

# Skin Health Preservation and Procurement with Special Reference to its Twak Vikaras

# Sushant Sud\*, Khyati Sud and Babariya CH

Department of Agad Tantra, Gujarat Ayurved University, India

**\*Corresponding author:** Sushant Sud, Department of Agad Tantra, Shri Gulabkunverba Ayurved Mahavidyalaya, Gujarat Ayurved University, Jamnagar, India, Tel: +91-9687792882; E-mail: drsushantsud@gmail.com

**Conceptual Paper** 

Volume 1 Issue 2 Received Date: August 12, 2017 Published Date: September 19, 2017

**Keywords:** Twak Vikaras; Healthy Skin; Preservation; Tridosha Theory

## Introduction

Annual growth of global population is around 1.9% and some of the country's population growth is as high as 2.7% annually. From this, it may be said that the human beings are the most dominant animal on the earth and have empowered every resources in the nature. But, are humans free from agony of natural calamities as well as diseases? In fact, it has been always with prime concern of human beings. Being a social animal quality of life remains upper most in the mind of each individual. Today, to improve the quality of life, human beings are trying to develop newer resources as well as are trying to improve quality of life by acquiring a sound health. Therefore, health care is one of the most vital aspects for each individual [1-4].

Ayurved, the ancient system of medicament on earth, has respectable status among these systems of medicine and it is considered to be the most suitable system of medicine, especially for the fulfillment of second purpose of Health Sciences. Ayurved encompasses not only science but religion and philosophy, as well. The word religion has been used to denote beliefs and disciplines conductive to states of being in which the doors of perception open to all aspects of life. The word philosophy refers to love of truth and in Ayurved truth is being pure existence. The source of all life, Ayurved believes that every individual is a unique phenomenon. An individual is indivisible from the cosmos. Whatever is there in the macrocosm, the same thing exists in the microsome. Every individual is a manifestation of cosmic consciousness. The vibrations of pure universal consciousness produce Sabdadi Tanmatras from which the five basic elements i.e. Akasa. Vayu, Agni, Apa and Prthvi are produced. Furthermore, these five basic elements are manifested into three biological organizations known as Vata, Pitta and Kapha. In every organism these are structural and functional units also governing all pathological changes. Specific permutations and combinations of these biological organizations are responsible for the manifestation of different elements of the body e.g. Dhatu and Mala etc and then organs and systems and at last whole body. Twak is also one such important organ of the body [5-7].

## **Procuring the Healthy Skin**

Every clinician has ample opportunity to look at the skin, when listening to or examining a patient. It is estimated that over 2500 skin conditions are occurring in the population. There are ample of examples and studies have shownthat, self-medication is much more common than treatment prescribed by the doctors/physicians for the sake of skin problems [8,9]. Skin diseases can harm affected individuals in a number of ways such as- death due to metastatic skin cancer; discomfort of itching; pain or post herpetic neuralgia; disfigurement due to acne; psoriasis; disability owing to dermatitis of hand and feet etc, are the problems and embarrassing consequences of unhealthy skin. It is often a cosmetic-social problem leading to anxious states especially for females. Hence a healthy -intact skin brings up the cheerfulness and proudness in the routine life and current modernized humans [10,11].

### **Basic Concepts of Healthy Skin**

Embryologically skin is derived from the metabolic process of dhatus, as a cream substance (Su. Sa.4/4) Shudha Rakta Purusha Lakshana includes prasanna varna. Characteristics of Twak sara purusha have been explained in the texts (Ca.Vi. 8/103) [12,13].

#### **Influencing Factors**

The following are the factors influencing the healthy skin viz:

- 1. Udana Vayu
- 2. Bhrajaka Pitta
- 3. Rasa dhatu
- 4. Manas
- 5. Ahara-Vihara
- 6. Ritu
- 7. Prakriti
- 8. Vayas
- 9. Agni
- 10. Oja

The expression of complexion is mainly depending upon the physiological prosperity of Udana vayu. It maintains the texture and lusture of the skin. Among the seven layers of the skin, functions of Vayu and Pitta are mostly confined to the 5<sup>th</sup> layer. Bhrajak Pitta, metabolizes the external oils and medicines, maintains the waterelectrolyte balance, and thermoregulation. According to the seasons the functions and properties of skin are altered. By the process of Prinana Karma Rasadhatu enriches the skin and gives the complexion, intactness and prosperity by its snigdha and slakshana etc properties. It also regulates the nutrition to the skin [14-16].

### The Mind and the Skin

- Embryological, skin and brain both are derived from "EPIBLAST". Skin-mind relationship is well established in the field of psychosexual development.
- Skin is not only an extension of primitive central nervous system but also becomes an essential part of the individual's temperament and personality.
- Skin is the convas on which most of the common emotions like fear, anger, embarrassment etc are reflected.
- It can be stated that the state of mind and the state of the skin affect each other reciprocally.
- Emotional factors are of significant aetiological importance in many of the skin diseases (15-20%) (wittkower). Dermatitis, alopecia, acne vulgaris,

psoriasis, urticaria, eczema etc are few examples of skin diseases which are having relevancy as etiological factor as mind. It means a sound mind can promote the health of the skin [17,18].

#### **Additional Factor**

- It plays a major role in the maintenance of healthy skin. Malnourishment, obesity, vitamin deficiency states etc will certainly affect the prosperity of the skin.
- At the same time environmental factors also affect the skin, viz. dry wind, high altitude, low and high temperature, very hot sun light, humidity, allergens etc. The same examples are found in the context of Viharas, Ritucharya of Ayurved.
- Constitution personality or Prakriti has got its own place in heath status of the skin. Many similies are seen in Vata-Pitt-Kapha prakriti purusha lakshanas. Pitta prakriti persons are usually having handsome, red skin. Vata prakriti puurushas are rough and blackish coloured. Kapha prakriti persons are smooth and oily skinned [19,20].
- As the aging process continues, the skin changes are mostly seen. At the infancy and childhood, skin plays a major role for the warmth, security and self differentiation, and then for sexual identification and at adolescence for sexual stimulation and gratification. It also plays a major method or mean for the attainment of orgasm. At the old age the intactness of skin is lost and brings the look of oldness.
- Agni maintains the metabolism, excretion and thermoregulation of the body. So any dearrangement in the status of the agni leads to the unhealthy skin. Ojas is the supremo, which is formed after all the dhatus and its intactness in the body brings a tuft and prosperity to the skin. It enriches and enhances the skin quality [21-23].

#### **Methods of Procuring Healthy Skin**

Ayurvedic classical texts have tried very much to protect the skin and enhance its capacity of making a person feel fresh or proud [24,25]. For this purpose the above said factors are to be maintained all the time:

#### **External Methods**

• Abhyanga: By using oil, medicated oils, and fragrant substances skin becomes lusturous. The body comes strengthened and health of the skin is obtained. Due to the effect of srotomukha shodhana and local nutrition and the effect of Bhrajak agni indirectly Abhayanga enriches the status of mind, so that conversely peaceful

mind keeps the skin insturous and healthy. The sensation of touch is seated at integument. The drugs and the methods which are promotive to the sensory perception and skin are helpful in maintaining the health and prosperity of the skin [26].

- Udvartana: Various substances and techniques are available in the texts, and they are said to be good as twak prasadan property. The sub stances usable are oils, powders, mustard powder with milk etc [27].
- Snanam: Daily routine bathing is practiced, and the same when practiced with other cosmetic drugs and pure water, it will remove the impurities from the skin leaving clear and healthy skin. Itching, sweat, bad smell, dust and other sticky substances are removed from the skin [28].
- Kesha and Twacha Prasadanam: Different kinds of perfumes, oils, cosmetics, shampoos etc are mentioned in the texts for cleaning and keeping the skin, scalp and hair healthy. These will improve the skin health and brings up lusture and freshness [29].
- Foot wears: It is mentioned and stressed on the Dinacharya to wear proper, perfect and comfortable footwares to combat the injuries to the sole. It bring courage, comfort and health to the skin and body and indirectly to the vision [30].
- Chatra: While walking in sunshine or in the rain the usage of umbrella has been stressed. It maintains the complexion and protects the skin. These are also named as Varnya [31].
- Manidharana: Precious stones, pearls, gold etc have got specific effect on skin and body on wearing them, by acting according to "Grahas." They bring health and complexion by their prabhava [32].
- Garlands: Fragrant, beautiful and ilumonious flowers when kept on hairs or as garlands will bring lusture and keep away the microbes [33].
- Kumkuma,Dhupa: A Sindoor or Kumkuma applied on forehead will enlight the health and spirit of face. Dhupas will bring the good smell to the skin and combat with microbes [34].
- Mukha Lepa: Face packing done with various herbomineral cosmetics will bring up the cheerfulness, takes off the premature scaling, spots from the skin. It also enriches the health status and complexion of the skin [35].
- Pichu Dharana: A swab of medicated oils or pastes will act locally on the skin layers and combat the dry skin, and cracks on the skin. It communicates the cracked skin and maintains the intactness of the skin [36].
- Plain or Medicated Oil: applied over the body will try to promote the health of the scalp and healthy growth of hairs, finally bringing up the complexion and comfort of

well being [37].

#### **Internal Methods**

- Dinacharya and Ritucharya: When these regimes are followed constantly for the longer time, it will bring up the healthy skin, body and even mind. They do act internally, externally and even both. They maintain the Dosha-Dushya balance perfectly. Seasonwise food products, clothing, water, shelter will protect the skin from external mutations; getting either dried or cracked or shrink.
- Food-nutrition: Ruksha, Kashaya, Khara, Lavana, Vidahi, Dhuma, Upavasa etc when consumed in Hina-Mithya- Atiyoga will certainly worsen the skin condition. So excessive usage of all these are contraindicated in procuring the healthy skin.
- Snigdha, Laghu, Slakshana, Drava guna dominant food products are helpful in maintaining the healthy skin. Green leafy vegetables, fruits are having natural resources which are very much needed in procuring healthy skin. They are rich source in vitamins and minerals.
- Water (Jala): Cold water has been said to be as Rasayana. It acts well on the skin texture and protects skin from getting wrinkles. But, too much cold water is not advocated. Water either cold or hot has got very essential role in changing the skin from sweat and other waste products.
- As it has been told that water from the rivers which arise from Vindhya and Sahyadri will produce skin disorders, so this water should be cautiously used. Hot water when consumed orally will act upon Bhrajak agni and procure the health of the skin, integrity of the skin functions is maintained.
- Milk and Milk products: Milk is Rasayan and Ojaskara, it acts upon the the skin and Rasa agni to maintain the health of the skin. Milk enhances the lusture, texture and functions of the skin.
- Milk and milk products are Jivanaya when used properly. They are helpful in maintaining the healthy skin. Excessive use of curd is contraindicated in skin health.
- Ghrita: It is very well said that Ghi (pure) is Kantivardhak, Saukaumaryajanaka and helpful for the skin health. It cures the injuries and damages of the skin. Ghi when consumed constantly in a proper way will produce good body health and skin conditions.
- Madhu: it is Kusthhara, Vrana shodhaka, Ropana, Sandhankara as told in the textx.
- Sarshapa Taila: it is Kusthaghna, means it acts on skin disease manifestation and bring backs the normalcy of the skin.

- Kusumbha Taila: is harmful to the skin and is not to be used continuously.
- Madya (Alcohol): Alcohols, wines and other fermented products when used in a proper manner will bring Pratibha, Varna of skin. But they should be used as medicines in a minimal doses only.
- Snehana & Swedana: brings about Malanirharana, Kantivardhaka.
- Vaman-Virechana-Raktamokshana: are the shodhan procedures which bring the lusture, purity and integrity of the skin. Hence they are mostly indicated in almost all the skin diseases [38].

The Twaka (skin) in the human body is a covering provided by mother nature to a human being and if that cover is spoiled or torn anywhere it either looks ugly or may be troubled with other serious anomalies. The first goal of Avurved is to promote "the health of the healthy" and second one is to "free the human beings from the diseases". In hot pursuit to achieve these goals, the learned Acharyas have formulated, propagated and professed various formulations which take care of the skin in healthy as well as diseased conditions. Various formulations and procedures like Pralepa, Pradeha, Malahara. Upanha, Taila, Avachurna. Abhvanga. Avagahana, Parisechana etc. have been and are being used with great effectivity pertaining to the requirement of the skin, keeping in mind the Prakriti of a person in healthy condition and the disease in the diseased [39-41].

From the time immemorial and as described by Acharya Sushruta, the formulations for Twaka have been used for basically three purposes, as (a) Doshaghna (b) Vishaghna and (c) Varnyakara. Thus, as stated above, the formulations for Twaka were used and are being used as skin protectives, disease removing and aesthetical purposes. Here, it becomes essential to understand the whole process of the effect of drug on the Twaka in terms of its structuro-functional aspect which may be depicted as under. Two theories may be forwarded as per the Ayurvedic ideology pertaining to absorption and activity of the drugs when applied externally and reaching into the body through the Twaka [42-45].

### **Narrations from Ayurvedic Classicals**

#### Pancha Mahabhuta Siddhanta

It has been said that every particle of the universe is made up of Penta elements - Prithvi, Jala, Teia, Vayu and Akasha, and a state of equilibrium between those components brings the (Satcitanandmaya) Balanced state of health. Imbalance in the proportion of these Mahabhutas would give rise to a disease. Each and every formulation for Twaka would also be Pancha Mahabhautika and following the Samanya – Vishesha principle, the body would be able to increase or decrease the essential and non essential constituents. Thus, if there is a need of Jala Mahabhuta- Snana, Parisheka, Avagahana may be effective. The decrease Parthiva contents may be combated by applying a Lepana of mud or the drugs listed under Parthiva Varga. The deficit of Agni Mahabhuta may be compensated through either sunlight or with the Abhyanga and Lepana of the drugs having -Agneya qualities and so on [46-48].

#### Tridosha Siddhanta

In order to give a compact form and to make its functional approach more rational, the penta-elemental theory has been divided into the Tridosha theory, where the body is said to be resting on the tripods of Vata, Pitta and Kapha Doshas. Further five subdivisions each of these entities have been described and have been attributed as to be performing different functions in the human being. According to this ideology the equilibrium between these Doshas yields health whereas various drugs and formulations along with proper use of procedures help to maintain the health or to cure a illness. For the betterment of increased Kapha the drugs having Kaphaghna properties may be used in the form of Avachurna or Abhyanga with oil having the Ushna-Teekshna properties as the base of the medicine utilized for Abhyanga. In the same way similar approach is to be followed for tackling Vata and Pitta Doshas [47-49].

#### Absorption and Activity of the Drugs

As it has been said in the Tridosha theory that the whole human body has the prevalence of Bhrajaka Pitta and Vyana Vayu whereas no separate type of Kapha has been said to be dwelling in the Twaka but it has also been said that the function of Sleshma is to bind all the Dhatus with each other and thus, may be said that the Sleshaka Kapha which is said to be present in every joints, is present at the joints of various layers of Twaka too. The function of Bhrajaka Pitta is said to metabolize the substance of drugs applied to the skin whereas one of its main functions is to manifest the colour and complexion of the Twaka. In function of metabolism the activities of Samana Vayu supported by Vyana Vayu is of great importance. Ayurved also propagates the theory of 'Srotomaya Purusha' indicating that the whole human body is porous. When the medication is applied in form of Lepa or Pradeha, the minute particles of the substance penetrate into the Twaka owing to the gravitational pull and the weight of the drug. The base used in Malahara

aids these function. In Abhyanga the Ashukari and Teekshna properties of the medium viz. Ghrita, Taila, Vasa or Majja and the pressure of the hand help the drug to penetrate the Twaka whereas the Avagahana and Parisheka act by diffusing into the Twaka pores due to Laghuta and Sukshmata. Above all, the Upashoshana property of Vayu (Vyana and Samana especially) would play a major role in the penetration, and absorption of the medicaments applied over the Twaka. After being absorbed in the Twaka, the drugs would act upon the body, pertaining to its Veerya (active Principles) and in some cases according to its Prabhava [50,51].

#### **Discussion & Conclusion**

Twaka is an updhatu of mamsa dhatu. It is the seat of all indrivas and specially sparshan indriva and according to some acharayas it is also the seat of manas. Ayurved has principally accepted the panchbhautikatva of Twaka as sparshan indriya and twaka avayava of Sharira. But at the same time it also an established fact that the twaka has the dominancy of vayu mahabhuta in it. Specially the seat if Vyana vayu, which has its influence all over the body. (Vyanaha Sarva Shariragah) because twaka is also present all over the body. Another main factor is of bhrajak pitta. Thus due to all this reactions twaka performs various physiological functions viz. protection of internal organs, provide complexion and colour to the body, awareness about the external environmental changes and adjustment of body temperature according to situation, receives different type of stimuli as pressure, temperature, and pain etc. as a non specific defence organ, helps in the absorption of medicaments used externally. act as an excretory organ, regulate temperature by excessive sweating or by checking it, depending upon the external environmental conditions.

It is the speciality f Ayurved science that the health for everybody or tissue is defined in general and in specific. The health status of skin can be diagnosed by assessing the signs and symptoms, available about the Sara of Twaka in any person and the genetically derivation of the same can be understood by the same method. After the assessment of health status af any individual or organ further measures should be advised depending upon the conviniency and other variables and non variable factors about the same, it is also advocated in Ayurvedic texts. These variable and non-variable factors may be age, sex, agni, dosha oja etc in general and in particular to that organ, manas prakriti etc. In the same way for the care of healthy skin various measures are advised to be followed depending upon the convenience and requirement.

#### References

- 1. Agnivesha, Charaka Samhitha, Edited by Vaidya Acharya Yadavji Trikamji, Chaukhambha Prakashan, Varanasi, Reprint 2007.
- Sushruta, Sushruta Samhita (2005) 8th(Edn.), Edited by Vaidya Acharya Yadavji Trikamji and Kavyatita Acharya Narayan Ram, Chaukhambha Orientalia.
- 3. Kunte AM, Navare KRS, Paradakara Shastri HS (2002) Ashtanga Hridaya of Vagbhata, Reprint Edi. Varanasi, Chaukhambha Surabharati Prakashan.
- Trivedi Acharya RP (1991) 2<sup>nd</sup> (Edn.), Charmaroga Nidarshika, Nagpur, Shree Baidyanath Ayurved Bhavan Ltd. pp: 71.
- 5. Peter L William's (1995) 38<sup>th</sup> (Edn.), Gray's Anatomy, Churchill Livingstone.
- Sujith KC (2008) 6<sup>th</sup> (Edn.), Concise medical Physiology, New central book agency pvt. Ltd., Kolkata.
- 7. Tony burns (2008) 7<sup>th</sup> (Edn.), Rook's Text book of Dermatology, Vol- I, Black well science Ltd., USA.
- Jean LB, Joseph L, Jorizzo and Ronold Rapihi (2003) 2<sup>nd</sup> (Edn.), Dermatology, Vol-II, Mosby publications, London.
- 9. BW Barry (1983) Dermatological Formulations: Percutaneous Absorption in drugs and Pharmaceutical Sciences, Vol-18, Swarbrick J. New York, Marcle Dekker.
- Dustidev Sahu (2014) Role of urban life style in the manifestation of vicharchika (eczema) – an observational review. Journal of Ayurveda and Holistic Medicine (JAHM) 2(2): 44-50.
- 11. Kashinath Shastri, Gorakhnath Chaturvedi (2003) Charaka Samhita by Charaka and Dhridhbala, Chaukhabha Bharti Academy, Varanasi. Vimansthana 3/48. pp: 703.
- 12. Kashinath Shastri, Gorakhnath Chaturvedi (2003) Charaka Samhita by Charaka and Dhridhbala, Chaukhabha Bharti Academy, Varanasi. Sutrasthana 23/3-6, pp: 436.
- 13. Kashinath Shastri, Gorakhnath Chaturvedi (2003) Charaka Samhita by Charaka and Dhridhbala,

Chaukhabha Bharti Academy, Varanasi. Sutrasthana 24/16, pp: 445.

- 14. KR Srikantha Murthy (2003) 5<sup>th</sup>(Edn.), Vagbhata's Ashtanga Hridayam, Chaukhabha Krishnadas Academy, Varanasi. Nidanasthana 14/1, pp: 136.
- 15. Park K (2009) 20<sup>th</sup>(Edn.), Park's Textbook of Preventive and Social Medicine. Banarsidas Bhanot Publishers, Jabalpur (India). pp: 24-25.
- 16. Ichhpujani RL (1985) Problem of communicable diseases in India. J Commun Dis 17(2): 101-103.
- 17. Singh KS (2002) People of India-An Introduction-National Series Vol. 1 Published by Oxford University Press, ISBN 10: 0195644441.
- Shenoi SD, Prabhu S (2013) Role of cultural factors in the bio psychosocial model of psychosomatic skin diseases: an Indian perspective. Clin Dermatol 31(1): 62-65.
- 19. Rao GS, Kumar SS, Sandhya (2003) Pattern of skin diseases in an Indian village. Indian Journal of Medical Science 57(3): 108-110.
- Baijayanti Baur, Jhuma Sarkar, Nirmalya Manna, Lina Bandyopadhyay (2013) The Pattern of Dermatological Disorders among Patients attending the Skin O.P.D of A Tertiary Care Hospital in Kolkata, India. IOSR Journal of Dental and Medical Sciences (JDMS) 3(4): 4-9
- 21. Asokan N, Priya Prathap, Ajithkumar K, Betsy Ambooken, Binesh VG, et al. (2009) Pattern of skin diseases among patients attending a tertiary care teaching hospital in Kerala. Indian Journal of Dermatology, Venereology, and Leprology 75(5): 517-518.
- 22. Figueredo N, Desai C (1949) Positive bacillary findings in skin of contacts of leprosy patients. Indian J Med Sc 3(4): 253-265.
- 23. Sangita Ghosh, Kamal Aggarwal, Vijay Kumar Jain, Soumik Chaudhuri, Epsita Ghosh, et al. (2014) Tuberculosis Verrucosa Cutis Presenting as Diffuse Plantar Keratoderma: An Unusual Sight. Indian J Dermatol 59(1): 80-81.
- 24. Kamat US, AMA F (2014) Management of STI: Looking beyond the index case. Indian J Dermatol 59(1): 105.

- 25. Thappa DM, Kaimal S (2007) Sexually transmitted infections in India: Current status (except human immunodeficiency virus/acquired immunodeficiency syndrome). Indian J Dermatol 52(2): 78-82.
- 26. Kashinath Shastri, Gorakhnath Chaturvedi (2003) Charaka Samhita by Charaka and Dhridhbala Chaukhabha Bharti Academy, Varanasi. Sutrasthana 5/85-86, pp: 87.
- 27. KR Srikantha Murthy (2003) 5<sup>th</sup> (Edn.), Vagbhata's Ashtanga Hridayam, Chaukhabha Krishnadas Academy, Varanasi. Sutrasthana 2/15, pp: 22.
- 28. KR Srikantha Murthy (2003) 5<sup>th</sup> (Edn.), Vagbhata's Ashtanga Hridayam, Chaukhabha Krishnadas Academy, Varanasi. Sutrasthana 2/16, pp: 22.
- 29. KR Srikantha Murthy (2003) 5<sup>th</sup> (Edn.), Vagbhata's Ashtanga Hridayam, Chaukhabha Krishnadas Academy,Varanasi. Sutrasthana 2/32, pp: 23.
- KR Srikantha Murthy (2003) 5<sup>th</sup> (Edn.), Vagbhata's Ashtanga Hridayam, Chaukhabha Krishnadas Academy, Varanasi. Sutrasthana 2/33, pp: 23.
- 31. KR Srikantha Murthy (2003) 5<sup>th</sup> (Edn.), Vagbhata's Ashtanga Hridayam, Chaukhabha Krishnadas Academy, Varanasi. Sutrasthana 2/34, pp: 23.
- 32. KR Srikantha Murthy (2003) 5<sup>th</sup> (Edn.), Vagbhata's Ashtanga Hridayam, Chaukhabha Krishnadas Academy, Varanasi. Sutrasthana 2/35, pp: 23.
- KR Srikantha Murthy (2003) 5<sup>th</sup> (Edn.), Vagbhata's Ashtanga Hridayam, Chaukhabha Krishnadas Academy, Varanasi. Sutrasthana 2/36, pp: 23.
- 34. KR Srikantha Murthy (2003) 5<sup>th</sup> (Edn.), Vagbhata's Ashtanga Hridayam, Chaukhabha Krishnadas Academy, Varanasi.Sutrasthana 2/37, pp: 24.
- 35. KR Srikantha Murthy (2003) 5<sup>th</sup> (Edn.), Vagbhata's Ashtanga Hridayam, Chaukhabha Krishnadas Academy, Varanasi. Sutrasthana 2/37, pp: 24.
- KR Srikantha Murthy (2003) 5<sup>th</sup> (Edn.), Vagbhata's Ashtanga Hridayam, Chaukhabha Krishnadas Academy, Varanasi. Sutrasthana 2/38, pp: 24.
- 37. KR Srikantha Murthy (2003) 5<sup>th</sup> (Edn.), Vagbhata's Ashtanga Hridayam, Chaukhabha Krishnadas Academy, Varanasi. Sutrasthana 2/39, pp: 24.

- KR Srikantha Murthy (2003) 5<sup>th</sup> (Edn.), Vagbhata's Ashtanga Hridayam, Chaukhabha Krishnadas Academy, Varanasi. Sutrasthana 5/18-63, pp: 46-54.
- Shendre Mohan C, Tiwari Rajnarayan R (2005) Role of occupation as a risk factor for sexually transmitted disease: A case control study, Indian Journal of Occupational and Environmental Medicine 9(1): 35-37.
- 40. Rajat Kandhari, Sanjiv Kandhari, Sudhir Jain (2014) Borrelial lymphocytoma cutis: A diagnostic dilemma, Indian J Dermatol 59(6): 595-597.
- 41. Brown SJ, McLean WH (2009) Eczema Genetics: Current State of Knowledge and Future Goals. J Invest Dermatol 129(3): 543-552.
- 42. Mohapatra LN (1989) Study of medical mycology in India-an overview. Ind J Med Res (89): 351-361.
- 43. Maiti PK, Ray A, Bandyopadhyay S (2002) Epidemiological aspects of mycetoma from a retrospective study of 264 cases in West Bengal. Tropical Medicine & International Health 7(9): 788– 792.
- 44. Mahajan VK, Sharma NL, Sharma RC, Gupta ML, Garg G, et al. (2005) Cutaneous Sporotrichosis in Himacha Pradesh,India. Mycoses 48(1): 25-31.

- 45. Chakrabarti A, Roy SK, Dhar S, Kumar B (1994) Sporotrichosis in north-west India, Indian J Med Res 100(62): 5.
- 46. Randhawa HS, Anuradha Chowdhary. Medical Mycology in India (1957-2007): Contributions by the VPCI Mycoses Group.
- 47. Chatterji AK, Chatterjea JB (1971) Porphyria erythropoietica in India. A review report on 21 cases. J Indian Med Assoc 56(9): 255-269.
- 48. Singh OP, Kanwar AJ (1976) Lichen planus in India-an appraisal of 441 cases. Int J Dermatol 15(10): 752-756.
- 49. Johnson MLT, Roberts J (1978) Skin conditions and related need for medical care among persons 1-74 years, Vital Health Education and Welfare. Nat Centre for Health Statistics 212: 1-72.
- 50. Fredricks DN (2001) Microbial ecology of human skin in health and disease. J Investig Dermatol Symp Proc 6(3): 167-169.
- 51. Findlay GH, Ratnam V A peculiar form of focalized toxic epidermal necrolysis in Zambians. Br J Dermatol 271(93): 613.