhyaya*

Dhatu Upadhatu utpatti, nama, lakshana, guna, Shodhana, Marana is mentioned in this chapter.

Distinctive features

Type of *Svarna* derived by contact with *Divyaaushadhi*, *Mani* etc is found to be quoted. It is mentioned that with the help of *Gandhaka* (etc *Uparasa*) usually *Marana* of all *Dhatu* (*Upadhatu*) can be done. Three type of *Rajata* are quoted. Mentioned different colour of *Tamra Bhasma* and accepted exception to the rule of *nischandratva* in case of *Parada marit Tamra Bhasma*. *Somamrut Loha Bhasma* and *suryatapi Loha Bhasma* (Without direct incineration) are quoted. Author mentioned doses of various *Loha* (*Dhatu, Upadhatu*) along with common dose of *Lauha*. General rules for *Putana* (type of *Putra*), methods of *Marana* of different *Dhatu Upadhatu* *varga dravya* are stated together and common process of *Dhatu marana* is mentioned. Author has mentioned *seven Loha dosha* and collected various common methods of *Loha Shodhana*. Common sequence of *Nirvapana* in liquids for *Shodhana* is noted to be changed. Common method of *nirutthikarana* of *Loha* is mentioned.

4th chapter- *Upadhatu Nirupanadhyayah*

Detail description of *Svarnamakshika*, *Simalamakshika*, *Tuttha*, *Bhunaga*, *Kamsya*, *Pittala*, *Bharta loha* (*pancha Loha*), *Shilajita* and *Chapala* is given.

Distinctive features

Sisaka and *Nagagarbha* are termed by author as synonyms of *Sindura*. Characteristics of acceptable form of *sindura* and description of *Bharta* (*pancha Loha*) are mentioned. Different variety of *Shilajatu* produced naturally in *Kshara bhumi* are mentioned, it is included under *Upadhatu* and said to have characteristics of *Rasa, Uparasa, Ratna* and *Loha*. It is advocated to take *Shilajatu* having *Lohaja Lakshana* (Characteristics like *Loha/Dhatu*). Method of *Satvapadana* and *Marana* of *Shilajatu* are mentioned. Author appreciates use of vessels of bronze (*Kamsya*) for meal and cooking whereas cooking of *Ghrita* in it is prohibited. Color of *svarnamakshika* is said as *Pancha varna*, it is said to use as substitute if *Swarna* and had almost

similar properties (in lesser potency) as that of *Swarna* along with other properties too due to various compositions. Variety of *Shilajatu* as *Soraka* is quoted from *Rasa Paddhati*. After *shodhana* it is advocated to do *dhupana* of *shilajatu* and it is said to be compatible with all *Anupana* in all disease conditions.

5th Chapter- *Ratnopa Ratnanam Sadhanadhyaya*

Detail description of 9 *Ratna* (precious stones) and 17 type of *Uparatna* (semi precious stones) are found. Detail descriptions of *Hiraka* (diamond) are found.

Distinctive features

New terminology in metrology i.e. *Purusha*, *kalanja* and others for weighing *Hiraka* e.g. *panasika*, *tandula*, *pinda* etc, difference in between *Mani* and *Ratna* and definition of *Ratna* is contribution of the text. Usefulness of *Mani* (*Ratna*) in *Bandhana* of *Parada* and 8 different sources of *Mukta* (pearls) are explained. Comparatively elaborative description of *Hiraka* is found only in this text. *Hiraka* is said to be *shadrasa* and *mrutyunjaya* (overcomes death). Different methods of examination of *Hiraka*, *Mukta* are found in this text only. Reference of 6 varieties of *Shukti* is contribution of the text. 5 types of *Ratna*, 8 types of *Mani*, 8 types of *pukharaja*, *saurashtrari satva* and *sasyak satva* are mentioned by author.

6th chapter-- *Vishopa Visha Lakshana Jati Guna seva pariharadhyayam*

Pharmacognostical features of various *Visha*, their Place of collection, *guna* of *Visha*, *samanya* and *vishesh Visha Shodhana vidhi*, Pharmacotherapeutic dose and contraindications, method of preparation of *Kshara* are explained.

Distinctive features

There are 18 types of *Kanda Visha* mentioned in the text which are classified as per intensity into -*Soumya Visha* (8) and *Ugra Visha* (10), the prior one is stated as fatal after oral

administration, therapeutically useful in *Rasayanvada*, *Dhatuvada* and *Vishvada*, in diseases like- *vatarakta*, *tridosha*, *unmada*, *apsmara*, *sannipata*, *kushtha* & *moha* and the later one is stated as fatal on contact or even with inhalation and not used as medicine or for *Rasayana* treatment.

Use of *Visha* in *Dhatuvada*, *Putana* and *Marana vidhi* of *Visha* are contributions of the text. In case of overdose of *Visha* and in *Visha vega* administration of borax (*Tankana*) with plenty of ghee (*Ghruta*) is mentioned.

It is written that if *Parada* is triturated along with *upvisha* it becomes *chhinnaapaksha* (reduced motility) and becomes *mukhkara* (i.e. accepts *Grasa* of *Dhatu* very quickly) too.

Taila patana vidhi of *Visha* with similar process as that of *Satvapata* with *kaancha yantra* is contribution of the text which is said as useful in making *Parada kshutkari* and *Mahaan* by trituration along with. General antidotal formulations like- *Visha vajrapata Rasa* and *Lavanbhedi sudhanidhi Rasa* are mentioned.

Kshara in powder form is indicated by author for *Pratisarana*.

Discussion

Author cursed to the hackers of intellectual property which reflects probable efforts taken by him in verification of experimental outcomes. Author pledges and stresses that all experiments written in the script are practically done by him; the subject matter of the text himself listened from the teachers and purposefully excluded the failed, less useful, difficult experiments. Mentioned various easy methods of *Swarna Nirmana* (*Hemavati Vidya*) too which are still not famous in the society. Some references quoted from other texts on *prima facie* looks like hyperbolae which limits the above cited declaration of the author.

Although the book is in summarized form still there is more specificity in the processes and other subject matter and gathered text matter which is important for aspect of experimentation

and practical utility from other texts e.g. quoted *Suddha Suta Lakshana* as reduction to 1/8th after *samskara*, acquisition of semisolid nature of *Parada* after *Swedana Samskara*, *Dvandvamelaka Aushadhi*, physical effects of sequential increment in quantity of *Grasa* in *Parada*, use of *Kashaya* of drugs mentioned for *mardana samskara* of *parada* for *Kanchuka harana* and *Shodhana* of *Shilajatu* with water, detailed description of process of *Shilajatu Shodhana* etc.

Author had given details of some Alchemical processes and explored hidden rules in ancient Indian Alchemy, pharmaceuticals, pharmacokinetics, toxicology and pharmacotherapeutics. It contains important subject matter of pharmaceutical technology engineering, instrumentation, mineralogy, metallurgy useful in Alchemy and therapeutics.

At the start of each chapter the reason for its order is quoted. Author had quoted various *Rasavarga* by their popular names in society.

Parada Jarana and *Samskara* are explained in detail with practically applicable easy and optional methods e.g. *Swedana*, *Mardana* along with *Utthapana* are given as optional methods for *Parada Ashta Samskara*. Many references of *Druti*, *Satva* of individual drugs and their processing are mentioned. Criteria of classification of *Rasa varga dravya* is taken as importance of drugs for their use in *Parada karma* and procedures on *Rasavarga dravya*.

Various types of common procedures on *Rasavarga dravya* i.e. *Drutikarana* of *sarva Loha*, *Ratna*, *Satva patana*, *Shodhana* and *Marana* of *Satva* of many *Rasa varga dravya*, *Shodhana* of *Sadharana Rasa*, different method of *Dhatu Shodhana*, *Drutimelana* etc. are mentioned. Dose, duration of administration, wholesome and unwholesome diet during consumption of *Rasa kalpa*, is explained in detail.

Author had adopted easy, practically applicable methods only e.g. he suggests using *Loha churna* in place of *Patra* for processing and opines to collect it with the help of *chumbaka*. As the author accepts scarcity of *Kanta* therefore he had mentioned *Chumbaka* in *Uparasa* separately inspite of mentioning the prior one under *Dhatu varga*. Alternative methods for *Parada Shodhana* are found as *Svedana*, *Mardana*, *urdhvapatana* and *patasarana* or washing with sour gruel or *urdhvapatana* if one fails to do *Ashta samskara*, quoted *Utthapana* of *Parada* by washing with hot water too. Author had purposefully avoided *Marana* of precious *Ratna* and permitted to use their small pieces, particles generated during their shaping. Mentioned method of *Drutikarana* of *Loha*, *Svarna*, *Rajata* etc.

There are 11 different types of *Yantra* along with their subtypes explained in the text. Author had discussed and cleared some controversies in the subject and given explanations too e.g. For removal of physical impurities in *shilajatu* apply method of washing with water, then use common method of *shodhana* and for *gunotkarsha* as per indication use of *Bhavana* with *Swarasa* is advocated.

Processes in the book are well described e.g. in 1st chapter while describing *Garbha druti* for preparation of *Marita Bija*, author clearly mentioned methods of preparation of its ingredients i.e. *Naga* and *Tapyas Bhasma* whose methods of preparation are elaborated in subsequent chapters.

According to the author, those who can demonstrate the use of mercury before the disciple alone are eligible to be preceptors, the rest are frauds. This shows that *Rasavidya* was difficult to learn. No work other than this deals with the process of making gold in to foils. Alchemy slowly lost its ground; there was increased tendency to keep it confidential, the therapeutic aspect alone survived even that was

confined to few *Guru shishya parampara* in the country.

Present Scenario

Today many ancient, recent scripts, compilation scripts and academic text books on Indian alchemy written in different era modified as per recent advances, need and availability of drugs are available but very little part of it is in practice since more than 3 centuries. Every text has some speciality and the same process is explained with various methods in different texts. This lag in practical utility of the knowledge of ancient alchemy is one of the barriers in understanding some aspects of subject.

Conclusion

Ayurveda Prakasha is an important text on Ancient Indian Alchemy and therapeutics written after golden age of both the branches which were then well practiced. It is a compilation text along with many important creations and modifications of its own. The subject matter of the text is focused on practical applicability, ease in performance and alternative methods of experimentation. Author had

considered failures, complexities in experiments and availability of the drugs, importance of the subject matter in view of its practical utility. The text if elaborated properly had potential to change many concepts of science in current practice. It can be a useful consultative text for undergraduate and post graduate scholars of *Rasashastra*.

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