



ORIGINAL RESEARCH PAPER

Ayurveda

A SHORT REVIEW ON VIPADIKA WRS PALMOPLANTAR PSORIASIS

KEY WORDS: Vipadika, palmoplantar psoriasis, Kshudrakusta, sphutanam

Dr. Vivek Chandurkar

Professor and HOD Kayachikitsa Department, SGR Ayurvedic Mahavidyalya, Solapur

Dr. Shweta A. Redasani*

PG Scholar Kayachikitsa Department SGR Ayurvedic Mahavidyalya, Solapur. *Corresponding Author

ABSTRACT

Skin plays a chief role in maintaining barrier between internal and external environment of human body. The healthy skin is the primary requirement for the beauty as well as attractive personality. Palmo-planter psoriasis produces significant functional and social disability. It is the second most common type of psoriasis produces followed by chronic plaque type psoriasis¹. Skin is the first organ of the body interacting with the environmental agents like physical, chemical and biological agents. The skin disorders are intrinsic in origin, most of the skin diseases in Ayurveda have been considered under the heading of Kustha. Vipadika is one of such disease which has been included under the heading of Kshudrakusta. It is characterised by sphutanam (cracks) either in palms or soles or in both with teevra vedana (severe pain). The pain present in vipadika is so intense that it severely affects the quality of life of the patient. In spite it being a minor condition it cripples the daily activities of patients. Based on the symptoms of vipadika, The present article is an attempt to highlighting on details of Vipadika with co-relating with Palma-plantar psoriasis

INTRODUCTION

Ayurveda broadly explains all skin disorders under one umbrella called 'kusta'. Kusta is the disease which causes deride or disgraceful situation. Basically in all *kusta* roga there is vitiation of *Tridosha*, *twak*, *rakta*, *mamsa* and *lasika*, but depending upon the *amshamsha kalpana dosha pradhanyata* differs in various varieties so only it is rightly marked as innumerable in classics. For the systematic study Acharya Charak have classified *kusta* as *mahakusta (T)* and *kshudra kusta (11)*. *Vipadika* is one among *kshudra kusta*².

Acharya Sushruta has mentioned the term *vipadika*, in *nidana sthana*³ but commentator Dalhana has clearly stated that *vicharchika* if occurs at *pada* then it is termed as *vipadika*³. *Padadari* has been explained under the *kshudra roga adhikara*⁴. Acharya *vagbhata* has mentioned it among *ekadasha kshudra kusta*⁵. Along with *pratyatma laxanas pani* and *padasputana*, *teevra vedana*, *kandu*, *raga* and *pidaka* have been added in the symptoms⁶.

Acharya *Madhava* also mentioned *Vipadika* under *kshudra kusta*, while in commentary they have mentioned that *vicharchika* occurring at *pada* (feet) itself is termed as *Vipadika*⁷. *Vipadika* is mentioned among *kshudra kusta* by *Bhavamishra*. He also quotes that *Vicharchika* occurring at the site of foot is called as *Vipadika*. While explaining *samprapti* he includes *pidaka*, *daha*, *kandu* as *laxanas* of *Vipadika*⁸. The main symptoms of *vipadika* are cracks in the palm and sole, severe pain and others like itching, inflammation, eruptions. In *vipadika*, *dosha pradhanata* is of *vata* and *kapha*. Based on its symptoms it can be correlated to different conditions like heel fissures, hand and foot eczema, palmoplantar psoriasis. In *samhitas* we don't find particular *nidana* mentioned for *vipadika*, but as it is one among the *kshudra kusta*, the general *nidana* of *kusta* can be considered. The *nidanas* can be subdivided as *aharaja*, *viharaja*, *manasika*, *achara*. *samsargaja*, *krimija*, *kulaja* *nidana* etc

Palmoplantar psoriasis is a chronic autoimmune disease characterized by the rise of desquamative plaques on the palms and soles. Due to the thick stratum corneum of the palmoplantar regions, the search for effective topical treatments has been significantly more difficult than other forms of psoriasis. Current topical treatments include phototherapy, methotrexate gel, laser therapy, and tazarotene ointment; most treatments outside of phototherapy, however, do not have sufficient high-level clinical evaluations to justify

their efficacy. In this systematic review, we explore the literature on different topical treatment regimens for palmoplantar psoriasis. According to Acharya Sushruta fourth skin layer called as *Tamara* its *dushti* occurs in *vipadika* and Acharya *Charka* also says fourth skin layers involved in *Kusta*. In modern science in *Psoriasis* the top layer of skin (called the *epidemis*) thickens and blood vessels in the second layer (called *dermis*) widen⁹.

DISCUSSION:

Discussion is made on the *nidana panchaka*. As it include *nidana*, *purvarupa*, *roopa*, *samprapti* and *chikitsa*.

1.1 Nidan^{10,11}

1. Aharaja Nidan: Virudha Ahara for Kushta– *Virudaha* like Intake of *Mulaka*, *Lashuna*, *Gramya*, *Anupa*, *audaka* *Mamsa*, intake of *Chilchima* fish with milk. Milk with *nimbuka* etc. For example *Chilchima* fish is *usna virya* and milk is *sheeta virya*, so this is the example of *virya virudaha*.

Mithya Ahara Hetu for Kushta - Improper food habits is another major causative factor of *Kushta*. *Ahara Vidhi* *vishesha* *ayatanani*, when it's not followed is called *Mithya Ahara*¹². *Mithya Ahara* deranges the digestive power of *Jatharagni* and also causes *Dushti* of *Grahani*. Thus the food doesn't get digested properly leading to production of *Ama*¹³. As *Grahani* is also *dushita*, *Ama* undergoes *putrification* and *Amavisha* is produced. So along with *Kushta*, other diseases which can be formed due to *Ama*, *Amavisha*, and *Grahani Dushti* etc¹⁴ **Adhyashana**:-Taking food even before digestion of previous meal is called *Adhyashana*, which leads to formation of *Amavisha*. These factors are the root cause of all diseases which are produced due to different permutation and combination of *Dosha* and *Dushya*. *Atyashana*- *Atimatra Ashana* is- "*Amapradoshahetu*". *Ahita bhojana* when takes *atimatra* (excess) and at improper time (*Akala*) leads to *dushti* in *Annavaha Srotas* and also disturbs the *Pakaprakriya* (Process of food digestion). *Vishamaashana*- Taking food at irregular time is called as *Vishamaashana*. It produces *Vishama Agni*¹⁵. It also does *vata prakopa*. *Ajirne Anne*- Intake of food in state of indigestion is called *Ajirne Anne*. According to Acharya Charak, taking food in state of indigestion is known to cause *Grahani dushti*. *Ajirna*, *Adhaysahana* causes *Agnimandya* and *Dushti* in *Pureesha Vaha Srotas*¹⁶. Both of them also vitiate *Rakta*. If this pathology continues for long time *Kushta* may be produced¹⁷. Continuous and excessive use of *Madhu*, *Phanita*, *Mulaka* etc. in state of *Ajirna* cause dusti of

Grahani and produce Ama. Excessive Guru, Snigdha and Drava: Taking excessive Guru, Snigdha Ahara produces dusti in Rasavaha Srotas. Guru Ahara causes Dusti of Mamsavaha Srotas¹⁸. Excessive Drava does dushana of Raktavaha srotas.

2 Viharaj Nidan: If swiftly changes happen like cold to hot and vice versa, without judiciously following the rules of gradual change, this causes dushti in Swedavaha Srotas. Unaware diving in cold water or drinking cold water in fear, exhaustion or sunlight causes the same effect. Swedavaha Srotas is also vitiated due to Krodha, Shoka, and Bhaya and may predispose skin disorders^{19, 20}. Suppression of urge of vomiting can cause Kushta. An urge for vomiting is only²¹ present when the *Doshas* are dislodged from their seat and are ready to be expelled (Utklista Avastha) but when the urge is suppressed, Utklishta *doshas* cannot be expelled out. These dislodged *Doshas* initiate the Vyadhi. Divaswapna²² :- Sleeping in day time after food intake vitiates Kapha, Pitta and leads to Kandu, Kotha, and Pidika. It is also said that day sleep after abhishyandi and guru diet causes dushti of Mamsavaha srotas and Medovaha Srotas²³. walking bare foot for long distance will cause cracks in the foot. (ref: padadari²⁴)

3 Achara Nidan²⁵: Behavioural misconduct, antisocial, sinful activities and other punishable activities are considered under this heading. Due to Raja and Tama *Doshas* the Manas is always in search of materialistic pleasures and to satisfy its desires, it is always doing good and bad deeds (Papa karma). Chinta, Bhaya, Krodha are Vata Prakopa Nidana. Bhaya, Krodha and Shoka produce Dushti of Svadavaha Srotas. Chinta causes Dushti of Rasavaha Srotas.

4. Other Nidan: Samsargaja Hetu²⁶: Kushta spreads by means of Prasanga, Gatrasamsparsha, Nihishwasat, Sahabhoja etc from one man to another. Kushta is *Adi Bala Pravritta Vyadhi*. *Kushtayukta Shukra – Shonita* results in the birth of child who is more likely to get Kushta²⁷. Krimija Hetu: -Krimi may be taken as one of the causative factor for Kushta²⁸. Chikitsa Vibharamsajanya Hetu: - Stambhana in initial stage of diseases like Raktaarsha, Raktapitta and Amatisara²⁹ can cause Kushta. Stambhana might lead to Tiryaka Gati of *Dosha* and hence cause Kushta. Kushta has been mentioned as Rakta Pradoshaja and Santarpanajanya Vyadhi.

1.2 Purvarupa of Kushta

Though there is no specific description about Purvarupa of *vipadika* in the classical texts, but being a variety of Ksudra Kushta, the samanya purvarupa of Kushta may be considered, they are aswedana, ati swedana, parushya, ati shlakshnata, vaivaranyam, kandu, nistoda etc³⁰. Among these purvarooapa we can find parushya, kharatva, kandu as purvarupa of *vipadika*, Due to various nidanas there is mainly vata vriddhi followed by kapha.parushyata or kharata may occur even before the manifestation of cracks and also due to excessive dryness there will be tendency for itching so these can be considered as the purvarooapa of *vipadika*.

1.3 ROOPA OF VIPADIKA

Pani and pada sputana, teevra vedana are the roopa mentioned by Acharya Charaka³¹, but Vagbhata along with this has mentioned other symptoms like alpa kandu, raga, pidaka in the symptoms of *vipadika*³². The cracks in the palm and sole is due to the vitiated vata *dosha*, which causes rukshata of the *twak* and produces pain. This is purely vataja in nature which can be compared with heel fissures and fissures in the palm. There is mild itching sensation which is due to vitiated kapha *dosha*, raga and pidakas may be seen in acute manifestations or any infectious conditions. These laxanas are suggestive of palmoplantar psoriasis, hand and foot eczema. Acharaya Bhavaprakash has included daha as one of the symptom of *vipadika* along with other symptoms.

Table no 5: lakshanas according to dosha and dhatu dusti

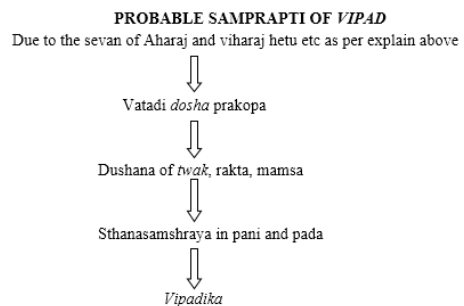
Lakshanas	Doshas	Dhatu
Pani sputana	Vata	Rasa
Pada sputana	Vata	Rasa
Vedana	Vata	Mamsa
Kandu	Kapha	Rakta
Raga	Pitta	Rakta
Pidaka	Kapha	Mamsa
Daha	Pitta	Rakta

Signs and symptoms:

- The appearance of red patches of skin topped with scales typical of psoriasis on the palms and elsewhere on the body.Ø
- Thickening and scaling of the skin accompanied with the formation of deep, painful fissures on the palms and soles.
- It is often bilaterally symmetrical
- Palmoplantar pustulosis- the appearance of deep, yellowish pustules.

1.4 SAMPRAPTI

The involvement of the dosha in the samprapti can be assessed by the laxanas exhibited. The laxanas mentioned by Charakacharya are pani, pada sputana, teevra vedana which shows that there is vitiation of vata dosha. Acharya Vagbhata have included other symptoms viz. alpa kandu, raga, pidaka which indicates association of kapha and pitta dosha also. Acharya Bhavamishra has explained the samprapti elaborately as the prakupita doshas does dushana of twak, mamsa dhatu and takes sthana samshraya at pani and pada pradesha and produces sputana in pani and pada and pada pradesha along with that pidakas, daha, kandu may also be associate



Chaya: Virudha ahara, Adhyashana, Atyashana, Vishamashana etc Aharaja hetu Sudden change from cold to hot & vice versa, suppression of urge, diwaswapna etc

- Prakopa: Due to the hetu sevan Vatadi dosha get vitiated.
- Prasara: In this avastha dosha shows
- Sthansanshraya: Pani-Pada
- Vayakti: Kshudarkushta
- Bheda: Vipadika

Vata	Pani-Pada sputana, Vedana
Pitta	Raga, Daha
Kapha	Kandu, Pidaka

1.5 SADHYA ASADHYATA

According to Charaka, the Kushta having all the symptoms along with complications like trisna, daha, agnimandya & Krimi are to be avoided by a wise physician. If the patient suffers from Vata-Kaphaja Kushta or only one *Dosha* is involved, then it is easily curable. But Kushta with deranged Kapha-Pitta or Vata-Pitta are difficult to cure³³. According to Madhava Nidana, sadhya *kusta* are those which are located in the Tvacha, Rakta or Mamsa & in which Vata & Shleshma are deranged together. Yapyas are those located in Medo Dhatu or which are Dwandaj (Vata-Pittaja or Pitta-Kaphaja). Those located in the Asthi or Majja Dhatu are Asadhya. As *vipadika* is a vatakaphaja and it is located in twacha, rakta, mamsa it is a sadhya Tripathi B.editor, Charak Samhita of Acharya Charak,

Chikitsa Sthana; Kustha Chikitsa: Chapter 7, Verse 4-8. Varanasi: Chowkhambha Sanskrit Series, 2006; 305. vyadhi.

1.6 UPADRAVA

Upadrava caused by Vata in Kushta may be Krishna, and Raktha Varnata, Kshata, Shula, Toda, Karshyata, Kampa, Romaharsha, Shrama, Sthabdata, Shunyata, Kotha etc. Upadrava caused by Pitta may be Ushnata, Atisveda, Snigdghata, Srava, Paka, Raktavarnata etc. Upadrava caused by Kapha in Kushta may be Shwetavarnata, Sheetata, Kandu, Sthabdata, Guruta, Snigdghata and Upalepa.

1.7 CHIKITSA

1. Nidan Parivarjan
2. Shodhan Chikitsa
3. Shaman Chikitsa
4. Pathya-Apathya

1. Nidan Parivarjana- *Nidana* or *Hetu* is the main causative factor for the disease which has major role in *Samprapti*. Hence to stop further progression of disease and restrict vitiation of *Doshas*, *Nidana* should be avoided. Here *Viruddhahara*, *Vega-vidharana*, *Shitoshna Krama Sevana* etc

2. Shodhan Chikitsa- *Kushta* is *Bahu doshaja*, *Kleda Pradhana Vyadhi*. In *Vata Pradhana Kushta Sarpipana* should be advised, in *Kapha Pradhana Kushta Vamana* should be administered, and in *Pitta Pradhana Kushta Virechana* and *Raktamokshana* should be performed. Sushrutacharya has advised to follow *Vamana* once in every 15 days, *Virechana* once in every 30 days, and *Raktamokshana* once in every 6 months, and *Nasya* once in every 3 days³⁴. Sushruta also explains *Shodhana* i.e. *Vamana* and *Virechana* should be done even in *Purvarupavastha*³⁵. Chakrapani comments that *Dosha Nirharan* should be done frequently in *Kushta* but *doshas* expelled should be in *Stoka Matra* i.e. small amounts. Acharaya Vagbhata advices to follow *Doshanusara Shodhana karma* after *Snehapana*. *Vipadika* is a *Vata-Kapha Pradhana Vyadhi* so *vata kapha hara dravyas* should be used, and for *vataja* variety of *kusta sarpipana* has been advised. Many *sneha kalpas* have been discussed in the *kusta* *adhikara* like *tiktaka ghruta*, *Maha+tiktaka ghruta*, *khadiradi ghruta*, *nimbadi ghruta* etc.

Basti – Both *Anuvasana* and *Asthapanabasthi* are contra-indicated in *Kushta*. But one can find some references for specific conditions. For *Asthapan Darvi*, *Bruhati*, *Patol* etc. are used and *Tila taila* medicated with same drugs is used for *Anuvasana*.

Nasya– If *Kapha Prakopa* and *Krimi Avastha* are present in *Kushta*, *Nasya* can be advised with *Saindhava*, *Danti* and *Maricha*.

Rakta-mokshana–In *Alpavastha* of *Kushta Pracchana karma* and in *Mahat avastha* (widely spread), *Sira vyadhana* is indicated. For this *Shring*, *Alabu*, *Jalauka* are used. In case of *Kushta*, extra precaution has to be taken for execution of *Shodhana* process.

3. Shaman Chikitsa- *Shamana* therapy is very beneficial in treatment of *kushta*. Charaka has described *shamana* therapy with *tikta* and *kashaya rasa pradana dravyas*.

Lepa-Ksharadi Prayoga -Only after proper *Shodhana* process, Sushruta further explains *Chikitsa* of *Kushta* based on the involvement of *Dhatus* in *Kushta*, the usage of *Lepa* and other *Shamanoushadhi* will definitely relieve. *Vipadikahara ghruta* *taila*- a *yamaka* preparation for external application is specially mentioned for *Vipadika*.

1. Pathya: Ahara: *Laghu Anna*, *Tikta Shaka*, *Purana Dhanya*, *Jangala Mamsa*, *Mudga*, *Patola*, Food and *Ghee* prepared by *Bhallataka*, *Triphala*, *Nimba*, *Purana Shali*, *Shashtika*, *Yava*, *Godhuma*, *Shyamaka*, *Udaalaka*, *Mandukaparni*, *Bakuchi*,

Siddha Ghruta. *Vihara*: *Abhyanga* with different *taila* or *ghruta*, using medicated *Kashayas*, *Parisheka* or *Avagaha* can be done. *Apathya: Ahara:* *Guru Anna*, *Amla Rasa*, *Dugdha*, *Dadhi*, *Matsya*, *Guda*, *Tila*, *Mamsa*, *Taila*, *Adhyasana*, *Ajirnasana*, *Vidahi-Abhishyandi Ahara*. *Vihara:* -*Divasvapna*, *Maitihuna*, *Vegadharana*, *Paapa Karma*, *Tapas Sevana* *Svedana* etc. Walking bare foot, excessive walking, exposure to mud, dust, water, winter season etc should be avoided. The choice of treatment to be adopted for psoriasis depends on many factors like extent and type of psoriasis, psychological condition of the patients, health status of the patient, previous treatment and age of the patient etc.

Topical therapy

A) *Tar Therapy:* The exact mode of action of tar in psoriasis is unknown. Tar has anti inflammatory and cytostatic activity.

B) *Anthralin* or *Dithranol:* It is generally used in ascending concentration. *Dithranol* act in psoriasis by inhibiting mitosis and thus slowing down the excessive rate of keratinocyte division in psoriasis.

C) *Keratolytic agents:* *Salicylic acid* (2-20%), *urea* (2-20%), *amoniated mercury* (2-20%), *propylene glycol solution* (40 – 60%) are *keratolytic agents* which are used to remove scale in *disoid*, *inveterate plaques* or *hyperkeratosis* of *palms* and *soles*.

D) *Bland Preparations:* It included *soft colite paraffin* or 1% *ichthamol* in *zinc paste*. These agents facilitate easy removal of *excessive scales* and *reduce fissure formation*.

G) *X-ray and Grenz-ray Therapy:* *Conventional X-ray* treatment is rarely used today. *Grenz-rays* are often helpful in selected patients with *localized psoriasis* that is resistant to other therapy.

H) *Radiation therapy:* Improvement of skin lesions is noticed in most patients subjected to *natural radiation*. This effect can also be brought about by exposure to *artificial light* twice in a week.

I.) *Photo therapy:* *Ultra-violet radiation* may be used either alone or in combination with other treatment in the range of (290 to 320nm) In *Goekerman's therapy* *UVB* is combined with *tar application* where as in *Ingram method* *UVB* is combined with *anthralin paste*.

J) *Vit D Analogues:* The most important topical therapy is *Vit D analogues*. These are used as a first line treatment in combination with the other topical treatments. They decrease the rate of *epidermal proliferation*. The main potent side effects are *hypocalcaemia* and *hypercalcuria*, resulting in *nephrolithiasis* and *hypocalcaemia*.

K) *Topical Cytostatic Therapy:* *Mechlorethamine* as a 0.01% - 0.05% aq. solution is used, having risk of *allergic contact sensitization* occurring in 80% of cases which can be lessened by combining therapy with *UVB photo therapy*.

L) *Intra-lesional Steroids:* The injection of *intralesional steroids* used for quick resolution of small *psoriatic areas*. It is used through a *needle* or *pressure jet injection*. It has no systemic side effects. Some of the adverse effects of this therapy are *atrophy*, *telangiactasia*, *hypo/hyper pigmentation*.

Systemic therapy:

a. *Systemic corticosteroids:* If other drugs are contraindicated or ineffective it should be used for short term in severe *erythrodermic* or *pustular psoriasis*. On withdrawal, *psoriasis* tends to *relapse promptly* and may *rebound*.

b. *Retinoids:* *Retinoid* are natural and synthetic analogues of *Vitamin A*. *Etretinate* is one of new synthetic *retinoids* found beneficial in the treatment of *Pustular*, *Erythrodermic* and *chronic Plaque psoriasis*.

c. *PUVA:* The mechanism of action is not fully understood but probably relates to an interaction of the *psoralen molecule* and *light energy* to decrease *DNA synthesis* and thus reduce the increase number *proliferating cells* seen in *Psoriasis*.

d. *Anti Metabolites:* i. *Methotrexate* ii. *Hydroxy urea* iii. *Razoxane* iv. *Cyclosporin*

CONCLUSION :

Vipadika is well explained in Ayurvedic samhita. That ancient knowledge of Ayurveda will helps in diagnosis and management *Vipadika* in present era very well. So its review article is an attempt to highlighting on details of *Vipadika with co-relating with Palmopantar psoriasis*.

REFRANCES:

1. Dr. Singh Devendra, Dr. Renu: Critical analysis on 'VIPADIKĀ GHRITĀ-TĀILĀ'- A Classical medication for vipadika (Palmo-plantar psoriasis)
2. Tripathi B. editor, Charak Samhita of Acharya Charak, Chikitsa Sthana; Kustha Chikitsa: Chapter 7, Verse 21-24. Varanasi: Chowkhambha Sanskrit Series, 2006; 305.
3. Shastri A., editor, (4th ed), Susrutasmhita of Maharsi-Susruta, Nidan Sthana; Kshudraroga Nidan: Chapter 13, Verse 28. Varanasi: Chaukhambha Sanskrit series, 1976; 284.
4. Shastri A., editor, (4th ed), Susrutasmhita of Maharsi-Susruta, Nidan Sthana; Kshudraroga Nidan: Chapter 13, Verse 3. Varanasi: Chaukhambha Sanskrit series, 1976; 281.
5. Garde G., editor, (6th ed), Vagbhatakruta Astanga hridaya, Nidan Sthana; Kusthashivtrakriminidana: Chapter 14, Verse 8. Aryabhushan mudralaya, 2000; 205
6. Garde G., editor, (6th ed), Vagbhatakruta Astanga hridaya, Nidan Sthana; Kusthashivtrakriminidana: Chapter 14, Verse 23. Aryabhushan mudralaya, 2000; 206
7. Madhavakara, madhava nidana with madhu kosha teeka by vijayarakshita and srikanthadatta vachaspati vaidya, vaidya jadavji tricumji acharya, chaukhambha orientalia, Varanasi, reprint 2010, 49/2:174
8. Misra B., editor (8th ed), Bhavaprakasha, Chikitsa prakarana; Kshudra Roga: Chapter 54, Verse 10, Varanasi: Chaukhambha Sanskrit series, 2003; 525
9. w w w . n c b i . n l m . n i h . g o v
10. Tripathi B. editor, Charak Samhita of Acharya Charak, Nidan Sthana; Kustha Nidan: Chapter 5, Verse 3, Varanasi: Chowkhambha Sanskrit Series, 2006; 623.
11. Tripathi B. editor, Charak Samhita of Acharya Charak, Chikitsa Sthana; Kustha Chikitsa: Chapter 7, Verse 4-8. Varanasi: Chowkhambha Sanskrit Series, 2006; 305.
12. Madhavakara, madhava nidana with madhu kosha teeka by vijayarakshita and srikanthadatta vachaspati vaidya, vaidya jadavji tricumji acharya, chaukhambha orientalia, Varanasi, reprint 2010, 49/2:174
13. Tripathi B. editor, Charak Samhita of Acharya Charak, Chikitsa Sthana; Grahanidosha Chikitsa: Chapter 15, Verse 42-43. Varanasi: Chowkhambha Sanskrit Series, 2006; 559.
14. Tripathi B. editor, Charak Samhita of Acharya Charak, Chikitsa Sthana; Grahanidosha Chikitsa: Chapter 15, Verse 42-43. Varanasi: Chowkhambha Sanskrit Series, 2006; 560.
15. Tripathi B. editor, Charak Samhita of Acharya Charak, Chikitsa Sthana; Grahanidosha Chikitsa: Chapter 15, Verse 44-45. Varanasi: Chowkhambha Sanskrit Series, 2006; 560.
16. Tripathi B. editor, Charak Samhita of Acharya Charak, Chikitsa Sthana; Grahanidosha Chikitsa: Chapter 15, Verse 45-48. Varanasi: Chowkhambha Sanskrit Series, 2006; 560.
17. Tripathi B. editor, Charak Samhita of Acharya Charak, Chikitsa Sthana; Grahanidosha Chikitsa: Chapter 15, Verse 49. Varanasi: Chowkhambha Sanskrit Series, 2006; 559.
18. Tripathi B. editor, Charak Samhita of Acharya Charak, Viman Sthana; Strotoviman: Chapter 5, Verse 12-13. Varanasi: Chowkhambha Sanskrit Series, 2006; 699.
19. Tripathi B. editor, Charak Samhita of Acharya Charak, Nidan Sthana; Kustha Nidan: Chapter 5, Verse 3, Varanasi: Chowkhambha Sanskrit Series, 2006; 623.
20. Tripathi B. editor, Charak Samhita of Acharya Charak, Chikitsa Sthana; Kustha Chikitsa: Chapter 7, Verse 4-8. Varanasi: Chowkhambha Sanskrit Series, 2006; 305.
21. Madhavakara, madhava nidana with madhu kosha teeka by vijayarakshita and srikanthadatta vachaspati vaidya, vaidya jadavji tricumji acharya, chaukhambha orientalia, Varanasi, reprint 2010, 49/2:342
22. Tripathi B. editor, Charak Samhita of Acharya Charak, Chikitsa Sthana; Kustha Chikitsa: Chapter 7, Verse 4-8. Varanasi: Chowkhambha Sanskrit Series, 2006; 305.
23. Tripathi B. editor, Charak Samhita of Acharya Charak, Viman Sthana; Strotoviman: Chapter 5, Verse 15. Varanasi: Chowkhambha Sanskrit Series, 2006; 699
24. Shastri A., editor, (4th ed), Susrutasmhita of Maharsi-Susruta, Nidan Sthana; Kshudratroga Nidan: Chapter 13, Verse 29. Varanasi: Chaukhambha Sanskrit series, 1976; 294.
25. Tripathi B. editor, Charak Samhita of Acharya Charak, Chikitsa Sthana; Kustha Chikitsa: Chapter 7, Verse 8. Varanasi: Chowkhambha Sanskrit Series, 2006; 305.
26. Shastri A., editor, (4th ed), Susrutasmhita of Maharsi-Susruta, Nidan Sthana; Kustharoga Nidan: Chapter 5, Verse 32-33. Varanasi: Chaukhambha Sanskrit series, 1976; 251.
27. Shastri A., editor, (4th ed), Susrutasmhita of Maharsi-Susruta, Nidan Sthana; Kustharoga Nidan: Chapter 5, Verse 27. Varanasi: Chaukhambha Sanskrit series, 1976; 250.
28. Tripathi B. editor, Charak Samhita of Acharya Charak, Viman Sthana; Vyadhirupiyavidnyaniyam: Chapter 7, Verse 26-27. Varanasi: Chowkhambha Sanskrit Series, 2006; 712.
29. Tripathi B. editor, Charak Samhita of Acharya Charak, Chikitsa Sthana; Raktapitta Chikitsa: Chapter 4, Verse 26-27. Varanasi: Chowkhambha Sanskrit Series, 2006; 225.
30. Tripathi B. editor, Charak Samhita of Acharya Charak, Chikitsa Sthana; Kustha Chikitsa: Chapter 7, Verse 11. Varanasi: Chowkhambha Sanskrit Series, 2006; 302.