

**THE STUDY OF MANUSCRIPT KALAGYANA VICHAR OF SHAMBHUNATH.****Dr. Mohan R. Joshi^{1*} and Dr. Kirti S. Patel²**¹Professor, Tilak Ayurved Mahavidyalaya, Pune.²Ayurvedic Medical officer, District Ayush Hospital, Sagar. MP.

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Corresponding Author*Dr. Mohan R. Joshi**Professor, Tilak Ayurved
Mahavidyalaya, Pune.**ABSTRACT**

Manuscript Kalajñāna Vichar is a manuscript written by Shambhunath in sixteenth century. It is in Sanskrit with Gujrathi commentary. It was studied with an objective to study and compare its contents with available texts in Ayurved. It is divided in chapters samuddesha KALA VARNAN, SADHYA LAKSHANAS, Mrityu Lakshanas, Nadi Lakshanas, Jwarasya Vivarnanam, Nadi Pariksha, Dosh Pariksha, Mutra vid pariksha. MSS Kala Jnana Vichar compromises of 8 sammuddes and they are named as following (including number of verses in each sammuddes)- Kala varnan-34, Sadhya Lakshanas- 13, Mrutyu Lakshanas- 23, Nadi Lakshanas-14, Jwarasya Vivarnanam- 42, Nadi Pariksha- 20, Dosh Pariksha, Mootra vid pariksha-29. Total 180 verses are present in MSS Kala Jnana Vichar. On comparison Total similarities in percentage of MSS Kala Jnana Vichar with other Ayurvedic text. On the basis of the study done it is observed that complete similar verses are 33%, some words different but principle same are 27%, half same and principle same 21%, No similar but only word present are 14%, and principle different are 5%. On comparing the verses present in each sammuddes with other Ayurvedic text maximum similarities were found in the below mentioned text Shiv swaroday, Harita samhita, Ras manjiri, Goraksha samhita Yog ratnakar, Yog ratnakar, Vangsen, nadi tatva darshan.

KEYWORDS: Kala gyan vichar, Nadi pariksha, Jwara, Manuscript study.

INTRODUCTION

Samhitas are main sources of knowledge of Ayurveda i.e. Charaka Samhita, Sushruta Samhita, Ashtanga Sangraha and Ashtanga Hrudaya. These samhitas were composed approximately 3000 years before and available in the text form since 6th century. Much more literature was created after these classical texts. This literature is either published or is available in the form of unpublished manuscripts (MSS). A manuscript Means- a hand written document, which has scientific, historical, literary or aesthetic value and which is at least seventy-five year old. Total number of manuscripts in 5,000,000 India, Percentage of manuscripts languages wise Sanskrit 67%.^[1] These Manuscripts are on various subjects. Some of them are commentaries on brihatrayes, some are collections from various books and some are original contribution by vaidyas. These Manuscripts contribute experiences and minute observations of symptoms, new diseases, new formulations and some new diagnostic technique. They are also likely to contain many unique formulations which will be helpful for researchers and practitioners. The rich medical manuscript wealth of India today faces a threat for survival.^[2] The manuscript is divided in chapters named as sammuddes. The names are appropriately given. When the actual verse were studied and compared with the other text books. It was observed that many books were refereed by the author during writing of the manuscript. The subjects covered in the manuscript are description of kala, symptoms of diseases which are incurable, and descriptions of arishta, jwar and examinations of urine, purisha and nadi. As the subjects vary, a lot references are also collected from the different books. Many concepts are similar to Ayurvedic books but even some concepts differ from Ayurvedic principles.

AIMS

To study Manuscript kalajnana vichar.

(Source-MSS found in Descriptive catalogue of vaidyaka manuscripts- Vol. XVI, part-I. Bhandarkar oriental research institute, Pune.)

OBJECTIVES

- To study manuscript “kalajnana vichar”.
- To compare topics in “kalajnana vichar” like Nadipariksha, Aristavijnana, Mutrapariksha with other Ayurvedic texts.

MATERIALS AND METHODS

Material

Manuscript- Kalajnana Vichar

MSS collected from Bhandarkar oriental research Institute, Pune.

This MSS found in Descriptive catalogue of vaidyaka

Manuscript- Vol – XVI, Part – I, yr-1939. No-50, 619/1895-1902

Author– Sambhunath

Methodology

Study was done in three phases.

Phase 1

- 1) Manuscript Kalajnana Vichar was photocopied from Bhandarkar oriental research institute, Pune.
- 2) Rewriting of manuscript – MSS was thoroughly Investigated for completeness and complete manuscript was re written in Sanskrit. During the process of re writing help was taken from books related to manuscriptology^[3]

Difficulty encountered in translating the text.

Incorrectness:- From the beginning incorrectness was observed in MSS. like in First verse- acharya says-“Shri Dhanantaray Namah” but correct is-“Shri Dhanvantarayay Namah”.

Script:- Collected MSS was rewritten; the efforts were taken to under stand the script written in MSS. it was observed that it was written in Sanskrit language and Devnagri script. It is more influenced by Gujarati language and Gujarati script. Hence it was essential to understand the proper meaning of characters specified in MSS.

After 4-5 reading of MSS, gradually the writing become conversant and character map required for reading of KV MSS was prepared. Some difficulty observed during the process of rewriting of MSS.

- Inconsistence use of characters-The words or the letters which could in understood and the hole verses was understood and compared with well known or similar verse which are available in other Samhitas.
- Incorrect Sanskrit words, inconsistence writing, worm eaten, errors during photocopy- In this MSS there were words some of them complex, some of them were missing in order

to gain meaning from such verse searched of similar meaning in different text like Vangasena Samhita, Yogratnakar etc.

Phase 2

- 1) To compile and make edition of manuscript “Kalajnana Vichar”.
- 2) The methodology for manuscript processing was followed.

Phase 3

Comparison of all topics given in manuscript -“Kalajnana Vichar” e.g. Nadi pariksha, Mutra pariksha, Arishta pariksha was done with Ayurvedic texts like- Bruhatrayi, Laghutrayi, Nighantu, Nadi Granthas, Granthas on Swar Shastra, Journals etc. All the comparison to compare the original text of KV and other book, a scale was prepared depending on grades.

04 Totally Same, 03 Slightly Modified, Same principle, 02 Half Similar, 01 Related to verse, -1 Principle Change. All 180 verses in KV were thoroughly compared for similarities.

1) Literary Study of MSS Kalajnana Vichar

Author:- At the end of every chapter author himself quoted his name as a Shambhunath. There is no other evidence about identity of author except his name.

About Title-Kala Jnana Vichar:- As mentioned at every last verse of each Sammuddes we can know that Title of MSS is KALA JNANA VICHAR. We can consider the meaning of KALAJNANA VICHAR- “Collection of thoughts about knowledge of time”

Structure of MSS Kala Jnana Vichar:- Acharya shambhunath wrote chapter’s title name as *Sammuddesa*. Acharya devided MSS kalajnana Vichar in 8 Smmuddeshas.

Language of MSS Kala jnana Vichar: Devnagri script in Sanskrit lipi. With old gujarati commentary.

Determination of Time Period of MSS Kala Jnana Vichara:- In total 6 scribes named “Kalajnana” are enlisted in catalogue^[4], Out of these in two scribes, the year of writing is specifically mentioned. Based on the above facts, it is possible to deduce that MSS Kala Jnana Vichara (No. 50, 619 / 1895 – 1902.) is also contemporary to these scribes and may belong to these time period ranging from- Samvat 1700- 1850. As MSS Kala Jnana Vichara includes Gujarati commentary below the each verses, it can be estimated as about 5-25 years after the original MSS.

3) Majority of verses of MSS Kala Jnana Vichara are found to be taken from following five texts.

- Kanad- Approximately 10th century.
- Shiv Swaroday- Approximately 10th century.
- Vangsen- 1210 A.D.
- Sar-Sangrah- 1575-1625 A.D.
- Yog Ratnakar -1676 A.D.

Critical study of Manuscript Kala Jnana Vichar

Form: the leaves of mss unstitched. Paper of mss is old county paper. Ink (masi) used to write the mss is in black and red colour. All leaves of mss are in uniform size.

Size: The size of the paper is 10 in. by 4 ½ in.

Pagination: The folios are numbered; the figure appears on the left margin.

Abbreviation: There is no abbreviation found in MSS.

Colophon: Colophon are at the end of a work may contain one or two or several or all of following items: Title of the work, Name of author, Name of parents, Teacher's name, Place of the author, Name of patron, with / without titles and parent's name. Amongst the eight sammuddes in the mss name of the author was observed in two places, name of the book was in 5 places, name of the sammuddes in 5 places.

Illustration: There is no illustration present in this MSS.

Decoration: Each margin of all the pages of MSS is decorated with double red colour line probably at the time of revision by the commentator or the reviewer.

Kinds of texts: We found that MSS Kala Jnana Vichar is Gujrati commentary because in MSS1 Gujrati commentary found in below the each line, except last 2 pages.

About 2 commentaries of MSS- After search various descriptive catalogue of MSS^[5], No MSS with the name of kalajnana vichar was found. A number of commentaries six have been written on them but only two of them are available.

They are.

- 1) Hindi Commentary.
- 2) Gujarati Commentary.

Content of MSS

First Sammuddes (Chapter) - KALA VARNAN- The topic described in first sammuddes is divided in 5 parts.

- 1) Importance of Time (*KALA*).
- 2) Kalagni.
- 3) Time and psychological factor, yoga and spirituality.
- 4) Time and *Swar Shastra*.
- 5) Kala and Rahman.

Second Sammuddes - Sadhya Lakshanas

Sadhya lakshanas (good prognosis of disease), is the second chapter of MSS KV. There are total 13 verses in it. Acharya has mentioned the signs of good prognosis of disease and along with it the signs of healthy individual.

Third Sammuddes- Mrityu Lakshanas (Sign of Death/ Arishta)

The third chapter of MSS Kala Jnana Vichar is Mrityu lakshan. There are 23 verses related to Arishta (sign of death). The sign of diseases which indicate for coming death of patient are discussed in this chapter.

Forth Sammuddes- Nadi Lakshanas

Forth chapter of MSS Kala Jnana Vichar based on NADI, named as “Nadi Lakshan”. There are 14 verses in this chapter. Following topics have been described by author in this chapter.

1. In this chapter Acharya described different names of Nadi, different sign of tridoshaj Nadi, curable sign of Nadi, and incurable sign of Nadi.
2. Uttala, lamba, manda, sarala, kathina, sthira, sookshma, mridvi, roudra etc. are the different name of Nadi.

Fifth Sammuddes - Jwarasya Vivarnanam

The fifth chapter of MSS Kala Jnana Vichar written by Acharya Shambhunath, is known as *Jwarasya vivarnanam* (Description of fever). It has total 42 verses. Even though it is known by the name description of fever it has many more different topics covered within it. Among the 42 verses mentioned only 12 are concerned with fever and the rest 30 verses are about indigestion, period of dosha vitiation, light food, drinking water at early morning, causative factors of disease, dosha prakriti nature symptoms. Detailed description about them is given- Fever, Types of indigestion (ajeerna) and their treatment method, Langhan/ Light diet, Period

of vitiation of doshas, Symptoms of dosha prakriti / nature, Drinking water at early morning, Causative factors of disease.

Sixth sammuddes- Nadi Pariksha

Sixth chapter of MSS Kala Jnana Vichar based on Nadi Pariksha, named as “Nadi Pariksha”. There are 20 verses in this chapter. Acharya described different kinds of nadi examinations regarding motion of Vat, Pitta, Kapha, sannipataja, Asadhya Nadi (incurable sign of Nadi).

Seventh and eighth Sammuddes- Dosh Pariksha, Mutra vid pariksha

Mutra Pariksha is the seventh chapter of MSS Kala Jnana Vichar .There are total 29 verses in it . Acharya has mentioned the Examination of Urine in this chapter. Description of Diagnosis of the disease by the examination of urine, described in seventh A sammuddes is divided in 3 parts.

- a) By appearance of urine-Diagnosis of *Dosha* involvement,Diagnosis of disease involvement.
- b) *By shape of the spread oil drop*-Diagnosis of *Dosha* involvement,Diagnosis of *Disease* involvement.
- c) Prognosis of disease by the examination of urine-By spreading nature of the oil, By spreading shapes of the oil.

RESULTS AND DISCUSSION

Kala Jnana Vichar is particularly based on the knowledge and importance of time by which diagnosis and prognosis of the diseases can be studied. Hence the name Kala Jnana Vichar is most appropriate.

First Sammuddes Kala Varnam

In the first chapter author Aacharya Shambhunath has explained the kala as a divine power. The references coated by the author emphasizes on the divineness of the Kala as karana dravya, Similar to a God, Creator, Originator etc. Similarly in Ayurvedic samhitas, kala is explained as a divine power as well as in the applicable forms like season or divisions of the year in^[7], Time of year^[8], Stages of life in^[9], Stages of disease, status of the patient^[10], Time of disease, Kala is the cause for the birth and death of all living beings, for the disorders and excellence of the seasons, properties of substances such as taste and potency, the disorders or excellence of strength of Dosha and the body.

Starting of Manuscript:- MSS Kala Jnana Vichar by acharya Shambhunath starts with gratitude towards the God Dhanvantary. The gratitude is always offer in all ancients books. The basic intention of the gratitude is to show the genuineness of the source of knowledge and the blessings for the successful completion of the book. In Ancient books gratitude or blessings in the beginning are from Brahma etc gods and Acharyas who gave the knowledge of Ayurved to the particular author like in Charak Samhita. The Blessings from the Dhanvantari are rare in the ancient period but are commonly found in the manuscripts of the period from 14th century to 16th century. Similar kind of gratitude was observed in 55 other manuscript in the catalogue of the “Vaidyaka” by Bhandarkar Oriental research institute. The book is related to Kala, Arishta, Nadi, Mutra pariksha, Jwara which is not exactly related to surgery or surgical procedures, even author himself explain the source of knowledge from the Lord Shiva still the gratitude of Dhanwantari is surprising. We can consider that Author may be from the Sushrut tradition and as the general tradition Dhanwantari is considered as God of Ayurved. and Acharya told about knowledge of time. acharya says that kala is very powerful and with the help of it we can know about forth coming death.

In next verse, Acharya says about power of kala that, kala is generator and destroyer of all creatures; in normal life we can see every creature is destroyed in a time period. This reference is also found in Hareet samhita^[12] and Mahabharat. This verse is replicated from Hareet Samhita and Mahabharat. In next verse^[11], acharya says that even God destructed by kala. In this verse Acharya Shambhunath explains that Fourteen *Indras* are destroyed in one day of *Bramhadev*. *Bramhadev* himself is destroyed in 100 years. God says that, life span of human being is 100 years which is influence by karma and depending on karma some are early destroyed by kala. This verse is also from Hareet Samhita.^[12] Acharya Shambhunath has described relation between mental factor and kala. In Ayurvedic descriptions, clear explanation of the description of relation between kala and Greed (*lobha*) and anger (*krodha*) is not expressed but the same principle is accepted and explained in various other ways like *Adharaneeya vega*^[13] i.e. Urges which should be avoided. These urges when expressed cause diseases. The anger and greed are also explained as the causative factor in almost all the diseases. Similarly these are due to *pragyaparadha*^[14] which is one of the three basic components which causes diseases likewise anger of the disease. The verse, Acharya says anger and greed should be avoided by the human. Ayurveda believe it can avoid premature death of the man.

Aacharya Shambhunath described about *Kalagni*. According to author it is digestive power and four type of matter that is food, water, sleep and *kam* is depending on it. Location of *kalagni* is also described in Goraksh samhita, Kubjika tantra. In other ayurvedic samhitas description about generation of disease due to deficiency of food and lack of sleep is present but about the generation of disease due to lack of water and *kam* is not clearly explained.

The concept of *kalagni* is not described in ayurveda but synonyms is terms *jathragni* is explained in ayurveda. Ayurvedic books considers the concept of Agni as God like^[15] even agni is the most vital reason in the development the disease and has the direct impact on human life. Shambhunath further explain 4 factor like- Food, water, sleep and *kama* are the factors which can vitiate the status of Agni. Ayurveda provides clear concept of relationship between food and sleep. Food, sleep and *kam* (*bramhacharya/abramhacharya*) in Ayurveda are the 3 sub pillars of life. The relationship clearly stated in Ayurveda which is similarly compiled in Kala Jnana Vichar.

Anashan is the commonest causative factor that causes vitiation of *dhatu*s, the lack of water causes disease due to *shonita*. The lack of *kam* causes disease of eyes. At the end of this verse Acharya says that lack of sleep is causative factor of the disease. This reference is found in Yog ratnakar coated as *Swabhavkancha*.^[16]

In next verse aacharya shambhunatha has introduced concept of yoga. He narrates "one cannot be considered as the knower of yoga philosophy who doesn't understand the concept of six chakras, 16 aadhar, 3 lakshya, and 5 vyom which are present in human body. The yoga is one of the philosophy followed by the Ayurvedic books like charak samhita in charak sharir I describes the yoga is the only source which leads to moksha and it will provide the relief from the pain. Similarly Concept of Shatchakras is also followed in some Ayurvedic texts. Though the similar verse can be directly found in Yogachudamani and Goraksha Samhita.^[17] *The sutra is similar in both the books. Above mentioned concept is Shatchakra.*^[18]

Shatchakra:- Bramha Chakra.(7), Ling Chakra.(1), Nabhi Chakra.(3), Hriday Chakra.(4), Kantha Chakra.(5), In between eyebrows.(6)

Shodasha Aadhar^[19]:- Ahankar, Maan, Buddhi, Mahabhoot, Chitta, Karan, Pran-5

Mahabhoot-5, Jyoti roop jeev. These 16 are base of body. 3 *Lakshya*^[20]- In Palat, In heart, In Umblicus. 5 *Vyom*^[21]- *Ek Stambha (Ahankar), Nav Dwar (Netradi 9 Dwar), Teen shoonya. (Satwa, Raj, Tam), Panch Dewta (panch Tatwa), Panch Indriya*^[22].

In next verse Acharya shambhunath defined relation between manas (mind) and kala. Acharya explains mind should be stabilized first, mind can stabilize vayu. Vayu can stabilize teja and teja can stable the kala. In this verse acharya explains relation between *manas* (mind), *vayu* (respiratory air), *Teja* and kala that is time. The next verse is about quantification of the *prana*. Time can also be divided into *prana*, which in this context means respiration, and there are fifteen *prana* per minute in a normal healthy condition. If the person's life is very stressful, having anxiety and worries, then the rate of respiration is higher. It will be beyond twenty per minute. But in a normal healthy individual, the number of respiration is 15 *prana* per minute. 15 multiplied by 60 is 900 breaths, 900 respirations, or 900 *prana* an hour and 900 multiplied by 24 hours of a day is 21,600 breaths per day. This is chronological time based upon the breaths. So *prana* is microcosmic time that governs cellular life, while *yuga* is macrocosmic time that governs the movements of the universe.^[23]

According to Indian astronomy is a simple expression: Breath is Time. The periods are based on the numbers 27, 54, 108, 360 and 21600, numbers which we find recurring again and again in tantrik texts. A respiration consists of two halves, an inhalation and an exhalation. The meshing of time and astronomy and breath is the Kalachakra. Mahakala is Brahma is Time. The obstacles to Sun-Moon respiration, or equipoise -breathing, are caused by conditioning. According to the ayurveda, food is of three types impressions, breath, edibles.

Just as without food we are starved and die, and without air we suffocate, so without impressions we could not survive. Wrong food affects us, faulty breathing starves the blood of air, lack of impressions causes physiological disturbance. Next verse which explains is also related to yoga. Relating our own body to cosmology, our earth centre, our physical or planetary body, is sustained by food. Our emotional centre (Sol) is sustained by breath. Our intellectual centre (Moon) is sustained by impressions.

In next verse acharyas says about *kaya* (body) and *maruta* (air/vayu) relationship. acharya says that residing in the centre of this body, *prana vayu* is like a guard. On entering the body (inhalation) it is said to be ten fingers long, on leaving (exhalation) it is twelve. This reference is replicated in Shiv swaroday, Yog chunamani and Anand kand. In ayurvedic ancient text

charak samhita also denoted importance of Vayu in eights chapter of Viman Sthana of charak samhita.

Next few verses explain Swar arishta. There are 4 verses about swar arishta. acharya explains one who has knowledge of concept of kala can understand the following swara arishtas.

Right swar(sun)	Left swar (moon)	Expectancy of life
always movement	doesn't move	15 days.

If there is continuous movement of only one swar in one month or six month or one paksha and three month or five night then death is conformed. If rising of swar from right and ended from left nostril then it is a very good sign otherwise it destroys the person. Left swar move in shukla paksha and right swar in Krishna paksha. Moon and sun both swar moves in 3 days in shukla-krishna paksha one can expect bad prognosis.

Above mentioned verses are taken from the books on Yoga, A separate branch of science is introduced as Swara Shastra. It basically deals with jyotish. The science claims that by observations of the swara and changes in the swara we can precisely predict the forth coming conditions and diseases. When an authentic ancient classic “*Swar swarodaya*”, “*Shiva Samhita*” “*Swara Chudamani*” was referred, which are based on Swar Shastra, we observed most of the references related to Swar shastra are compiled from these books.

In 29th verse of first sammuddes acharya described about prana vayu and body. This body consisting of the five elements is like an earthen lamp (deepaka) nourished by the oil of Shiva (prana) and the life of that person who protects it from the wind of the sun (solar swara) becomes stabilized. This reference is totally similar found in Shiv swaroday.^[24]

In next 4 verses Acharya explains the concept of *RAHMAN*. When we searched about Rahman we got following meaning.

Jeewanmukta, Samadhi, Moksha, Aatma, Bhagwan^[25], *Parbhu*.^[26]

When the mind of the person remains associated with the perception of the sense organs like *Shabda, sparsha, ropa, rasa* then he is known as *Rahaman*. The place where *Rahaman* can be reached by bathing in the holy places (*tirthas*), by performing charity (*dana*), penance, austerity or Virtuous acts, recitation of mantras or prayers, meditation and yoga. This reference is found only in *Shiv swarodaya*.^[27] These characters of the person are similar to the characters of *stitapradnya* in bhagawat geeta and characters of Samadhi in books of yoga.

second Sammuddes – Sadhya Lakshanas- In second verse acharya described sign of healthy man. The verse is complexly structured and lacks clarity of meaning. In next verse Acharya says about movement of doshas. Movement of vat is fast, pitta is slow and movement of kapha is steady.^[28] In next verse acharya says about body temperature of human according to the dominance of dosha. Acharya says about *pitta* constituted man's body temperature would be high, *vat* and *kapha* constituent man's would be low body temperature.^[29] Similar description is also found in Charak Samhita^[30] and Sharangadhar Samhita^[31] in next verse acharya praises the vat. Acharya says pitta, kapha and others mal(waste product), dhatu is lame, vat is most stronger in all of these, it leads to movement of all. This ref. is also found in Sharangdhar Samhita^[32] poorva khanda 5/43.

In next verse acharya says Kala remains the one of the causative factors for life and death of a person. Concept is similar as described with the terms *niyata ayu* and *aniyat ayu* by Charak Samhita.^[33]

In next verses acharya described about *sadhya lakshanas* or curable sign. These references are found in *Yog ratnakar*.^[34] These are signs of homeostasis (*samyavashtha*) of doshas and dhatu. These signs are commonly observed.

Third Sammuddes - Mrityu lakshanas

Third chapter of MSS Kala Jnana Vichar is based on *mrityu lakshana* (sign of death). These signs indicate the prognosis of patient regarding cure and death.

Description of *arishta* (sign of forthcoming death) is specially mentioned in Ayurveda. Acharya Charak wrote a complete chapter *Indriya Sthana* on it. Descriptions of sign of forthcoming death described by Acharya Shambhunath are quite different than Acharya Charak.

Fifth Sammuddes - Jwar varnan

Fifth sammuddesh of MSS Kala Jnana Vichar is named as *Jwar varnan*. In this sammuddesh Acharya Shambhunath describes mainly *Jwara* and other explanation like- *Anghanas* in *jwar*, *Vitiation* time of doshas, *Ajeerna*, 6 causes for generation of disease, Importance of drinking water in early morning (*Ushahpan*), Various types of *jwar*, Principals of treatment of *jwar*.

Fourth and Sixth Sammuddes- (Nadi)

From the historical point of view the knowledge of pulse examination is found during the medieval period (13 to 16th century), In vedic and Samhita period (2000 B.C. to 8th century)

the word 'Nadi' has been mentioned but scientific description of pulse examination is not available. The first glimpse of this art is seen in *the text of late medieval* Period like *Yoga Ratnakar* and *Sharangadhar Samhita* when *Nadi Pariksha* entered into the main stream of Clinical Medicine by way of *Ashtvidha Pariksha* where Nadi was mentioned on priority one among the eight points to be examined.

Kutumbiah (an author) has, in the general introduction to his now well-known book, *Ancient Indian Medicine*, observes: "As a matter of fact, pulse lore is not mentioned in the ancient medical classics of *Charak* and *Sushrut*: It finds its way into Indian Medicine in the 13th century A.D." In his explanatory note on the above, he observes: "Sharangadhar was the first writer to deal with *Nadi pariksha*, in his *samhita*, *Purva-khand*, Chapter III, he has a section on *Nadi pariksha* "it is no doubt true that classical authors like *Charak*, *Sushruta*, *Vagbhata*, *Madhavakar* and *Cakradatta* have not made any mention of the pulse. There is however, some doubt, if *Vrnda* who flourished in the tenth century could not have been the first to include the *nadipariksha* in his *Vaidyaka*."^[34]

Seventh sammuddes – (Mutra Pariksha):-) By appearance of urine

Diagnosis of Dosha involvement- In "Vata" aggravated diseases, urine of the patient appears as *Snigdha and blackish*. This reference is found in *sar-sangrah*^[35], *Hansraj nidan*.^[36] and *vangsen*.^[38], In *Kapha* dominated conditions urine becomes "*Pallav peeniyam*", i.e. frothy or cloudy. This reference is found in *sar-sangrah*, *vangsen*, *hansraj nidan* and *Vasavrajeeyam*, In *Pitta* aggravation urine appears yellowish bubbles or *Rakta varna* (reddish). This reference is found in *sar-sangrah*, *Hansraj nidan* and *Vangsen*, In case of rakta-aggravation urine appears upper part is blue and lower is red, *Ushna* (hot) and resembles blood. This reference is present in *Vangsen*, *Vasavrajeeyam*, and *Hansraj nidan*, In *Dwandaja*, i.e., a state of combined *Dosha* aggravation, mixed colours are seen in the appearance of the urine as per the *Dosha* involved in the diseases causation, In case of vat-pitta urine appears seasemom oil. kapha- vat urine appears like butter milk. This reference is present in *Vangsen* and *Yog ratnakar*.^[39] *Sar sangrah*, acharya Aatreya described kapha vat urine appears like *Saubeer* (a type of wine), *Rakta-shleshma* urine appears blackish. This reference is present in *Vangsen*, *Vasav rajeeyam* and *Sar sangrah*, *Pitta-shleshma* urine appears whitish (*ghruta kanopam*). in other Ayurvedic books this is not clearly mentioned, In *Sannipata* state urine becomes *Krishna varna* (blackish). In other books this references is also present.

Diagnosis of disease involvement- In the case of diseases related to '*Ajerna*' (indigestion) *jwar*, urine appears like, urine of shegoat, In *Aam vat* urine appears 'Yellow coloured " and the affected passes more urine (*Bahu Mutrata*), In *Rasadhikya* - urine is appears sugar cane juice and yellow colour of eye, In *Vata Shlesmajwara* - urine is appears like butter milk. This reference is present in *Vangsen* and *Yog ratnakar*. But in *Sar sangrah*, acharya Aatreya described kapha vat urine appears like Saubeer (a type of wine), In *Sannipata jwara* - urine appears in mixed shades depending on the *Dosha* involvement (mostly black), In *kshaya* – urine is blackish. If urine appears white in *kshaya* then it is regarded as *Asadhya* or incurable. it is also mentioned that if urine is placed in a glass jar and appears reddish in the bottom, the patient is suffering from *Atisara* (diarrhoea). This reference is present in *Vangsen*, *Vasav Rajeeyam* and *Sar Sangrah*.

If the urine has particles appearing like the *Swatah swinna*, it indicates *Jalodara* (Ascites). But in *sar sangrah*, acharya says urine appears like droplets of *grata*.

In *Niram jwara*, urine appears reddish or yellowish in colour, and like sugar cane juice', urine becomes yellowish. This reference is present in *vangsen*.

By shape of the spread oil drop

Diagnosis of *Dosha* involvement- It is said that if the *Vata* is predominant, then the *Taila* attains *Mandala* (circular shape) this reference is present in *yog ratnakar*, *vangsen*, *vasav rajeeyam* and *sar sangrah*, In *Pitta* diseases it attains *Budbuda* (bubbles). This reference is present in *vangsen*, *vasav rajeeyam* and *sar sangra*.

Commentaries on kala jnana vichar: As references, No of verses in two commentary (Hindi and Gujarati) are totally different, some similarities was observed in Gujarati commentary, it cannot be concluded they are based on same MSS.

COMPARISON OF CHAPTERS

Comparison of first sammuddes Kala Varnan- On comparison the verses of first sammuddes Kala varnan with other ayurvedic text, books on swar shastra like Shiv swaroday, books on yoga, it is observed that maximum similarities were present in Shiv swaroday, Harita samhita.^[40] Ras manjiri, Goraksha samhita Yog ratnakar, Kubjika tantra. Maximum percentage of similarities was found in- Shiv swaroday, Shiv swaroday is an ancient text based on Swar shastra. Its time period is approximate 10th century.

Comparison of second sammuddes Sadhya lakshan- On comparison the verses of second sammuddes Sadhya lakshan with other ayurvedic text i.e. Yog ratnakar, Arishta vigyan, sharangdhar, charak samhita, Swakshand Tantra. It is observed that Maximum percentage of similarities was found in Yog Ratnakar.

Comparison of Third sammuddes- On comparison the verses of third sammuddes Mrityu lakshan with other ayurvedic text i.e. Yog ratnakar, Harita samhita, Arishta vigyan, Shiv swaroday, Bhel samhita, Charak samhita. It is observed that Maximum percentage of similarities was found in Shiv swaroday.

Comparison of forth sammuddes- On comparison the verses of forth sammuddes Nadi lakshan with other ayurvedic text i.e. Yog ratnakar, Ravan nadi pariksha, Abhinav nadi tantra, Nadi darshan, Nadi tantra darshan, Arishta vigyan. It is observed that Maximum percentage of similarities was found in Yogratnakar and Abhinav nadi tantra.

Comparison of fifth sammuddes - On comparison the verses of fifth sammuddes Jwarsya varnan with other ayurvedic text i.e. Yogratnakar, Bhavprakash, Sharangdhar, Madhav Niadan, Harita samhita, Mahashubhashita sangrah. It is observed that Maximum percentage of similarities was found in Yog ratnakar.

Comparison of sixth sammuddes - On comparison the verses of sixth sammuddes Nadi pariksha with other ayurvedic text i.e. Sharagdhar, Yog ratnakar, Ravan Nadi Pariksha, Abhinav, Nadi Darshan, Nadi Tatva Darshan. It is observed that Maximum percentage of similarities was found in kanad, Nadi tatva darshan, Yog ratnakar.

Comparison of seventh sammuddes- On comparison the verses of seventh sammuddes Mutra pariksha with other ayurvedic text i.e. Yog ratnakar, Vangsen, Vasav rajeeyam, Hansraj nidan, Sar sangrah. It is observed that Maximum percentage of similarities was found in Atreya virachit Sar samgrah, Vangsen.

Total number of similarity and dissimilarity

The study text of MSS Kala Jnana Vichar on the basis of similarities of verses with other text is based on five grade system from -1 to +4. On the basis of the study done it is observed that complete similar verses are 33%, Some words different but principle same are 27%, Half same and principle same 21%, No similar but only word present are 14%, and principle different are 5%.

CONCLUSION

MSS is rewritten by Acharya Shambhunath. The time period of the text Kala Jnana Vichar can be exactly determined as 16th century from the study. The structure and process of MSS suggest that it is well written with proper punctuation and well pressed. MSS Kala Jnana Vichar comprises of 8 sammuddes and they are named as following (including number of verses in each sammuddes)- Kala varnan-34, Sadhya Lakshanas- 13, Mrutyu Lakshanas- 23, Nadi Lakshanas- 14, Jwarasya Vivarnanam- 42, Nadi Pariksha- 20, Dosh Pariksha, Mootra vid pariksha-29. Total 180 verses are present in MSS Kala Jnana Vichar. On comparison Total similarities in percentage of MSS Kala Jnana Vichar with other Ayurvedic text. On the basis of the study done it is observed that complete similar verses are 33%, some words different but principle same are 27%, half same and principle same 21%, No similar but only word present are 14%, and principle different are 5%.

On comparing the verses present in each sammuddes with other Ayurvedic text maximum similarities were found in the below mentioned text.

Name of sammuddes	Name of maximum similar text
1) Kala varnan	Shiv swaroday, Harita samhita, Ras manjiri, Goraksha samhita Yog ratnakar.
2) Sadhy Lakshanas	Yog Ratnakar
3) Mrutyu Lakshanas	Shiv swaroday.
4) Nadi Lakshanas	Yog ratnakar, Abhinav nadi tantra
5) Jwarasya Vivarnanam	Yog ratnakar.
6) Nadi Pariksha	kanad, nadi tatva darshan, Yog ratnakar.
7) Dosh Pariksha, Mootra vid pariksha	Atreya virachit Sar samgrah, Vangsen.

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