ISSN NO. 2320-5407

Journal homepage: http://www.journalijar.com

INTERNATIONAL JOURNAL OF ADVANCED RESEARCH

RESEARCH ARTICLE

ATTENTION DEFICIT HYPERACTIVITY DISORDER IN CHILDREN AND ITS MANAGENENT IN AYURVEDA.

[1]Dr.Suryawanshi Sandipkumar R. ,[2] Dr.Suryawanshi Pradipkumar R., [3]Dr.Shweta V Musale.

1. M.D(Kaumarbhritya),Asst.Professor, K.V.T.R Ayurved College, Boradi, Dhule (M.S)
2. M.D(Swasthavritta),Asst.Professor, M.G.A.C.H.& R.C, Salod(H), Wardha. (M.S)
3. M.D (Dravyaguna), Ayurved Pediatrician, Shaishvam Child Speciality Clinic, Shirpur, Dhule (M.S)

Manuscript Info

Manuscript History:

Received: 14 May 2015
Final Accepted: 22 June 2015
Published Online: July 2015

Key words:

Corresponding Author

Dr.Suryawanshi Sandipkumar R.

Abstract

Attention Deficit Hyperactivity Disorder is the most commonly diagnosed childhood psychiatric disorder, characterized by extreme and persistent restlessness, sustained and prolonged motor activity, difficulties in sustaining attention and impulsivity. Children with this disorder are reckless, and prone to accidents. Due to poor attention and lack of persistence with tasks they may have learning difficulties. As the condition continues, many develop minor forms of antisocial behavior particularly disobedience, temper tantrums and aggression. Low self esteem and mood fluctuations are common and they are often unpopular with other children. Kashyapacharya has clearly mentioned that feeding with vitiated breast milk will lead to various diseases in the child. Mana is said to be "*Annamaya*". Cchandyogya Upanishada has given a simile of curd. Like Ghee is the essence of curd, similarly the finest essence of food is mana, i.e. it gives nourishment to mind.Excessive ingestion of any one particular rasa leads to various disorders some of which are at the level of psyche.

Attention Deficit Hyperactivity Disorder is the most commonly diagnosed childhood psychiatric disorder, characterized by extreme and persistent restlessness, sustained and prolonged motor activity, difficulties in sustaining attention and impulsivity.

The name Attention Deficit Disorder was first introduced in 1980 in DSM-III, the third edition of the 'Diagnostic and Statistical Manual of Mental Disorders' used in psychiatry. In 1994 the definition was altered to include three groups within ADHD; the predominantly hyperactive-impulsive type; the predominantly inattentive type; and the combined type.

Children with this disorder are reckless, and prone to accidents. Due to poor attention and lack of persistence with tasks they may have learning difficulties. As the condition continues, many develop minor forms of antisocial behavior particularly disobedience, temper tantrums and aggression. Low self esteem and mood fluctuations are common and they are often unpopular with other children.

The high prevalence, ability to affect nearly every aspect of life, persistence and functional impairment it causes, makes ADHD a disease of utmost importance to affected individuals, their families, our health and educational systems and for society as a whole.

.....

INTRODUCTION

EPIDEMIOLOGY

Attention-deficit/hyperactivity disorder (ADHD) is the most common neurodevelopment disorder of childhood. Studies show a wide range in the prevalence of ADHD.

- Prevalence of AD / HD is estimated as 3% - 5% in school age children[1,2]
- Recent systematic reviews report ADHD prevalence estimates as wide as 2%-18%. [3]
- Prevalence rates in Indian children range from 5-10[4,5]

Male to female ratio of ADHD

Male to female ratio ranges from 3:1 to 4:1 (3.17:1)[6]

Classification-

ADHD is classified as a disruptive behavior disorder along with oppositional defiant disorder, conduct disorder and antisocial disorder.

ADHD has three subtypes:

- Predominantly hyperactive-impulsive (Sannipatika with kapha)
- Predominantly inattentive (Sannipatika with Vata Pitta predominance)
- Combined hyperactive-impulsive and inattentive (Sama Sannipata)

NIDANAS

A wide variety of Nidaanas are mentioned for mental disorders in Ayurveda. For ADHD also multifactorial causation theory is accepted. The Nidaana can be classified in to Nija and Aagantuja.

Nija Nidana

It can be further classified into Sahaja, Garbhaja and Jaataja

(1) SAHAJA NIDANA-Genetic Factors

(a) Atmakarma

The past actions are alone responsible for the Sattva (Psyche) of the child[7].

(b) Atmaja bhava and Sattvaja Bhava

Atmaja Bhava:

In the context of ADHD, the traits related to intellect and higher order psyche, which are passed from the Atma, are important. As in the full blown clinical presentation of the disease many of these traits are found to be functioning abnormally. The important psychic traits passed on from Atma are Prerana, Dharana, Iccha- Dwesha, Sukha Dukha etc[8].

Sattvaja bhava:

Matru and Pitru Sattva - the various mental traits of the parents as being responsible for the psychological endowment of the children[9].

(c) Related to beeja, beejabhaga and beejabhagavayava:

- The mother and father chiefly exert their influence in the make up of the personality through Shukra and Shonita[10].
- Charakacharya has described the abnormalities of microfine constituents of these germ cells, (the Shukra and Shonita) the beeja, beejabhaga and Beejabhagavayava to be responsible for congenital deformities in the fetus[11]
- manas prkriti of the parents will influence the Manas Prakriti of the child. Out of three types of Manas Prakriti - Sattvika, Rajasika and Tamasika, the child who will inherit a Rajasika manas prakriti will be Anavasthita – fickle minded.

(2) GARBHAJA (Antenatal factors)

The Ayurvedists firmly believed that any event during the antenatal period would exert its influence on the growing fetus both physically as well as psychologically.

Charakacharya has mentioned Matru Ahara (diet of the mother), Matuvihara (conduct of the mother) and Ashayadosha (abnormalities of the Garbhashaya) as the antenatal factors causing deformities in the fetus[12].

Among the factors, which are responsible for psychic peculiarities in an individual, Charakacharya has included "*Antarvartnya Shrutayaschabhikshanam*"[13]

Acharya Chakrapani has explained it as whatever music etc. the mother hears; she will deliver a child of similar characteristics.

Matu Ahara:

A great amount of stress has been given by the Ayurvedists on the diet of the pregnant women to avoid any untoward effects on the growing fetus[14].

- Alcohol consumption by pregnant women would lead to short memory span (Alpasmriti) and inattention (Anavasthitachitta) in the child[15].
- The fetus is said to grow from the essence of diet that mother takes through the processes of Upasweda and Upasneha[16]. Therefore whatever diet the mother takes affects the fetus directly. This fact is well supported by the contemporary science that exposure to toxins, alcohol etc. during the antenatal period can lead to ADHD in the child.

(c) Matu Vihara

Not only the diet but also the behavior of the mother, at the time of pregnancy, has got its own deterministic influence on the psychological development of the child.

- Behavior of the mother and her emotional state of mind during the period of pregnancy or at the time of conception influences the psychological makeup of the child[17].

Stress also upsets the normal functioning of the maternal endocrine system. These results in a hyperactive state of the thyroid and adrenal glands – the glands of the endocrine system that prepare the body for increased activity during an emotional state. These endocrine secretions are then transmitted to the prenatal environment in the uterus and result in a condition that affects the developing child.

Dauhrida Vimanana –

Unfulfillment of Dauhrida a woman will give birth to a child who would be affected by deformities like lameness, defective vision, blindness or mental deficiency[18] .

(3) JANMOTTARA – The Postnatal factors

(a) Effect of Matridugdha:

Kashyapacharya has clearly mentioned that feeding with vitiated breast milk will lead to various diseases in the child[19] Vagbhata -I has advised that breast milk of woman who is angry should be avoided. While Vagbhata-II has instructed that a woman with psychological abnormalities should not feed the child.

(b) Ahara:

Mana is said to be "*Annamaya*". Cchandyogya Upanishada has given a simile of curd. Like Ghee is the essence of curd, similarly the finest essence of food is mana, i.e. it gives nourishment to mind.

Excessive ingestion of any one particular rasa leads to various disorders some of which are at the level of psyche[20].

- ❖ Lavana atisevana –hindrance to the functioning of indriyas and causes moha
- ❖ Katu rasa atisevana – causes moha, tama and bhrama.
- ❖ Tikta rasa atisevana – causes moha, bhrama.
- ❖ Ahara has been also included among one of the Upastambha an which health depends[21].

Modern researchers have now established the relationship between diet and ADHD as diet modification have been seen to give better results in controlling the hyperactivity.

(c) Nidra

Sukha, Dukha, Jnana, Ajnana are said to be dependent on Nidra[22].

AGANTUJA NIDANA

They are caused by kshata, bhanga, prahaara, etc; according to the mode of affliction. They are of two types-Saririka and Manasika

Shirobhighata:

Shirobhighata has been considered as a causative factor for Shiroroga. Any injury to Shiras can directly lead to injury to the Indriya as they are situated in it. different types of Abhighaatas are told as causative factors for mental illness e.g. injury to Seemanta marma may cause Unmaada[23].Different types of prenatal and post natal brain insults and obstetric trauma have been known to cause ADHD.

Bhutaveshaja Nidana:

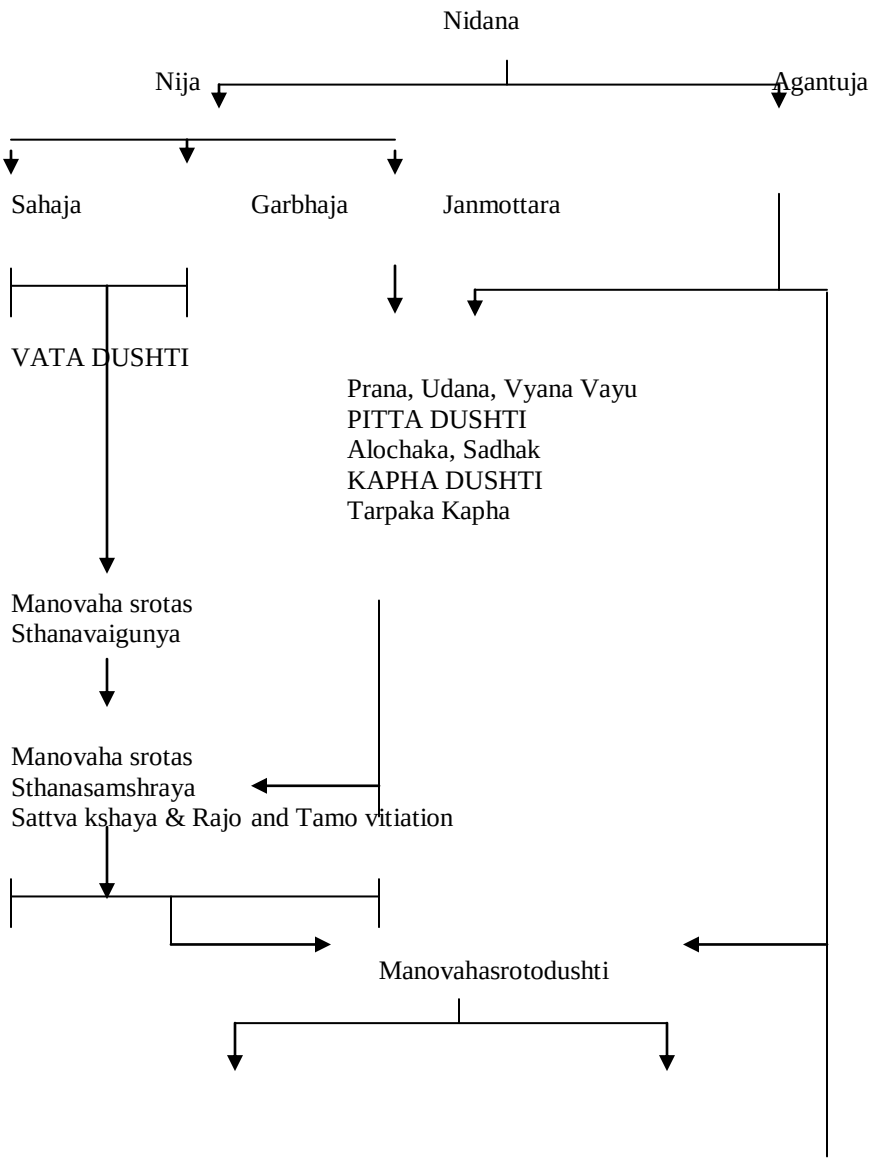
This include infectious diseases like encephalitis which are considered as the etiolgical factor for ADHD.

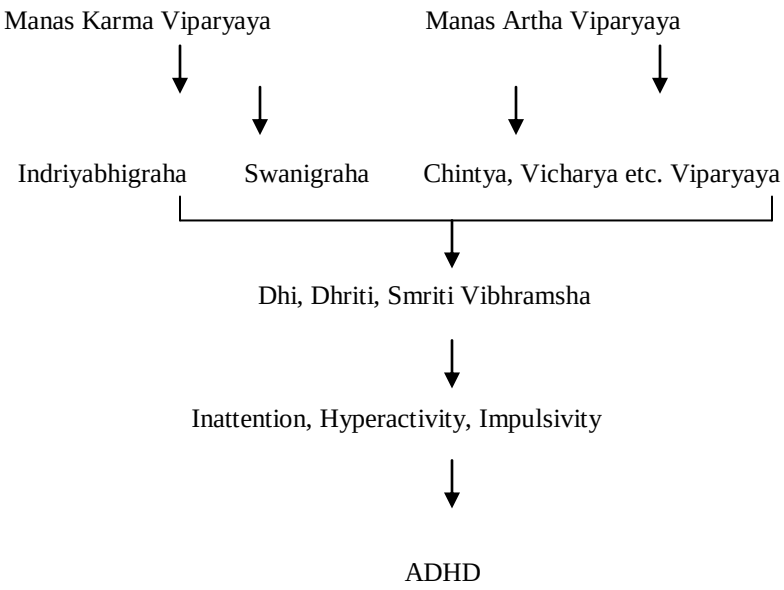
Manasika:

- Generally negative emotions like Irshya, Soka, Bhaya, Krodha, Maana, Dvesha are considered as exogenous causative factors for mental illness[24].
- **SAMPRAPTI**
- The Samprapti explains the mode of development of the disease due to the effect of Nidaana and further differentiation. This is the most important part in defining a new disease in Ayurvedic methodology. The Samprapti Ghataka of ADHD can be categorized as follows:

Dosha – Sharirika	Vata – Prana, Udana, Vyana
	Pitta – Buddhi vaisheshika Alcohaka, Sadhaka
	Kapha – Tarpaka
Manasika	Rajas and Tamas
Dushya	Rasa, Majja
Srotas	Manovaha Srotas
Dushti	Atipravritti
Agni	Vishama
Udbhavasthana	Mastishka, Hridaya
Vyaktisthana	Sarva Sharira
Rogamarga	Madhyama

SCHEMATIC REPRESENTATION OF SAMPRPATI





LAKSHANAS OF ADHD

Attention deficit / hyperactivity disorder is characterized by 3 core symptoms of –

(1) Inattention

Dhee Dhriti Smriti vibhramsha:

In ADHD due to this Dhriti bhramsha, Manas is unable to sustain focus on particular Indriyartha and it is frequently shifting from one Indriya to another Indriya attending unwanted or irrelevant stimuli. Due to the impairment of the controlling factor (Dhriti) over the Manas, leads to the person indulging irrelevant tasks and dangerous activities.

Anavasthita chittatvam:

In Naanaatmaja vikaaras of Vata explained by Charaka Anavasthita chittatvam is one of the condition among eighty[25]

(2) Hyperactivity

Hyper is a prefix, which means 'more than usual' or 'excessive'. Activity is denoted by the term *"Cheshta"* in Ayurveda.

Cheshta: Cheshta is of three types- Vaak cheshta, Saririka cheshta, Manasika cheshta.

So it reveals that the actions or gestures or behaviours by body, mind and speech may be considered as cheshta.

(3) Impulsivity

Impulsivity is a sudden action that is under taken without careful thought. Some related conditions in Ayurveda are,

Austukyam: This means without thinking indulging in activities or excitement.

Buddhi vibhrama:

In the case of Buddhi vibhrama the person get lost himself in the vishayaas and take sudden decisions without considering the consequences and situations.

Diagnostic Criteria for diagnosing Attention Deficit (Hyperactivity) Disorder:

A. Either (1) or (2)

1) Six or more of the following symptoms of **inattention** have persisted for at least six months to a degree that is maladaptive and inconsistent with the developmental level:

Inattention

1. often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities
2. often has difficulty sustaining attention in tasks or play activities

3. often does not seem to listen when spoken to directly
4. often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (not due to oppositional behaviour or failure of comprehension)
5. often has difficulty organizing tasks and activities
6. often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (such as schoolwork or homework)
7. often loses things necessary for tasks or activities at school or at home (e.g. toys, pencils, books, assignments)
8. is often easily distracted by extraneous stimuli
9. if often forgetful in daily activities

2) Six or more of the following symptoms of **hyperactivity-impulsivity** have persisted for at least 6 months to a degree that is maladaptive and inconsistent with the developmental level:

Hyperactivity

1. often fidgets with hands or feet or squirms in seat
2. often leaves seat in classroom or in other situations in which remaining seated is expected
3. often runs about or climbs excessively in situations in which it is inappropriate (in adolescents or adults, may be limited to subjective feelings of restlessness)
4. often has difficulty playing or engaging in leisure activities quietly
5. often talks excessively
6. is often 'on the go' or often acts as if 'driven by a motor'

Impulsivity

7. often has difficulty awaiting turn in games or group situations
8. often blurts out answers to questions before they have been completed
9. often interrupts or intrudes on others, e.g. butts into other children's games

B. Some hyperactivity - impulsive or inattentive symptoms that cause impairment were present before the age of 7 years.

C. Some impairment from the symptoms is present in more than two or more settings (e.g. at school or work or at home).

D. There must be clear evidence of clinically significant impairment in social, academic, or occupational functioning.

E. The symptoms do not occur exclusively during the course of a Pervasive Developmental Disorder, Schizophrenia, or other Psychotic Disorder, and are not better accounted for by another mental disorder (e.g. Mood Disorder, Anxiety Disorder, Dissociative Disorder, or a Personality Disorder).

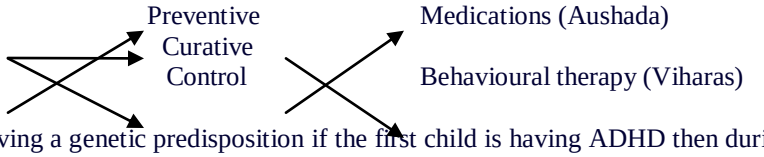
Based on these criteria, three types of ADHD are identified:

1. ADHD, Combined Type: if both criteria 1A and 1B are met for the past 6 months
2. ADHD, Predominantly Inattentive Type: if criterion 1A is met but criterion 1B is not met for the past six months
3. ADHD, Predominantly Hyperactive-Impulsive Type: if Criterion 1B is met but Criterion 1A is not met for the past six months.

American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision. Washington, DC, American Psychiatric Association, 2000.

Ayurveda Management

Avoid the Nidanas



A) Prevention

Since ADHD is having a genetic predisposition if the first child is having ADHD then during second pregnancy of the lady proper Garbhini Paricharya must be advised, giving special consideration to her life style.

b) Curative

Oushada Prayoga

a) Shodhanam
Udwarthanam
Snehapanam with kalyanaka ghritham, Brahmighritham etc.
Kayasekam with Bala thailam, Vatasini thailam, Ksheerabala thailam etc.
Virechana with Gandharva erandam thailam
Dhmana nasya with Rasnadi choornam

b) Shamanam
Shiropichu with Himasagara thailam, Vathasini thailam
Kalyanaka ghritham
Kalyanaka choornam
Abhyanaga with Bala thailam
Mathravasthi with Dhanwantharam thailam
Pradeha, Ustadana, Abhyanaga dhumapana Explained by charaka.

c) Rasayana Prayoga- Medhya rasayana

C) Behavioural therapy

- Social skill training

Appropriate behavioural training in maintaining social relationship like sharing toys, asking for help etc.

- Support groups

Connect with other people who have similar problems and concerns with their ADHD children.

- Parenting Skills Training

Immediately reward good behaviour or work.
Isolation to a bedroom when child becomes out of control
Give quality time each day to share a pleasurable or relaxing activity with parent.
Mild penalty when child does not do desired activities
Structure situations that will not allow him to succeed like 1 or 2 playmates at a time
Avoid restrictions; turn off TV, radio, computer games while child is doing home work.

- ❖ Statistical Data

Research work conducted under Dept. Of Kaumarabhrithya, GAVC, Thiruvananthapuram last year, 20 cases had reduction in Hyper activity and increase in attention span and got satisfactory result.

References

1. Behrman, Kliegman and Jenson, Nelson textbook of Pediatrics, 17th edition, 2004, chapter 29, Neurodevelopmental dysfunction in the school aged children, Page no.107
2. Rowland AS, Lesesne CA, Abramowitz A J, The epidemiology of attention deficit hyperactivity disorder: a public health view.
3. Behrman, Kliegman and Jenson, Nelson textbook of Pediatrics, 17th edition, 2004, chapter 29, Neurodevelopmental dysfunction in the school aged children, Page no.107
4. Chandra R, Srinivasan R, Madhavan S. The prevalence of mental disorders in school aged children attending a general pediatric department in southern india.Acta Psychiaatri. Scan.1993, 87: 192-196

5. Malhotra S, Chaturvedi SK. Patterns of childhood psychiatric disorders in India. Indian Journal of Pediatrics, 1984: vol 51, Page 235-239
6. Behrman, Kliegman and Jenson, Nelson textbook of Pediatrics, 17th edition, 2004, chapter 29, Neurodevelopmental dysfunction in the school aged children, Page no.107
7. Brahmanand Tripathi, Ganga Sahay Pandey, editor, Charak Samhita, Charak Chandrika Hindi commentary, Chaukhamba Surbharti Prakashan, 2007.Charak . Sharirsthana. 2/26, Page-27
8. Brahmanand Tripathi, Ganga Sahay Pandey, editor, Charak Samhita, Charak Chandrika Hindi commentary, Chaukhamba Surbharti Prakashan, 2007.Charak . Sharirsthana Ch. Sha. 3/10
9. Brahmanand Tripathi, Ganga Sahay Pandey, editor, Charak Samhita, Charak Chandrika Hindi commentary, Chaukhamba Surbharti Prakashan, 2007.Charak . Sharirsthana Ch. Sha. 8/16
10. Brahmanand Tripathi, Ganga Sahay Pandey, editor, Charak Samhita, Charak Chandrika Hindi commentary, Chaukhamba Surbharti Prakashan, 2007.Charak . Sharirsthana Ch. Sha. 8/16
11. Brahmanand Tripathi, Ganga Sahay Pandey, editor, Charak Samhita, Charak Chandrika Hindi commentary, Chaukhamba Surbharti Prakashan, 2007.Charak . Sharirsthana Ch. Sha. 4/30, Ch. Sha. 3/17, Ch. Sha. 4/34
12. Brahmanand Tripathi, Ganga Sahay Pandey, editor, Charak Samhita, Charak Chandrika Hindi commentary, Chaukhamba Surbharti Prakashan, 2007.Charak . Sharirsthana Ch. Sha. 4/29
13. Brahmanand Tripathi, Ganga Sahay Pandey, editor, Charak Samhita, Charak Chandrika Hindi commentary, Chaukhamba Surbharti Prakashan, 2007.Charak . Sharirsthana Ch. Sha. 8/16
14. Brahmanand Tripathi, Ganga Sahay Pandey, editor, Charak Samhita, Charak Chandrika Hindi commentary, Chaukhamba Surbharti Prakashan, 2007.Charak . Sharirsthana Ch. Sha. 8/21
15. Brahmanand Tripathi, Ganga Sahay Pandey, editor, Charak Samhita, Charak Chandrika Hindi commentary, Chaukhamba Surbharti Prakashan, 2007.Charak . Sharirsthana Ch. Sha. 8/21
16. Ambikadutta Shastri, editor, Sushruta Samhita, Chaukhamba Sanskrit Sansthan, Varanasi, 2007. Sushruta Sharirsthana. 3/40
17. Shastri, editor, Sushruta Samhita, Chaukhamba Sanskrit Sansthan, Varanasi, 2007. Sushruta Sharirsthana. 2/48
18. Shastri, editor, Sushruta Samhita, Chaukhamba Sanskrit Sansthan, Varanasi, 2007. Sushruta Sharirsthana. 3/22-25
19. Hemraj Sharma, Vidyotini Hindi Commentry, Chaukhamba Surbharti Prakashan, 2007, Kashyap Sutrasthan. 19/4
20. Brahmanand Tripathi, Ganga Sahay Pandey, editor, Charak Samhita, Charak Chandrika Hindi commentary, Chaukhamba Surbharti Prakashan, 2007,Charak Sutrasthana. 26/3,4,5
21. Brahmanand Tripathi, Ganga Sahay Pandey, editor, Charak Samhita, Charak Chandrika Hindi commentary, Chaukhamba Surbharti Prakashan, 2007,Charak Sutrasthana. 11/35
22. Brahmanand Tripathi, Ganga Sahay Pandey, editor, Charak Samhita, Charak Chandrika Hindi commentary, Chaukhamba Surbharti Prakashan, 2007,Charak Sutrasthana. 21/36
23. Atrideva Gupta, editor, Ashtanga Hridaya, Vidyotini Hindi commentary Chaukhambha Prakashan, Varanasi 2009. Asthanaga.Hrudaya. Sutrasthana. 4/65
24. Brahmanand Tripathi, Ganga Sahay Pandey, editor, Charak Samhita, Charak Chandrika Hindi commentary, Chaukhamba Surbharti Prakashan, 2007,Charak Sutrasthana. 7/52
25. Brahmanand Tripathi, Ganga Sahay Pandey, editor, Charak Samhita, Charak Chandrika Hindi commentary, Chaukhamba Surbharti Prakashan, 2007,Charak Sutrasthana. 20/11