

A LITERATURE REVIEW OF VICHARCHIKA (ECZEMA) IN AYURVEDA AND MODERN CLASSICS

Vd. Rituja Raghunath Jadhav^{1*} and Vd. Kavita Sachin Patil²

¹P.G. Scholar, Kayachikitsa Department, SSAM and Hospital, Nasik.

²Associate Professor, Kayachikitsa Department, SSAM and Hospital, Nasik.

Article Received on
22 Sept. 2020,

Revised on 12 October 2020,
Accepted on 02 Nov. 2020

DOI: 10.20959/wjpr202014-19000

***Corresponding Author**

**Vd. Rituja Raghunath
Jadhav**

P.G. Scholar, Kayachikitsa
Department, SSAM and
Hospital, Nasik.

ABSTRACT

In modern era, our daily sedentary life style has given rise to most of the skin disease as compared to last 30-40 years. In Ayurveda all skin diseases are included under the kushtharoga, which is further classified into two divisions i.e. Maha kushta and kshudra kushta. Representation of vicharchika is similar to those of eczema, which is mentioned in modern dermatology. Eczema, which is also mentioned as atopic dermatitis is characterized by dry itchy skin, discoloured patches, exudates/oozing, papules which resembles to symptoms of Vicharchika like Kandu, shyavavarnata, srava and raji respectively. Acute phase of eczema consists of vesicular and oozing state, while in the chronic phase it becomes hyper pigmented and thickened (lichenified),

sometimes which is also known as elephant like skin. Excoriations are mostly seen. In allopathy, the science has greatly advanced specially in dermatology but there are no specific medications for complete cure of eczema, only symptomatic and supportive treatment like steroids are used and they produce adverse effects like blackening of skin, cancer of skin etc. whereas, Ayurveda It believes that all doshas in equal state is essential for wellbeing of human. Allopathy does not cure eczema from root; recurrence is not uncommon, while Ayurveda cures by neutralising the effects of imbalanced doshas and dhatu in Vicharchika. In Bruhatrayi, different forms of lepa, churn, rasayana is mentioned.

KEYWORDS:- Vicharchika, Eczema, Bruhatrayi.

INTRODUCTION

Ayurveda is a system of medicine with historical roots in the Indian subcontinent. In Ayurveda all skin diseases are included under the kushtharoga, which is further classified into

two divisions i.e. Maha kushta and kshudra kushta. Vicharchika can be correlated with eczema which is characterized by persistent or recurring skin rashes, running a chronic course, and has a tendency of exacerbations. Eczema, which is also mentioned as atopic dermatitis is characterized by dry itchy skin, discoloured patches, exudates/oozing, papules which resembles to symptoms of Vicharchika like Kandu, shyavavarnata, srava and raji respectively. Acute phase of eczema consists of vesicular and oozing state, while in the chronic phase it becomes hyper pigmented and thickened (lichenified), sometimes which is also known as elephant like skin. Acute phase of eczema consists of vesicular and oozing state, while in the chronic phase it becomes hyper pigmented and thickened (lichenified), sometimes which is also known as elephant like skin. Excoriations are mostly seen. In allopathy, the science has greatly advanced specially in dermatology but there are no specific medications for complete cure of eczema, only symptomatic and supportive treatment like steroids are used and they produce adverse effects like blackening of skin, cancer of skin etc. whereas, Ayurveda It believes that all doshas in equal state is essential for wellbeing of human. Allopathy does not cure eczema from root; recurrence is not uncommon, while Ayurveda cures by neutralising the effects of imbalanced doshas and dhatu in Vicharchika. In Bruhatrayi, different forms of lepa, churn, rasayana is mentioned.

MATERIALS AND METHODS

1. According to Acharya Charaka.

सकण्डूः पिडका श्यावा बहुस्रावा विचर्चिका ।

(च.चि.७/२६)^[1]

Vicharchika is defined as dark coloured eruptions associated with itching and profuse discharge.

2. According to Sushruta Samhita.

राज्योऽतिकण्ड्वर्तिरुजः सरूक्षा भवन्ति गात्रेषु विचर्चिकायाम् ।

कण्डूमती दाहरुजोपपन्ना विपादिका पादगतेयमेव ॥

(सु.नि.५/८)^[2]

Acharya Sushruta defines, Vicharchika is a condition in which the skin has linear rough lesions with intense itching and pain but when the same symptoms appear at the feet alone, it is called as “Vipadika”.

Nidan panchaka a proper understanding of etiological factors help in better understanding of samprapti.

1) Hetu

1. Aharaja hetu

आह्नियत इत्याहारो भेषजमपि ।

(चक्र. च.सु.२६/८५)

The substance which is taken in the body is Ahara. It is also called Bhesaja.

According to Acharya Charaka, the use of wholesome diet is prime reason for the growth and development of the body, on the contrary, unwholesome diet causes several diseases (Ch.Su.25/31)

The main causative factors of Kushtha are Viruddha Ahara and MithyaAhara.

a) Viruddha ahara

यत्किञ्चिद्विषमुत्क्लेश्य न हरेत्तत्समासतः ।

विरुद्धम्.....॥

(अ. ह.सु.७/४५)

Anything (Anna, Pana and Aushadha) which stimulates the Dosha, but do not eliminate from the body are regarded as ViruddhaAhara.

विरुद्धमपि चाहारं विद्याद्विषगरोपमम् ।

(अ.ह.सु.७/२९)

Vagbhatta has compared ViruddhaAhara with Visha and Gara. On this Arunadutta has commented just like Visha and Gara, ViruddhaAhara also causes disease or death.

षाण्डयान्ध्यवीसर्पकोदराणां विस्फोटकोन्मादभगन्दराणाम् ।

मूर्च्छामदाध्मानगलग्रहाणां पाण्ड्वामयस्यामविषस्य चैव ॥

किलासकुष्ठग्रहणीगदानां शोथाम्लपित्तज्वरपीनसानाम् ।

सन्तानदोषस्य तथैव मानदत्योर्विरुद्धमन्नं प्रवदन्ति हेतुम् ॥

(च.सु.२६/१०२-१०३)

According to Charaka, due to Viruddha anna Shandhya, Andhya, Kushthaatc. even death can occur.

Viruddhaahara is a causative factor for Majjavaha Sroto Dushti.

MithyaAahara means improper diet or the diet not according to the rule.

अकाले चातिमात्रं च ह्यसात्म्यं यच्च भोजनम् ।

विषमं चापि यद् भुक्तं मिथ्याहार स उच्यते ॥

(म.नि.२/२-मधुकोष)

Ingestion of food which taken untimely, excessive quantity, unwholesome and Vishama is called MithyaAahara.

आहारस्य मिथ्यात्वं प्रकृत्यादीनामाहारोपयोगहेतूनां विरुद्धत्वेनोप्योगः ।

(मधुकोष. मा.नि.२/२)

Vijayarakshita, the commentator of Madhava Nidana, has defined 'MithyaAhara' as a diet opposite to 'AstauAhara Vidhi VisheshAyatanani'. Acharya Charaka has listed these eight factors in Ch.Vi. 1/22 which are:

Prakruti, Karana, Samyoga, Rashi, Desha, Kala, Upayoga, samsthan, Upyokta.

Poorvarupa

1) Asweda

अस्वेदो अत्यन्त स्वेदाभावः ।

(इन्दु अ.स.नि.१४/८)

Asweda mean complete or marked absent of sweating. This is due to Swedavaha Srotasa Dushti.

2) Swedadhikya

Due to vitiated Dosha settled in Rakta, leads to excess Sweda formation.

3) Atislakshnata

It means Atimrudu

Excessive secretion of Twak Sneha (sebum) leads to Atislakshanata.

4) Vaivarnyata

Discolouration apart from the normal colours of the skin like Krushna, Shyama, Shyamavadata and Avadata is called Vaivarnya.

5) Toda

तोदो विच्छिन्नं शूलम् ।

(अरुणदत्त. अ.ह.सु.१२/४९)

Toda is mentioned in Vatananatmaja Vikara. It is a one type of pain sensation due to vitiated Vata Dosha.

6) Suptata

Suptata means Sparshahani which is due to Dushti of Vata or Kapha Loss of Sparsha or ShunaAnga or Jadata (Yogindranath Sen).

7) Paridaha/Daha

दाहः सर्वाङ्गदहनमिव ।

(च.सु.२०/१६)

Daha means burning like sensation in whole body. It is due to vitiated Pitta.

It is also mentioned as Pitta Nanatmaja Vikara

8) Pariharsha

परिहर्षो झिनझिनिका ।

(च.नि.५/७)

It means Feeling of excessive coldness. This is due to Anavasthitatwa of Vayu or by Prabhava of Vayu.

9) Ushmayana

Ushmayana is due to increase of Ushna Guna of Pitta. Ushmadhikya is also mentioned as a Pitta Nanatmaja Vikara.

10) Gaurava

गौरवं दुर्वहाङ्गत्वं । अ.ह.सु. ११/७

Gaurava means feeling of heaviness in the body. It is due to Kaphavruddhi.

Vicharchika

Accordingly from above text Kushtha are of two types

1) Mahakushtha 2) Kshudra kushtha

Vicharchika is considered in Kshudra Kushtha

सकण्डूः पिडका श्यावा बहुस्रावा विचर्चिका ।

(च.चि.७/२६)

Vicharchika is defined as dark coloured eruptions associated with itching and profuse discharge.

Modern aspect

Eczema means distinctive reaction of the epidermis to a variety of agents, endogenous and/or exogenous, characterized clinically by itchy eruption, erythematous papules, oedema, vesicle, scaling, vesicles leading to weeping and/or lichenification, and histological evidence of spongiosis.

Difference between Eczema and Dermatitis

The terms eczema and dermatitis are used with different connotations by different people

- Some dermatologists use the term dermatitis to include any cutaneous inflammation, eczema being just one type of inflammation of the skin. So, dermatitis is a broader term.
- Some use both terms synonymously and interchangeably.

Classification of eczema

Several classification of eczemas are available none being all encompassing

Etiological	Morphological
Endogenous	Discoid
Exogenous	Hyperkeratosis
Combined	Lichenified
	Seborrheic

The most practical way to classify eczema, according to etiology is:

- **Endogenous eczema:** Where the constitution of the patient predisposes the patient to develop eczema.
- **Exogenous eczema:** When the patient develops eczema as a response to external stimuli, e.g. irritant dermatitis.
- **Combined eczema:** When a combination of extrinsic and constitutional factors work, e.g., atopic dermatitis.
- **Symptoms:** Eczema looks different for everyone, and flare – ups wont always happen in the same area.

No matter which part of your skin is affected, eczema is almost always itchy. The itching somrtimes starts before the rash.

Symptoms in infants

In infants, the itchy rash can lead to an oozing, crusting condition, mainly on the face and scalp. It can also happen on their arms, legs, back, and chest.

Symptoms in children's

Children's and teens usually have a rash in the bends of their elbows, behinds their knees on their neck or their wrists or ankles. The rash turns scaly and dry.

Symptoms in adults

The rash usually happens on face, the backs of knees, wrists, hands, feet.

Associated features: Asthma, Hay fever, Urticaria.

Investigations

1) Blood test

A small amount of blood sample is drawn and its tested for the presence of eosinophils. Increased levels of eosinophils cells in blood sample indicate an immune reaction. The level of allergen specific IgE antibodies would also be assessed in the blood sample.

2) Skin tests

Skin biopsy – Skin biopsy is a procedure where numbs the skin and removes a small sample of skin. The sample is examined under a microscope diagnose eczema.

3) Skin prick test

This test is used to identify the allergies that are caused by pollen, dust mites and certain foods. Needle are used to remove skin tissue at the test site.

4) Patch testing

Patch test is done to identify the allergy that is caused due to substances such as fragrances, rubber, metals, resins, hair dyes and preservatives. This test involves exposing skin to certain extract of substances and then evaluating skin reaction.

Management

Samanya chikitsa sutra

वातोत्तरेषु सर्पिवमनं श्लेष्मोत्तरेषु कुष्ठेषु।
पित्तोत्तरेषु मोक्षो रक्तस्य विरेचनं चाग्रे ॥ च.चि. ७/३९

Shodhana chikitsa

Vamana karma

In Ch.Chi.7/43, says that when the Dosha are located in Hridaya or the centre of the body, Dosha are in a state of Utklesha, and then the patient having Kushtha in the upper parts should be given Vamana with Kutaja, Madanaphala, Madhuka mixed with decoction of Patola and Nimba.

Virechana karma

- Drugs like Trivruta, Danti and Triphala are useful for Virechana. The recipe can be prepared by adding Souviraka, Tushodaka, Alodana, Asava and different types of Sidhu.

Asthapana basti

If there is excess of Vayu then Asthapanabasti should be given with the drugs like Darvi, Bruhati etc.

Anuvasanabasti

When there is excess of Vayu even after Virechana and Asthapana and if the patient is suitable for the administration of Anuvasana and then he should be administered with Madanaphala, MadhukayuktaAnuvasana Basti. But in the general indications both types of Basti are contraindicated, but depending upon the situations it can be done.

Nasya

Nasya is indicated with the drugs like Saindhava, Danti, Maricha etc which are effective against Krumi and Kushtha and diseases caused by Kapha Prakopa.

Dhumapana: Virechanika Dhuma cures Krumi, Kushtha and Kilasa affecting the shira.

Raktamokshana

- If the patches of Kushtha are Sthira, Kathina and Mandala, Prastara and NadiSweda should be done and Rubbed with Kurcha. The blood oozing out through this process should there after be eliminated.
- Bhela in Chikitsa 6/40 mentions that the Raktajanya and SannipatajaKushtha are initially treated with Siravyadha. In AlpaKushthaPracchanna is indicated, either with the help of Jalauka, Alabu or Shruna.
- Site for Raktamokshana is mentioned in A.H.Chi.19/15. Siravyadha can be done at Lalata, Hasta and Pada also. Siravyadha can be done 2 angula above the Kshipra Marma.
- Snehapana is necessary after Raktamokshana and Virechana to control the aggravation of Vata.
- Eventhough Bahu Doshavastha is found in Kushtha, only little quantity of Dosha should be eliminated repeatedly otherwise aggravated Vata destroys the Bala.
- Repeated administrations of Vamanadi procedures are mentioned: Vamana once in 15 days, Virechana once in 30 days, Raktamokshana once in 6 months and Nasya for once in 3 days.

- Bhela has mentioned Avapeedana Nasya for once in 3 days.

Shamana chikitsa

Some of the Yoga early in the morning like GuduchiSwarasa, Kwatha or Siddha Ghruta for one month helps to nullify all types of Kushtha.

Kwatha of Darvi, Khadira and Nimba is said to be Kushthhara Tuvaraka, Bhallataka, Bakuchi, Chitrakamula and Shilajatu are indicated for Rasayana prayoga.

Specific treatments for vicharchika are

Arkataila, Marichyaditaila, Vishataila, Shadbindutaila Aragwadhadhi Kwatha, Rasamanikya etc.

Kshara prayoga

- In case of anaesthetic patches, Shastra is contraindicated and Kshara should be applied after elimination of blood and Dosha.
- The Lepa prescribed for Kushtha becomes instantaneously efficaceous only after the elimination of impurities in the blood and in Koshta.
- The drugs like Kushtha, Amrutasanga, Daruharidra, Kasisa, Kampillaka, Musta, Lodhra, Sougandhika, Sarja Rasa, Vidanga, Manashila, Haratala, Karaveera twak are indicated for Avachmana in Vicharchika.

Daivavyapashraya chikitsa

व्रतदमयम्सेवा त्यागशीलाभियोगो द्विजसुरगुरुपुजा सर्वसत्त्वेषु मैत्री ।
शिवशिवसुतताराभास्कराराधनानि प्रकटितमलपापं कुष्ठमुन्मुलयन्ति ॥
अ.ह.चि.१९/१^[18]

Vrata, Dama, Yama, Guruseva, Tyaga, Shilabhiyoga, Dwija-Sura-Guru puja, Maitri to all living creature, Aradhana of Shiva, Kartikeya, Tara and Bhaskara will subside all types of Kushtha.

Tapopasevana (Su.Ni.5/31) and charmakshya (Ch.Sha.1/117) will subside the disease. Harita has mentioned Dana of Go, Bhumi, Swarna or Anna for Papakarmottapanna Kushtha (Ha.Dwi.1).

In Vata Pradhana Kushtha Sarpipana, in Shleshma Pradhan Kushtha Vamana, in Pittapradhan Kushtha Virechana and Raktamokshana should be done. Prachchhana should be done in Alpa Dosha YuktaKushtha and Siravyadha in Mahat Dosha. Kushtha with BahudoshaAvastha should be given Samshodhana therapies frequently.

Vaccinations

Routine vaccinations can be given during the quiescent phase of the disease. Children suspected to be allergic to eggs, should not be inoculated against measles, influenza and yellow fever.

Topical therapy

The aim of topical therapy is: Hydration of the skin Reduction of itching and so scratching Protection from environmental factors. Suppression of inflammation Reduction/ prevention of secondary infection.

Emollients

- Emollients have hydrating effect, reduce scaling, improve skin texture and appearance, improve the extensibility of skin, and reduce fissure as well as decrease pruritus and inflammation.

Topical corticosteroids

- Topical corticosteroids are the most useful topical agents for the treatment of AD.
- However these drugs are only suppressive and need to be given over long periods. Toxic side effects, such as skin atrophy, pituitary-adrenal axis suppression and masked infection, are ever-present possibilities. Sudden withdrawal can lead to a sudden and severe rebound aggravation of the eczema.
- It is prudent to use the least potent corticosteroid preparation that is effective. Topical corticosteroids may become less effective with continued use, but changing to another preparation of similar potency will regain control. This phenomenon of acquired tolerance is known as tachyphylaxis.
- There are many corticosteroids and less potent agents, such as hydrocortisone, clobetasone 17-butyrate, flurandrenolone and desoxymethasone that are particularly suitable for infants with active eczema.
- Creams, lotions and gels are less helpful vehicle for the corticosteroids and are less useful than greasy ointments. They should be applied once or twice daily.

Topical calcineurin inhibitors (TCI)

- Topical immunomodulators like pimecrolimus (1% cream) and tacrolimus (0.03% and 0.1% ointment) modify the cytokine response of cells and are useful in mild-moderate AD because of:
 - Their steroid sparing action
 - No potential for local side effects like atrophy and telangiectasia
 - Rapid reduction in itching both tacrolimus and pimecrolimus are safe and the only important side effect is mild local burning.

Tar preparations

- Coal tars used for eczema and psoriasis.
- Their anti-inflammatory action is little understood and they are best employed for chronic lichenified areas of eczema.
- They can irritate the skin and have caused concern because of a potential for carcinogenicity.

Systemic therapy

Some patients with severe disease do not respond to topical measures. For these there are several options include systemic antibiotics photo chemotherapy, systemic steroids, and cyclosporine.

CONCLUSION

On the basis of the present article, following conclusions can be drawn. Vicharchika is stated as a Kshudra Kushtha & Sadhya Kushtha by all acharya, but Kushtha is one among Ashta Mahagada. So, it is difficult to cure. Vicharchika can be seen at any age but frequently in young age due to exposure to occupational, environmental factors and mental stress. Now a day junk food, irregularity in food taking, suppression of natural urges, uses of cosmetics and other chemicals, polluted environment, stressful life and Emotional disturbances definitely play a major role in manifestation of Vicharchika. Mithya Ahara – Vihara, especially Navanna, Viruddhahara and Vegavidharana are the main causative factors of Vicharchika. Excessive intakes of Santarpaka Nidana cause Agni Dushti and play an important role in manifestation of Kushtha. Hands and Feets (Pani-Pada) are the main culprit of the disease. Vicharchika has Kapha dominance but Tridoshaja involvement was evident from signs and symptoms. Rasa, Rakta, Mamsa and Lasika are involved in manifestation of Vicharchika.

Rasavaha, Raktavaha, Mamsavaha and Swedavaha Srotasa are involved in the disease. The cardinal symptoms of Vicharchika are Kandu, Pidaka, Vaivarnya especially Shyavata, and Srava. In Bruhatrayi initially shama chikitsa is explained, which pacifies the dosha from root cause, which helps to move the dosha from shakha to koshtha followed by shodhana chikitsa which eliminates the dosha from body via, vamana, virechana, basti, raktamokshana etc, karma. One should also consider different types of lepa which are explained. Upon topical application, the active principle of the Lepa reaches to the deeper tissues through Siramukha & Swedavahi Srotasa by virtue of its stains with its Sukshma & Tikshna property. Due to its Ushna, Laghu, Ruksha properties it removes the obstruction in Swedavahi Srotasa and allows the local toxins to flow out through the Sweda, thus clearing out the micro channels. In most of the patients Kandu which is main symptom of disease, was relieved significantly due to the Kusthaghna and Kandughna properties of drugs of Lepa.

REFERENCES

1. Professor Vaidya.Ya.Go.joshi, Charaka Samhita, Shri Chakrapani datta Virachit, Ayurveda Dipika vyakhya, 4th edition 2013, Volume 2, Chikitsa sthana, Kushthachikitsa adhyaya, Pg.No.192.
2. Dr. Anantram sharma, Sushruta Samhita, Sushruta vimarshini hindi vyakhya, Volume 1, edition 2015, Chaukhamba surbharti prakashana, Nidanasthana, Kushtha Nidana, Pg.No. 496.
3. Dr. Anna Moreshwar Kunte and Krushna Shastri Navre, Ashtanga Hrudaya and commentaries sarvangasundara of Arundatta and Ayurveda rasayana of Hemadri, Nidanasthana, Kushtha Nidana, Pg.No.525.
4. Dr. V. Narayana Swamy (Padmashri), a crusader of Ayurveda, Ashthanga Samgraha of Vagbhata, Volume 2, Nidana sthana, Kushthashwitrakrumi Nidana, Pg.No.237.
5. Professor Vaidya.Ya.Go.joshi, Charaka Samhita, Shri Chakrapani datta Virachit, Ayurveda Dipika vyakhya, Volume 1, 4th edition 2009, Vaidyamitra prakashana, Sutrasthana, Atreyabhadrakapya adhyaya, Pg.No.341.
6. Dr. Anna Moreshwar Kunte and Krushna Shastri Navre, Ashtanga Hrudaya and commentaries sarvangasundara of Arundatta and Ayurveda rasayana of Hemadri, Sutrasthana, Annarakshaasadyaya, Pg.No.137.
7. Dr. Anna Moreshwar Kunte and Krushna Shastri Navre, Ashtanga Hrudaya and commentaries sarvangasundara of Arundatta and Ayurveda rasayana of Hemadri, Sutrasthana, Annarakshaasadyaya, Pg.No.133.

8. Professor Vaidya.Ya.Go.joshi, Charaka Samhita, Shri Chakrapani datta Virachit, Ayurveda Dipika vyakhya, Volume 1, 4th edition 2009, Vaidyamitra prakashana, Sutrasthana, Atreyabhadrakapya adhyaya, Pg.No.342-343.
9. Khemraj Shrikrushnadas, Madhava Nidana with commentary, Shrivyankateshwar, Bombay, Edition 2008, Pg.No.13.
10. Khemraj Shrikrushnadas, Madhava Nidana with commentary, Shrivyankateshwar, Bombay, Edition 2008, Pg.No.13.
11. Professor Vaidya.Ya.Go.joshi, Charaka Samhita, Shri Chakrapani datta Virachit, Ayurveda Dipika vyakhya, Volume 1, 4th edition 2009, Vaidyamitra prakashana, Nidana sthana, Jwara Nidana, Pg. No.427.
12. Dr. Anna Moreshwar Kunte and Krushna Shastri Navre, Ashtanga Hrudaya and commentaries sarvangasundara of Arundatta and Ayurveda rasayana of Hemadri, Sutrasthana, Doshabhedhiya adhyaya, Pg. No.201.
13. Professor Vaidya.Ya.Go.joshi, Charaka Samhita, Shri Chakrapani datta Virachit, Ayurveda Dipika vyakhya, Volume 1, 4th edition 2009, Vaidyamitra prakashana, Sutrasthana, Maharoga adhyaya, Pg.No.266.
14. Professor Vaidya.Ya.Go.joshi, Charaka Samhita, Shri Chakrapani datta Virachit, Ayurveda Dipika vyakhya, Volume 1, 4th edition 2009, Vaidyamitra prakashana, Nidana sthana, Kushtha Nidana, Pg. No.470.
15. Dr. Anna Moreshwar Kunte and Krushna Shastri Navre, Ashtanga Hrudaya and commentaries sarvangasundara of Arundatta and Ayurveda rasayana of Hemadri, Sutrasthana, Doshadivignyaniya adhyaya, Pg. No.183.
16. Professor Vaidya.Ya.Go.joshi, Charaka Samhita, Shri Chakrapani datta Virachit, Ayurveda Dipika vyakhya, 4th edition 2013, Volume 2, Chikitsa sthana, Kushthachikitsa adhyaya, Pg.No.192.
17. Professor Vaidya.Ya.Go.joshi, Charaka Samhita, Shri Chakrapani datta Virachit, Ayurveda Dipika vyakhya, 4th edition 2013, Volume 2, Chikitsa sthana, Kushthachikitsa adhyaya, Pg.No.194.
18. Professor Vaidya.Ya.Go.joshi, Charaka Samhita, Shri Chakrapani datta Virachit, Ayurveda Dipika vyakhya, Volume 1, 4th edition 2009, Vaidyamitra prakashana, Sutrasthana, Aaragwadhiya adhyaya, Pg.No.59.

Textbooks

1. API textbook of medicine Vol. 1, Yashpal Munjal, 9th edition, Jaypee Brothers Medical Publishers (P) Ltd.
2. Kumar and Clark Clinical Medicine, edited by Parveen Kumar and Michael Clark, 5th edition 2002, W.B. Saunders Publication.
3. Davidson's Principles and Practice of medicine, edited by Brian R. Walker, Nicki R. College, Stuart H. Ralston, Ian D. Penman, Churchill Livingstone Elsevier.