



REVIEW ARTICLE

# Hypothyroidism - An Ayurveda Approach

Author: Daya Kalsariya<sup>1</sup>

Co Authors: Kailas Dabhi<sup>2</sup> and Himanshu Kanzariya<sup>3</sup>

<sup>1,2</sup>, Upgraded PG Department of Kayachikitsa, GAAC, Ahmedabad, Gujarat, India

## ABSTRACT

Hypothyroidism is the most common Endocrine disease. It is a condition in which thyroid gland is unable to make adequate amount of Thyroid hormone to meet the requirement of peripheral tissue. The prevalence of Hypothyroidism is about 4 – 5 % globally. Women are more affected than males and ratio is 6:1. Autoimmune disease and Thyroid failure following 131I or surgical treatment of Thyrotoxicosis account 90% cases, except in area where iodine deficiency is Endemic. Autoimmune, Drug induced, Iatrogenic, Congenital, Genetic are cause of Primary Hypothyroidism. While Hypopituitarism, TSH deficiency, Hypothalamic disease are causes of secondary Hypothyroidism. Clinical features comprises of tiredness, weakness, dry skin, feeling cold, hair loss, difficulty in concentrating and poor memory, constipation, weight gain, loss of appetite, hoarse voice, dyspnea, menorrhagia, puffy face, peripheral oedema. In modern science Treatment of Hypothyroidism is Levothyroxine (T4). In Ayurveda the condition has similar pictures with *Dhatwagnimandhya*, *Sthaulya* etc. In this condition *Kapha dosha Vruddhi* and *Pitta Dosha kshaya* are seen. While analysing the signs and symptoms of Hypothyroidism in Ayurvedic literature mainly Rasa and Medovaha Srotas Dushti Lakshana is observed. Based on *Dosha - Dushya* involvement *Agnidipana*, *Kapha – Medahara Chikitsa* is useful in Hypothyroidism.

**Key Words:** *Hypothyroidism, Dhatwagnimandhya, Sthaulya, Kapha Vruddhi, Pitta kshaya*

## INTRODUCTION

Hypothyroidism is a common condition with various causes but Autoimmune disease and Thyroid failure following surgical treatment of Thyrotoxicosis account for over 90 % cases. It is a hypometabolic clinical state resulting from inadequate production of thyroid hormone for prolonged period or from resistance of peripheral tissues to the effect of thyroid hormone. It affect body's physiology as well as Psychology. In this situation serum T4 level is low and TSH is elevated. The rare condition of secondary hypothyroidism is caused by failure of TSH

secretion in a patient with hypothalamic or anterior pituitary disease<sup>1</sup>.

## CONGENITAL HYPOTHYROIDISM

Hypothyroidism occurs in about 1 in 4000 newborns. Neonatal hypothyroidism is due to thyroid gland dysgenesis, error of thyroid hormone synthesis and TSH-R antibody mediated of affected newborns.

The majority of infants appear normal at birth and then diagnosed based on clinical features- jaundice, delayed bone maturation, Umbilical hernia, permanent neurogenic damage result if treatment is delayed.



## REVIEW ARTICLE

Congenital malformation especially cardiac are four times more common in congenital hypothyroidism.

### AUTOIMMUNE HYPOTHYROIDISM

It may be associated with a Goiter or at a later stage of the disease-

Minimal residual thyroid tissue (Atrophic Thyroiditis). Because the autoimmune process gradually reduce thyroid function, there is a phase of compensation when normal thyroid hormone level maintained by a rise in TSH level. Though some patients may have minor symptoms called- Subclinical Hypothyroidism. Later T4 level fall and TSH level is rise further symptoms become more readily apparent at this stage referred to clinical Hypothyroidism or overt Hypothyroidism.

### CLINICAL FEATURES

- Weight gain with poor appetite
- Skin become dry and decreased sweating
- Puffy face, hand and feet with oedematous eyelids
- Dyspnoea
- Nail, hair become dry and brittle
- Increased hair fall
- Blood flow is diverted from the skin producing cold extremities
- Constipation due to reduced peristalsis movement
- Hoarse voice reflects fluid accumulation in vocal cord and tongue
- Libido is decrease in both sexes, there may be oligomenorrhea or amenorrhea in long standing disease, but menorrhagia is also common

- Reduced fertility and increased miscarriage incidence
- Thinning of Epidermis
- Increase dermal Glycosaminoglycan, Hyaluronic acid – traps water giving rise to skin thickening without pitting
- There is pallor often yellow tinge to the skin due to carotene accumulation
- Carpal tunnel syndrome is common, as is impairment of muscles function with stiffness, cramp and pain
- There may be slow relaxation of tendon reflexes and pseudomyotonia

Autoimmune hypothyroidism is uncommon in children and usually present with slow growth and delayed facial maturation, delayed puberty, myopathy with muscles swelling is common in children than in adult. There may be intellectual impairment if the onset is before 3 years and hormone deficiency is severe.

In hypothyroidism psychological symptoms also seen like, depressed mood, forgetfulness, lethargy etc.

By seeing all conditions we can not find one to one correlation with a single disease from *Ayurveda* though condition is suggestive of pathologies like *Sthaulya*, *Dhatwagnimandhya* etc.

### UNDERSTANDING HYPOTHYROIDISM WITH AN AYURVEDIC APPROACH

Though the exact description of Hypothyroidism is not given in Ayurvedic classic but to understand Pathogenesis of hypothyroidism according to *Ayurveda* it is mainly due to hypo-functioning of *Agni*. Hypofunctioning of *Jathragni* which in turn



## REVIEW ARTICLE

affect *Dhatwagni* and bring out pathological sequence and ultimately the disease condition develops. Many systems are involved in the pathogenesis of hypothyroidism. Out of *AshtaninditapurushaAtihrsvata* may be compared with cretinism and *Atisthulata* may be result of hypothyroidism. All types of correlation may not satisfy the present demand. However for such problem *Charaka* has given the guidance by saying that,

विकारनामाकुशलो न जिहीयात् कदाचन  
न हि सर्वविकाराणां नामतोऽस्ति ध्रुवा स्थितिः<sup>2</sup>||

It means it is not possible to give the name to all the diseases.

### AGNI

*Agni* include digestion of food, absorption, assimilation, cellular metabolism and regulation of hormone at the level of neurons and behind that.

पुरुषोऽयं लोकसम्मितः<sup>3</sup>||

In *Ayurvedic* literature man is considered as replica of the universe, whatever found in the universe is wholly presented in human body. This living body which is made up of *Panchmahabhata* always undergo “wear and Tear” phenomenon – *Chaya* and *Apachaya*. Their balance keeps *Dhatu* in equilibrium. To maintain this balance a physician should concentrate on the factors which are responsible for all biochemical transformation in the body. This power has been termed as “*Agni*”.

आयुर्वर्णो बलं स्वास्थ्यमुत्साहोपचयौ प्रभा  
ओजस्तेजोऽनयः प्राणाश्रोक्ता देहामिहेतुकाः||

शान्तेऽनौ प्रियते, युक्ते चिरं जीवत्यनामयः।  
रोगी स्याद्विकृते, मूलमग्निस्तस्मान्निरुच्यते<sup>4</sup>||

### JATHARAGNI

अन्नस्य पक्ता सर्वेषां पक्त्वामधिपो मतः।  
तन्मूलास्ते हि तद्वृद्धिक्षयवृद्धिक्षयात्मकाः||  
तस्मात्तं विधिवद्युक्तेरन्नपानेन्धनैर्हितैः।  
पालयेत् प्रयतस्तस्य स्थितौ ह्ययुर्बलस्थितिः<sup>5</sup>||

It maintains life and various biophysical and biochemical factors which participates in the course of digestion and metabolism. *Jatharagni* is most important as it influences other *Agni* inside a living body. *Jatharagni* is considered between *Amashaya* and *Pakvashaya*.

### BHUTAGNI<sup>6</sup>

*Agni* is present in every macro and micro particles of the universe. Each cell is *Panchbhautika*, according to *Mahabhuta* predominance, it can be named as *Parthiva*, *Apya* etc. According to our ancient science basic food converted into elemental form by *Jatharagni* is further digested by *Agni* (*Bhutagni*) leading to a complete changes in qualities and they are rendered fit to be acted upon by specific *Agni* present in *Dhatu* to get assimilated.

### DHATWAGNI

*Agni* by means of which *Ahararasa* undergoes further transformation (*Sukshmapaka*) till it takes status of particular *Dhatu* is termed as *Dhatwagni*. *Dhatu* make our body stable.

त एते शरीरधारणाद्भातव इत्युच्यन्ते<sup>7</sup>||

According to *Chakrapani Shariradhatu* which are destroyed by their own *Agni* (catabolism) are replaced by ingestion of food (anabolism)<sup>8</sup>.



## REVIEW ARTICLE

Suitably processed nutrients (by *Bhutagni*) which result into two end products- *Prasada* and *Kitta Bhaga*. *Prasada Bhagais* made available to *Dhatu* through respective *srotas* and *KittaBhaga* is excreted out. *Prasad Bhaga* has divided in to 3 parts.

1) *Sthayi Dhatu*, 2) *Upadhatu*, 3) *Poshakansha* for the subsequent *Dhatu*<sup>9</sup>.

When a condition of hypofunctioning of *Jatharagni* is created there is hypofunctioning or complete suppression of the function of the endocrine gland which are representative of *Dhatwagni*.

Acc. To *Ayurveda* function of hormones can be correlated with function of *Dhatwagni*. Normalcy of *Agni* is must for body function rhythmicity. Metabolic activity of is controlled by thyroid

hormone secretion and metabolic process of body are under the control of *Agni*.

रसनिमित्तमेवस्थौल्यंकार्श्यं<sup>10</sup>॥

*Rasadhatu* is responsible for *Shtaulya* and *Karshya*. Two factors are responsible for weight gain –

- Exogenous factor - Excessive intake of food and sleep, lack of exercise etc..
- Endogenous factor – Weight gain is independent to food and exercise, Hormonal disturbance and *Rasa Dhatu Dushti* are responsible for weight gain.

*Rasadhatudushti*, *Nanatmaja Kapha Vikara Lakshanas* are present as a sign and symptoms of hypothyroidism.

### *Kapha Vata Vardhaka Nidana Sevana*

#### *Jatharagnimandhya*

#### *Ama Utpati*

#### *Rasa Dhatu Dushti*

### ***Rasa Dhatu Dushti Lakshana***

अश्रद्धा	चारुचिश्चास्यवैरस्यमरसज्ञता				
हल्लासो	गौरवं	तन्द्रा	साङ्गमर्दो	ज्वरस्तमः	॥
पाण्डुत्वं	स्रोतसां	रोधः	क्लैब्यं	सादः	कृशाङ्गता
नाशोऽग्नेरयथाकालं	वलयः	पलितानि	च		॥
रसप्रदोषजा रोगा <sup>38</sup> .....					

#### *Dhatwagnimandhya*

#### *Medodhatwagnimandhya*

*Anneashraddha*, *Alasya*, *Apakti*, *Gaurava*, *Tandra*, *Angamarda*, *Pandutva*, *Srotorodha*, *Klaibya*, *Sada*, *Agninasha*.

### ***Atisthula Purusha Lakshana***

अतिस्थूलस्य तावदायुषो हासो जवोपरोधः

कृच्छ्रव्यवायता दौर्बल्यं दौर्गन्ध्यं स्वेदाबाधः

क्षुदतिमात्रं पिपासातियोगश्चेति भवन्त्यष्टौ दोषाः<sup>39</sup>॥

### ***CHIKITSA***<sup>40,41</sup>



## REVIEW ARTICLE

Langhana,  
Agnidipana,  
Pachana,  
Lekhana Karma,  
Shothahara,  
Kapha – Medohara Chikitsa – Katu, Tikta,  
Kashaya, Ushna, Tikshna, Ruksha Ahara Sevana  
Swedana, Vyayama, Vamana, Shirovirechana

Trikatu, Triphala, Shilajit, Madhu, Vidanga,  
Punarnava, Gokshura, Madhu, Guggulu,  
Gaumutraharithaki, Kshara, Lekhana Basti,  
Pranayama, Asana, Meditation.

### PATHYA<sup>42</sup>

Kapha – Medahara, Vataghnaannapana, Yavagu,  
Priyangu, Shyamaka, Kodrava, Yavaka, Yava,  
Mudaga, Kulattha, Adhaki, patola, Madhudaka,  
Amalaki with Bhojana, Arishtapanaanupanarthe.  
Prajagarana, Vyayama, Chinta.

## DISCUSSION

Due to sedentary life style today hypothyroidism is a burning issue and the present treatment is not helping much in resolving the pathology. The conceptual analysis of hypothyroidism help us to identify its *Rasa&Medodhatudushti* predominantly. The treatment can be planned on the basis of *DoshaPratyanikaChikitsathanVyadhipratyanikaChikitsa*. Yogas like *TrikatuChurna*, *GaumutraHaritaki*, *Kshara*, *pippali* preparation helps in removing *Srotorodha* and improves *Agni* (*Jatharagni & Dhatvangni*). The *Shodhana*

*Chikitsa*(*Vamana*)helps in *Agnidipana* and *Srotoshodhana*.

वमनं तु सर्वोपक्रमेभ्यः श्लेष्मणि प्रधानतमं मन्यन्ते भिषजः<sup>43</sup>॥

## CONCLUSION

Hypothyroidism can be considered as condition which results due to *Agnimandhya*, *KaphaVatadoshaVruddhi* and *PittaKshaya*. Due to *Agnimandhya*, *Rasa dushti & Meda Dhatwagnimandhya* contribute in pathology of this condition. The *Chikitsa* of hypothyroidism with *Dosha Pratyanika* will help to manage the condition better.

**Table 1** Involvement of *Dosha* and *Dushya* in Hypothyroidism

Sign & Symptoms	Dosha & Dhatu
<b>Weight gain</b>	<i>Kaphaja Nanatmaja Vikara</i> <sup>11</sup> <i>Rasa Dhatu MedaVruddhi</i> <sup>12</sup>
<b>Poor appetite</b>	<i>Pitta Kshaya</i> <sup>13,14</sup> <i>KaphaVruddhi</i> <sup>15</sup> <i>Kaphaja Nanatmaja Vikara Rasa Dhatu Dushti</i> <sup>16</sup>
<b>Constipation</b>	<i>Vata Vruddhi</i> <sup>17</sup>
<b>Puffy face &amp; eyelids</b>	<i>Kapha Vruddhi</i> <sup>18</sup>
<b>Pale skin</b>	<i>Rasa Dhatu Dushti</i> <i>Pitta Kshaya</i> <i>Kapha Dushti</i>
<b>Nail &amp; hair – dry, brittle</b>	<i>Vata Vruddhi</i>
<b>Hair fall</b>	
<b>Decreased Sweating</b>	<i>Medodhatu &amp;Kapha Vrudhhi</i> <i>Pitta Kshaya,</i>
<b>Dry skin</b>	<i>Vataja Nanatmaja Vikara</i> <sup>19</sup> <i>Rakta Kshaya</i> <sup>20</sup>
<b>Reduced fertility</b>	<i>Rasa &amp; Shukra Dhatu Dushti</i>
<b>Pulse rate reduced</b>	<i>Kaphaja Nanatmaja Vikara</i>
<b>Hoarse voice</b>	<i>Kapha Vata Dosha Vruddhi</i>
<b>Dyspnoea</b>	<i>Meda Dhatu Vrudhhi</i> <sup>21</sup>
<b>Tiredness &amp; weakness</b>	<i>Kaphaja Vrudhhi</i> <i>Rasa Dhatudushti</i> <i>Meda Dhatu dushti</i> <sup>22</sup>
<b>Cold extremities</b>	<i>Pitta Kshaya,</i> <i>Vata Kapha Dosha Vruddhi</i>
<b>Cold intolerance</b>	<i>Kapha Vruddhi,</i> <i>Rasa Dhatu Dushti</i>



## REVIEW ARTICLE

The term METABOLISM can be correlated to *Dhatupaka* in *Ayurveda*. *Kayagni* plays an important role in *Dhatupaka*. The term *Kayagni* denotes not only *Jatharagni* but it also include *Bhutagni* and *Dhatvagni*.

स्वस्थानस्थस्यकायाग्रेरंशाधातुषुसंश्रिताः।

तेषांसादातिदीप्तिभ्यांधातुवृद्धिक्षयोद्भवः<sup>23</sup> ॥

The part of the *Jatharagni*, which works on the *Dhatu* parlances and its exacerbation and diminution causes respective *Dhatu Vridhdhi* and *Dhatu Kshaya*.

येपाचकांशाधातुस्थास्तेषांमान्धातितैक्षणतः।

वृद्धिः क्षयश्चधातुनांजायते.....॥

पारम्पर्येऽपिदावाग्रेस्ततत्प्राप्येन्धनंशिखा ॥

वृद्धिक्षयौयथायातितथाधातुपरम्परा ॥

द्रव्यंतुल्यंविशिष्टं हिस्वस्वंवृद्धैक्षयायच।

प्रत्यात्मबीजनैर्यस्माद्भ्रुशमाशुचजायते<sup>24</sup> ॥

Thyroid disorders for all practical purpose are to be classified into structural changes and functional impairments. Usually both does not co-exist with

Goiter (structural enlargement of thyroid gland) Hypothyroidism produces heaviness in the body, lack of enthusiasm etc. that is due to reduction in B.M.R. These are functions of *Agni* according to *Ayurveda* and changes in *Dhatvagnimandhya* results in this type of manifestation. Hyposecretion of different hormones increases body mass and its excessive secretion depletes body tissue/ *Dhatu*. So, in a case of Hypothyroidism drugs those are *Ushna Virya*, improve digestion (on cellular level – specifically *Dhatwagni*) and reduces *Kapha* and *Meda* like *Guggulu*, *Pipli* are useful in Hypothyroidism.

**Table 2** *Samprapti Ghataka*

<i>Dosha</i>	<i>Kapha – VataVruddhi, Pitta Kshaya</i>
<i>Dushya</i>	All Dhatus mainly Rasa and Meda Dhatu
<i>Srotas</i>	Rasavaha, Medavaha
<i>Srotodushti</i>	Sanga, Vimarggamana
<i>Agni</i>	Jatharagni&MedaDhatwagimandhya
<i>Adhishthana</i>	Gala Pradesh
<i>Udbhavsthana</i>	Amashaya
<i>Vyaktasthan</i>	SarvangaSharira
<i>Rogamarga</i>	Bahya and Abhyantara
<i>Chronicity</i>	Chirakari
<i>Sadhyata</i>	<b>Krucchhsadhya</b>

*Samprapti* as mentioned in table 2.

### *Kapha Vata Vardhaka Nidana Sevana*

#### *Jatharagnimandhya*

*Ama Uttpati*

*Rasa Dhatu Dushti*

*Kapha Vata*

*Vardhaka Nidana Sevana*

***Rasa Dhatu Dushti Lakshana***

*Dhatwagnimandhya*

*Medodhatwagnimandhya*

अश्रद्धा	चारुचिश्चास्यवैरस्यमरसज्ञता				
हल्लासो	गौरवं	तन्द्रा	साङ्गमर्दो	ज्वरस्तमः	॥
पाण्डुत्वं	स्रोतसां	रोधः	क्लैब्यं	सादः	कृशाङ्गता



## REVIEW ARTICLE

नाशोऽग्नेरयथाकालं वलयः पलितानि च ॥  
रसप्रदोषजा रोगा....

*Anneashraddha, Alasya, Apakti, Gaurava, Tandra, Angamarda, Pandutva, Srotorodha, Klaibya, Sada, Agninasha.*

### **Atisthula Purusha Lakshana**

अतिस्थूलस्य तावदायुषो हासो जवोपरोधः

कृच्छ्रव्यवायता दौर्बल्यं दौर्गन्ध्यं स्वेदाबाधः क्षुदतिमात्रं पिपासातियोगश्चेति भव  
न्त्यष्टौ दोषाः॥

### **CHIKITSA<sup>25</sup>**

*Langhana,*

*Agnidipana,*

*Pachana,*

*Lekhana Karma,*

*Shothahara,*

*Kapha – Medohara Chikitsa – Katu, Tikta,*

*Kashaya, Ushna, Tikshna, Ruksha Ahara Sevana*

*Swedana, Vyayama, Vamana, Shirovirechana*

*Trikatu, Triphala, Shilajit, Madhu, Vidanga,*

*Punarnava, Gokshura, Madhu, Guggulu,*

*Gaumutraharitaki, Kshara, Lekhana Basti,*

*Pranayama, Asana, Meditation.*

### **PATHYA<sup>26</sup>**

*Kapha – Medahara, Vataghnaannapana, Yavagu,*

*Priyangu, Shyamaka, Kodrava, Yavaka, Yava,*

*Mudaga, Kulattha, Adhaki, patola, Madhudaka,*

*Amalaki with Bhojana, Arishtapanaanupanarthe.*

*Prajagarana, Vyayama, Chinta.*

## DISCUSSION

Due to sedentary life style today hypothyroidism is a burning issue and the present treatment is not helping much in resolving the pathology. The

conceptual analysis of hypothyroidism help us to identify its *Rasa&Medodhatudushti* predominantly. The treatment can be planned on the basis of *DoshaPratyanikaChikitsathanVyadhipratyanikaChikitsa*. *Yogas* like *TrikatuChurna, GaumutraHaritaki, Kshara, pippali* preparation helps in removing *Srotorodha* and improves *Agni (Jatharagni & Dhatvangni)*. The *Shodhana Chikitsa(Vamana)* helps in *Agnidipan* and *Srotoshodhana*.

वमनं तु सर्वोपक्रमेभ्यः श्लेष्मणि प्रधानतमं मन्यन्ते भिषजः<sup>27</sup>॥

## CONCLUSION

Hypothyroidism can be considered as condition which results due to *Agnimandhya, KaphaVatadoshaVruddhi* and *PittaKshaya*. Due to *Agnimandhya, Rasa dushti & Meda Dhatwagnimandhya* contribute in pathology of this condition. The *Chikitsa* of hypothyroidism with *Dosha Pratyanika* will help to manage the condition better.



## REVIEW ARTICLE

### REFERENCES

1. Principles of Internal medicine, Fauci Braunwald Kasper Hauser Longo Jameson Loscalzo, 17<sup>th</sup> edition, written by Harrison, Published by Mc Graw Hill medical, Volume 2, page no. 2229 to 2233.
2. Agnivesha, Charaka Samhita, revised by Charaka and Dradhbala, edited with 'Caraka-Chandrika' Hindi commentary by Dr. Brahmanand Tripathi, Volume 1, Published by Chaukhamba Surbharati Prakashan Varanasi, Year of reprint 2014, Sutrasthana 18/44, Page no. 278.
3. Agnivesha, Charaka Samhita, revised by Charaka and Dradhbala, edited with 'Caraka-Chandrika' Hindi commentary by Dr. Brahmanand Tripathi, Volume 1, Published by Chaukhamba Surbharati Prakashan Varanasi, Year of reprint 2014, Sharirasthana 5/3, page no. 897.
4. Agnivesha, Charaka Samhita, revised by Charaka and Dradhbala, edited with 'Caraka-Chandrika' Hindi commentary by Dr. Brahmanand Tripathi, Volume 2, Published by Chaukhamba Surbharati Prakashan Varanasi, Year of reprint 2014, Chikitsasthana 15/3,4, page no. 550.
5. Agnivesha, Charaka Samhita, revised by Charaka and Dradhbala, edited with 'Caraka-Chandrika' Hindi commentary by Dr. Brahmanand Tripathi, Volume 1, Published by Chaukhamba Surbharati Prakashan Varanasi, Year of reprint 2014, Cikitsasthana 15/39,40, page no.558.
6. Agnivesha, Charaka Samhita, revised by Charaka and Dradhbala, edited with 'Caraka-Chandrika' Hindi commentary by Dr. Brahmanand Tripathi, Volume 1, Published by Chaukhamba Surbharati Prakashan Varanasi, Year of reprint 2014, Cikitsasthana 15/13, page no, 552
7. Sushruta, Sushruta Samhita, edited with Ayurveda Tattva-Sandipika hindi commentary by Kaviraj Dr. Ambikadatta Shastri, published by Chaukhamba Sanskrit Sansthan, Varanasi, year of reprint 2014, Part 1 Sutrasthana 14/20 page no. 69.
8. Agnivesha, Charaka Samhita, revised by Charaka and Dradhbala, edited with 'Caraka-Chandrika' Hindi commentary by Dr. Brahmanand Tripathi, Volume 1, Published by Chaukhamba Surbharati Prakashan Varanasi, Year of reprint 2014, Cikitsasthana 28/3, page no. 545.
9. Agnivesha, Charaka Samhita, revised by Charaka and Dradhbala, edited with 'Caraka-Chandrika' Hindi commentary by Dr. Brahmanand Tripathi, Volume 1, Published by Chaukhamba Surbharati Prakashan Varanasi, Year of reprint 2014, Cikitsasthana 15/15, page no. 553.
10. Sushruta, Sushruta Samhita, edited with Ayurveda Tattva-Sandipika hindi commentary by Kaviraj Dr. Ambikadatta Shastri, published by Chaukhamba Sanskrit Sansthan, Varanasi, year of reprint 2014, Part 1 Sutrasthana, 15/37, page no. 81.
11. Agnivesha, Charaka Samhita, revised by Charaka and Dradhbala, edited with 'Caraka-





### REVIEW ARTICLE

- Chandrika' Hindi commentary by Dr. Brahmanand Tripathi, Volume 1, Published by Chaukhamba Surbharati Prakashan Varanasi, Year of reprint 2014, Sutrasthana, 20/17, Page no.395.
12. Agnivesha, Charaka Samhita, revised by Charaka and Dradhbala, edited with 'Caraka-Chandrika' Hindi commentary by Dr. Brahmanand Tripathi, Volume 1, Published by Chaukhamba Surbharati Prakashan Varanasi, Year of reprint 2014, Sutrasthana, 21/4, Page no. 399.
13. Sushruta, Sushruta Samhita, edited with Ayurveda Tattva-Sandipika hindi commentary by Kaviraj Dr. Ambikadatta Shastri, published by Chaukhamba Sanskrit Sansthan, Varanasi, year of reprint 2014, Part 1 Sutrasthana, 15/11, page no. 76.
14. Vagbhatta, Ashtang Hridaya, edited with Nirmala Hindi Commentary by Dr. Brahmanand Tripathi, published by Chaukhamba Sanskrit Pratisthana, Delhi, Year of reprint 2013, Sutrasthana 11/16, page no.163.
15. Vagbhatta, Ashtang Hridaya, edited with Nirmala Hindi Commentary by Dr. Brahmanand Tripathi, published by Chaukhamba Sanskrit Pratisthana, Delhi, Year of reprint 2013, Sutrasthana, 11/7, page no. 161.
16. Agnivesha, Charaka Samhita, revised by Charaka and Dradhbala, edited with 'Caraka-Chandrika' Hindi commentary by Dr. Brahmanand Tripathi, Volume 1, Published by Chaukhamba Surbharati Prakashan Varanasi, Year of reprint 2014, Sutrasthana, 28/9,10, Page no. 548.
17. Agnivesha, Charaka Samhita, revised by Charaka and Dradhbala, edited with 'Caraka-Chandrika' Hindi commentary by Dr. Brahmanand Tripathi, Volume 1, Published by Chaukhamba Surbharati Prakashan Varanasi, Year of reprint 2014, Sutrasthana, 15/18, page no. 78.
18. Vagbhatta, Ashtang Hridaya, edited with Nirmala Hindi Commentary by Dr. Brahmanand Tripathi, published by Chaukhamba Sanskrit Pratisthana, Delhi, Year of reprint 2013, Sutrasthana, 12/53, page no. 178
19. Agnivesha, Charaka Samhita, revised by Charaka and Dradhbala, edited with 'Caraka-Chandrika' Hindi commentary by Dr. Brahmanand Tripathi, Volume 1, Published by Chaukhamba Surbharati Prakashan Varanasi, Year of reprint 2014, Sutrasthana, 20/11, Page no. 390.
20. Sushruta, Sushruta Samhita, edited with Ayurveda Tattva-Sandipika hindi commentary by Kaviraj Dr. Ambikadatta Shastri, published by Chaukhamba Sanskrit Sansthan, Varanasi, year of reprint 2014, Part 1 Sutrasthana, 15/13, page no. 76.
21. Vagbhatta, Ashtang Hridaya, edited with Nirmala Hindi Commentary by Dr. Brahmanand Tripathi, published by Chaukhamba Sanskrit Pratisthana, Delhi, Year of reprint 2013, Sutrasthana, 11/11, page no. 162.
22. Agnivesha, Charaka Samhita, revised by Charaka and Dradhbala, edited with 'Caraka-



#### REVIEW ARTICLE

- Chandrika' Hindi commentary by Dr. Brahmanand Tripathi, Volume 1, Published by Chaukhamba Surbharati Prakashan Varanasi, Year of reprint 2014, Nidanasthana 4/47, Page no. 621.
23. Vagbhatta, Ashtang Hridaya, edited with Nirmala Hindi Commentary by Dr. Brahmanand Tripathi, published by Chaukhamba Sanskrit Pratisthana, Delhi, Year of reprint 2013, Sutrasthana, 11/34, page no.166.
24. Vagbhatta, Ashtang Sangraha, edited by Kaviraj Atridev Gupta, Published by Chaukhamba Krushnadas Academy, Varanasi, Year of reprint 2016, Sutrasthana 19/16,17,18, page no. 157.
25. Agnivesha, Charaka Samhita, revised by Charaka and Dradhbala, edited with 'Caraka-Chandrika' Hindi commentary by Dr. Brahmanand Tripathi, Volume 1, Published by Chaukhamba Surbharati Prakashan Varanasi, Year of reprint 2014, Sutrasthana, 28/25, Page no. 550.
26. Agnivesha, Charaka Samhita, revised by Charaka and Dradhbala, edited with 'Caraka-Chandrika' Hindi commentary by Dr. Brahmanand Tripathi, Volume 1, Published by Chaukhamba Surbharati Prakashan Varanasi, Year of reprint 2014, Sutrasthana, 21/21-28, Page no. 404-405.
27. Agnivesha, Charaka Samhita, revised by Charaka and Dradhbala, edited with 'Caraka-Chandrika' Hindi commentary by Dr. Brahmanand Tripathi, Volume 1, Published by Chaukhamba Surbharati Prakashan Varanasi, Year of reprint 2014, Sutrasthana, 20/19, Page no.396.