

Volume 6, Issue 6, 1307-1321.

**Research Article** 

ISSN 2277-7105

## PILOT STUDY OF THE HOLISTIC HEALTH EFFECTS OF RAKTAMOKSHAN (SIRAVEDHA) KARMA IN VICHARCHIKA

## Dr. Pragati Gupta<sup>\*1</sup>, Dr. Minaj Kulkarni<sup>2</sup> and Prof. Dr. S. M. Vedpathak<sup>3</sup>

<sup>1</sup>B.A.M.S, M.D (Scholar), Dept of Panchakarma, Bharati Vidyapeeth Deemed University, College of Ayurved, Pune-4.

<sup>2</sup>BAMS, MD, Ph.D (Panchakarma), Asso.Prof. Dept of Panchakarma, Bharati Vidyapeeth Deemed University, College of Ayurved. Pune.

<sup>3</sup>B.A.M.S, M.D. (Ayu.), Ph.D. (Ayu), M.B.A.(HRM), Professor & H.O.D.Dept. of

Panchakarma, Bharati Vidyapeeth College of Ayurveda, Pune.

Article Received on 11 April 2017, Revised on 02 May 2017, Accepted on 22 May 2017 DOI: 10.20959/wjpr20176-8644

\*Corresponding Author Dr. Pragati Gupta B. A. M.S, M. D (Scholar), Dept of Panchakarma, Bharati Vidyapeeth Deemed University, College of Ayurved, Pune-4.

## ABSTRACT

Vicharchika (eczema) is one of the Rakta Pradoshaj Vikara commonly observed in society having the symptoms of Rukshata, Twakvaivarnyata, Pidaka and Ruja. It is Tridoshaj Vyadhi but mainly Kapha and Vata Dosha are vitiated. Preserving the health is one of the main endeavors of Ayurveda. Raktmokshana (Blood letting) ( siravedha) is one of the Panchakarma therapy, is the choice of the treatment in all the Rakta Pradoshaj Vikaras like Kushtha, Visarp, Vicharchika. As Rakta is among the Sapta Dhatu gets vitiated by the continuous use of the etiological factors like Apathya Aahar Vihar, sedentary life style and ignorance of Rutucharya. After Siravedha, Vitiated *Dosha and Rakta* were removed from body, there is relief

from *Vicharchika* takes place. *Vicharchika* is correlated to certain extent with eczema which is one among the common chronic skin disease and its epidemiological studies by WHO reveals that it affects 10-20% of the total world's population. About 30% of all the skin diseases are eczematous. Although *Panchakarma* procedures are much researched upon, the effects reported are mainly on *Sharir* level. Apart from the effects on disease pathology, the procedures are known to demonstrate effects on *Manas Bhav* (subtle changes) Hence, in present study consist of to evaluate holistic effects of *Raktamokshana* procedure by assessing its effects on *Manas Bhav*.

KEYWORDS: Raktamokshan (Blood letting)(Siravedha), Vicharchika, Manas Bhav.

#### **INTRODUCTION**

In Ayurveda, almost all skin diseases can be taken under generalized term "Kushtha". Kushtha is divided in to Maha and Ksudra Kushtha<sup>[1]</sup> by almost all the Acharyas. Vicharchika<sup>[2]</sup> being the Kshudra Kushtha is having Pradhana Tridosha involvement. Vicharchika is considered as Kapha Pradhan and Pitta Pradhana by Acharya Charaka<sup>[3]</sup> and Sushruta<sup>[4]</sup> respectively.

According to *Acharya Charaka*<sup>[5]</sup> and Vagbhatt<sup>[6]</sup> *Kandu, Piddika and Bahu strava* are the symptoms present in *Vicharchika* (Ch.Ch. 7/26). Means the skin ailment where eruption over the skin appears with dark pigmentation, itching with profuse discharge from the lesion.

**Prevalence** - *Vicharchika* is correlated to certain extent with eczema which is one among the common chronic skin disease and its epidemiological studies by WHO reveals that it affects 10-20% of the total world's population. About 30% of all the skin diseases are eczematous. Normally 15-30% patients coming to general partition are having dermatological disorders.

*Panchakarma*, the five procedures namely *Vamana*, *Virechana*, *Basti*, *Nasya* and *Raktamokshana* restore balance of body through Shodhana (cleansing) effect. Of these, *Raktamokshana* is useful for the diseases caused due to *Rakta dushti*. As *Vicharchika* is one of the *Raktapradoshaj Vikar*<sup>[7,8,9]</sup>, *Raktamokshan (Siravedha)* will find to be effective to reduce the symptoms of *Vicharchika*.

*Siravedha* procedures are complex and holistic in nature, have also been described to show effects on *Manas Bhav*.<sup>[10]</sup> They exert multidimensional effects. Apart from the effects on disease pathology (gross changes manifested on *Sharir*), the procedures are known to demonstrate effects on *Manas Bhav* (subtle changes). Although *Panchakarma* procedures are much researched upon, the effects reported are mainly on *sharir* level. The present study evaluates the conceptual holistic effects of *Raktamokshana* procedure by assessing its effects on *Manas Bhav*.

Skin is the vital organ of human body. *Sparshnendriya* is situated in skin which gives the knowledge of touch (*sparsha*). Indeed, Research has shown that people with skin disease experience higher levels of psychological and social distress. Research in to the manifestation of psychocutaneous disorder has led to an increasing awareness of the psychosocial effects

associated with skin disease. These included depression, a decreased sense of body image, sexual and relationship difficulties and general reduction in quality of life.

**Types and Symptoms of** *Vicharchika* (Eczema): There are several types of eczemas. In *Ayurveda*, all the three doshas can lead to eczema. The symptoms of the different eczemas are.

*Vata dosha* **type**<sup>[11]</sup>: When the vitiation of the *Vata dosha* produces the eczema, it is felt in the dryness of the skin. There is pain and severe itching of the affected region.

*Pitta dosha* type<sup>[12]</sup>: *Pitta dosha* vitiation can cause oozing from the affected part. There are other symptoms shown such as burning and fever.

*Kapha dosha* type<sup>[13]</sup>: When there is an imbalance of the *Kapha*, it is more observable on the skin. The skin becomes thick and is accompanied by oozing and itching.

# AIM AND OBJECTIVES

To study the holistic effects of the *Raktamokshana Karma (Siravedha)* in the *Vicharchika Vyadhi*.

1) To study about Vicharchika Vyadhi and Raktamokshan (Siravedha) procedure.

2) To study about the holistic effects of *Raktamokshan Karma (Siravedha)* in *Vicharchika Vyadhi.* 

#### **\* REVIEW OF LITERATURE**

The effects of *Raktmokshan* procedure on *Mana and Indriya* are extracted from the following texts: *Charak Samhita, Sushrut Samhita, Ashtang Hriday, Sharangdhar Samhita, Dalhan* commentary, *Bhela Samhita*. The information about the concept of siravedha karma in *Vicharchika vyadhi* are mentioned in *Ayurvedic samhita*.

#### **Previous Work Done**

#### There are such type of work has been taken place

1.Conboy L.A Edshten I.Garivaltis H.has published the paper in Harvard Medical School Boston on Ayurveda and Panchakarma: Measuring the effects of a Holistic Health Interventions. The Scientific World Journal (2009) 9,272-280.

2. Ventegott S, Clausen B, Neilsen ML, Merrick J. Clinical Holistic Health: Advanced tools for Holistic Medicine: The Scientific World JOURNAL 2006; 6: 2048-2065.

3. Deshpande H, et al. J Evid Based complementary Altern Med. 2016: Assessment of Quality of Life in Patients with skin disorders undergoing Ayurvedic Panchakarma as management.

#### MATERIALS

1.Review of Vicharchika and Raktamokshan therapy was studied from Charak Samhita, Sushrut Samhita, Ashtang Hriday, Dalhan commentary, Bhela Samhita and various textbooks.

2. Review of Holistic health effects of *Shodhan* was studied from the paper which was published in Harvard Medical School Boston on *Ayurveda* and *Panchakarma* by Conboy L.A Edshten I.Garivaltis H.

#### **METHODS**

1) Nidana, Purvarupa, Rupa of Vicharchika Vyadhi was studied.

2) Raktamokshan (Siravedha) Vyadhi was studied.

3) Properties and Karmukata of Siravedha in Vicharchika was studied.

4) Collection of all the references was done and correlation between the data was done logically i.e. by using *Yukti Pramana* (logical inferences).

#### **OBSERVATIONS**

#### Literary search observations

In Literary Review we observed following observations:

#### Nidana & Samprapti of Vicharchika

**NIDANA**<sup>[14]</sup>: Specific Nidanas for each variety of Kushta are not described in Ayurvedic classics. As Vicharchika is one among the types of Kushta, the Samanya Nidanas described in the context of Kushta can be taken for Vicharchika also.

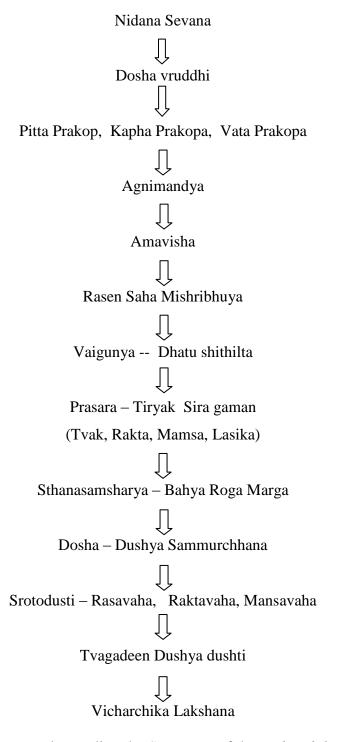
#### So Nidan for Vicharchika can be summarized below

*Amla, Lavan, Guru Ahar* which are the *Hetus* does the vitiation of *Pitta Dosha* and *Rakta Dhatu* and also it is *Raktadushti Karak*. So, if *Dadhi* which is *Abhishyand* is taken in excess, leads to vitiation of *Rakta, pitta* and leading to *Vicharchika vyadhi*.

#### SAMPRAPTI

In all the text of *Ayurveda* there is no separate description regarding the *samprapti* of *Vicharchika*, hence *samprapti* mentioned for *kushta* to be considered here also.

## SAMPRAPTI OF VICARCIKA<sup>[15,16]</sup>



In samhitas, Aacharyas stated regarding the Samprapti of the Vicharchika that teekshna, guru Gunas, amla, Rasatmaka and kledakara, Abhishyanda Aahar leads to Pitta Prakop, due to theses Prakopa, vikruti of piita, kapha and Rakta dushti.

## *Purva rupa*<sup>[17,18]</sup> – :(Premonitory sign)

- 1. Aswedanam
- 2. Atiswedanam
- 3. Vaivarnyam
- 4. Kandu
- 5. Lomaharsha
- 6. Toda

*Roopa*- (symptoms) In our classics the specific *laksana* of *Vicharchika* are mentioned by *Acharya Charaka*, and *Bhava Prakasha* and *Yogaratnakar* as (*Vicharchika*).

- 1. Kandu (Itching)
- 2. *Ruja* (Pain)
- 3. *Daha* (Burning pain)
- 4. *Rukshata* (Dryness)
- 5. Vaivarnya (Discoloration)

#### Upashaya

- 1. Snigdha Aahar
- 2. Drava aahar
- 3. Yavagu
- 4. Laghu Aahar

#### Anupshaya

- 1. Viruddha Aahar
- 2. Intake of *Chilchim* fish with milk
- 3. Intake of food mostly containing *Hayanaka*, *Chinak*, *Udadlak*, with *Ksheer*, *Dadhi*, *Takra* etc.
- 4. Intake of Mulak and Lasun with Ksheer.
- 5. Continuous intake of Gramya, Audak and Anup Mansa with Ksheer.
- 6. Use of Pippali and Kakmachi, Likuch with Dadhi and Sarpi.
- 7. Use of Meat of deer with milk.
- 8. Use of Mulaka with Guda.

*Chikitsa – Raktamokshan (Siravedha)*<sup>[19]:</sup> *Acharya Sushruta* described the method of *Siravedha* as 2 *Angula* above and 2 *Angula* below the *Kshipra Marma*.

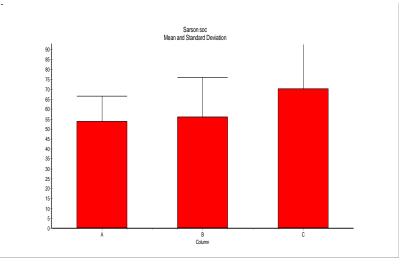
#### RESULT

#### **OBSERVATIONS OF MANAS BHAV QUESTIONERIES**

Assessment	Median	Mean	Stand devirion	P value
1 <sup>ST</sup> Assessment	67	69.6	23.2	0.05
2 <sup>ND</sup> Assessment	51	57.2	22.1	0.05
3 <sup>RD</sup> Assessment	53	59.6	27.5	0.05 ,0.01

• Table no - Health Promoting Life Style

\*p<0.05 , \*\*P<0.01 as compared to  $1^{st}$  assessment



Graph-14

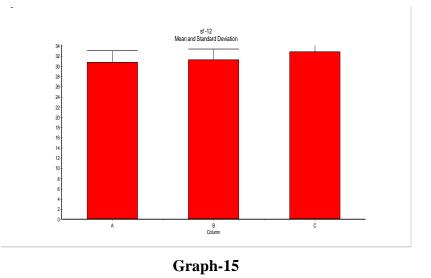
The present data shows slight improvement in patient's condition (P<0.01) after Siravedha karma. There is considerable improvement in quality of life of patient in  $2^{nd}$  assessment and significant improvement in  $3^{rd}$  assessment as compared to  $1^{st}$  assessment.

#### Table No -31 Quality of life

Assessment	Median (range)	Mean	Stand deviaton	P vaule
1 <sup>ST</sup> Assessment	31 (27-36)	30.7	2.3	
2 <sup>ND</sup> Assessment	31 (28-35)	31.2	2.17	0.01
3 <sup>RD</sup> Assessment	33 (31-36)## ^^	32.8	1.3	0.01

## p<0.01 as compared to 1<sup>st</sup> assessment

 $^{n}$  p<0.01 as compared to 2<sup>nd</sup> assessment

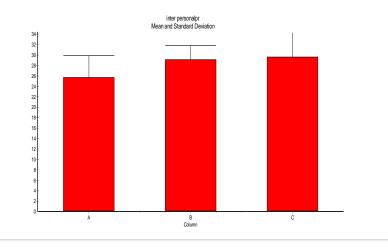


There is no difference seen in assessment in quality of life of patient in  $2^{nd}$  assessment but there is highly significant improvement seen in  $3^{rd}$  assessment as compared to  $1^{st}$  assessment.

#### Table no-32 Inter personal support

Assessment	Median	Mean	Stand deviaton	P vaule
1 <sup>ST</sup> Assessment	26	25	4.4	0.01
2 <sup>ND</sup> Assessment	30	29	3.8	0.01
3 <sup>RD</sup> Assessment	31 **	29	5.0	0.01

\*\*p<0.01 as compared to 1 st assessment



Graph-16

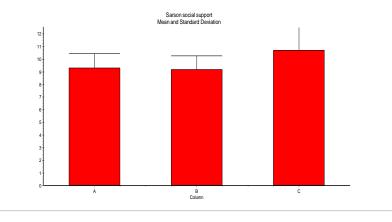
There is significant improvement seen in assessment in interpersonal support of patient in  $2^{nd}$  assessment and there is highly significant improvement seen in  $3^{rd}$  assessment as compared to  $1^{st}$  assessment.

Assessment	Median	Mean	Mean Stand deviaton	
1 <sup>ST</sup> Assessment	9	9.1	1.1	
2 <sup>ND</sup> Assessment	10	10.3	1.0	0.05
3 <sup>RD</sup> Assessment	11 *^^	10.9	2.0	0.01

#### Table no-33 Social support

\*p<0.05 as compared to 1<sup>ST</sup> assessment

^^P<O.O1 As compared to 2nd assessment



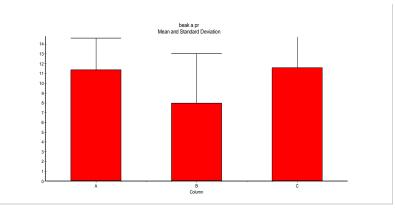
Graph-17

There is no difference seen in assessment in social support of patient in  $2^{nd}$  assessment but there is highly significant improvement seen in  $3^{rd}$  assessment as compared to  $1^{st}$  assessment.

Table	no-34.	Anxiety
-------	--------	---------

Assessment	Median (range)	Mean	Standard deviarion	P vaule
1 <sup>ST</sup> Assessment	11	11.3	3.3	0.01
2 <sup>ND</sup> Assessment	18	17	4.1	0.05
3 <sup>RD</sup> Assessment	8*	7.7	5.2	0.01

\* P<0.05 As compared to 2<sup>nd</sup> assessment



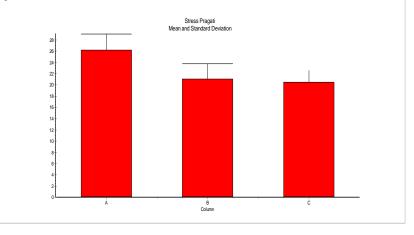
Graph-18

There is no difference seen in assessment in anxiety of patient in  $2^{nd}$  assessment but there is slight increase in anxiety of patients observed in  $3^{rd}$  assessment as compared to  $1^{st}$  assessment. It is due to the fact that in Siravedha karma lot of blood is lost which make the patient feel nervous and scary resulting in increase in anxiety of patient.

#### Table no -35 Stress

Assessment	Median (range)	Mean	S D	P Vaule
1 <sup>ST</sup> Assessment	26	25.1	3.2	0.05
2 <sup>ND</sup> Assessment	20 ***	20	1.9	
3 <sup>RD</sup> Assessment	20***	20	2.2	0.05

\*\*\* p < 0.001 as compared to 1<sup>st</sup> assessment



Graph-19

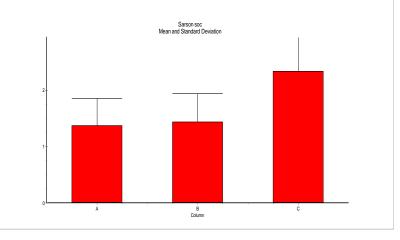
There is significant improvement seen in assessment in Stress of patient in  $2^{nd}$  assessment and there is highly significant improvement seen in  $3^{rd}$  assessment as compared to  $1^{st}$  assessment.

Assessment	Median (range)	Mean	S D	P Vaule
1 <sup>ST</sup> Assessment	1	1.4	0.4	0.01
2 <sup>ND</sup> Assessment	2**	1.8	0.5	0.01
3 <sup>RD</sup> Assessment	1^^	2.3	0.6	0.01

\*p<0.01 as compared to 1<sup>st</sup> assessment

^^P<O.O1 As compared to 2 nd assessment

There is significant improvement seen in assessment in Self efficacy of patient in  $2^{nd}$  assessment and there is highly significant improvement seen in  $3^{rd}$  assessment as compared to  $1^{st}$  assessment.





#### DISCUSSION

Discussion is carried under following headings.

1. Discussion on Nidan of Vicharchika

2. Discussion on Rupa of Vicharchika.

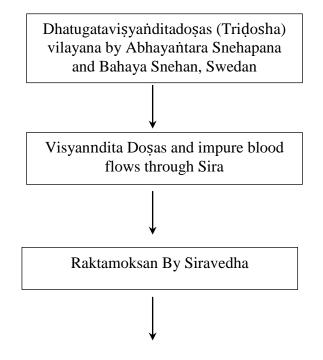
3. Discussion on the effect of Siravedha in Vicharchika

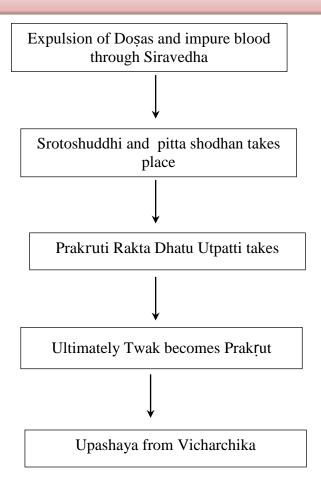
Probable mode of action of Siravedha (BLOOD LETTING)

#### SAMPRPATI BHANG IN VICHARCHIKA

### DISCUSSION ON EFFECT OF THERAPY (SIRAVEDHA)

#### Probable Samprapti Bhanga of Vicharcika by Siravedha





#### DISCUSSION

**Concept of Holistic Effect:** As far as the study is concerned Holistic means physical health along with the mental health means the well being of *Sharir* along with the *Mana*, *Indriya*, *Buddhi* whole is Holistic. In *Vicharchika* Raja and Tama Guna (Attributes) of Mana(Mind) has been affected due *Kapha and Pitta Dushti*. After Siravedha vitiated *Kapha Vata*, Pitta get expelled out it leads to reduce in Raja and Tama Guna of Mana it means Indriya Shudhhi and Mana Prasadana resulted after *Siravedh karma* (Raktmokshana).

Effect on Siravedha Karma in Vicharchika: Symptoms like Twakvaivarnta, Rukshata, Kandu, Daha will reduce after Siravedha Karma due to Prabhut dosha Nirharan by Siravedha and Rakta Shudhhi, Sarir laghvta, Vedana shanti, Twak Shotha..

According to *Charak, and Sushruta, Shodhan* is necessary for disease due to the *Bahudosha* Avastha. As Vicharchika (eczema) is Vata-Kaphaj Condition so Siravedha karma (blood letting) can be given in Vicharchika (eczema).

Although *Vicharchika (eczema)* is considered as a disease of *Bahya Roga Marg*, the initiation of pathogenesis is from the *Koshtha*. However applying the usual Shaman principles of

treatment of *Vicharchika* according to *Nidan* and *Samprapti*, will inevitably result in only partial cure, therefore *Sanshodhan Karma* is considered as the best line of effective treatment. *Siravedha (blood letting)* procedure is effective to absorb toxic materials so they can be easily evacuated from body. Beside eliminating *Pitta and Kapha Doshas*, the main seat of *Vata* is also purified thereby making *Siravedha Karma* a truly *Tridoshahar* procedure.

#### Holistic Effect of Siravedha In Vicharchika

*Siravedha* comes under the *Pancha Shuddhi* according to the *Charkacharya* which means to purify the body from inside, *Siravedha karma* not only cleanses the body from inside but also does the *Prasadan* of the *Mana, Indriya, Satva, Atma* which are called the tripod of the *Shari*r. which directly improves the Quality life, Life Style, Efficacy of Life, Beck Anxiety ,Interpersonal Support, Stress which are the main objective of the Study.

As *Manas Hetu* also plays very important role in the *Vicharchika (eczema)* i.e. Bhay, Chinta , aggravates the *Tridosha*.

**Comparison of the Holistic Health with the Manshik Bhava:** Holistic health care is an integrated approach to health care that treats the whole person not simple symptoms and disease. Body and mind are integrated and inseparable.

In this, *Bhaya, Chinta, Krodha* etc comes under the *Mansik Bhava* which is the backbone of the study. In all these *Bhavas, Tridoshas* get vitiated according to the dominance of the *Bhava* which directly hamper the Quality of Life, Social Support, Stress Scale, Beck Anxiety Inventory, Self Efficacy etc. As all these scales shows the prognosis of the Disease which directly shows the imbalance of the *Mansik Bhavas* which further aids in the pathogenesis of the Disease.

#### Effect on Validated Questionnaire<sup>[20]</sup>

The improvement in Health promoting life style and quality of life after performing *Siravedha* therapy due to Eradication of Dushit *Kaph Pitta, Kleda* Nash resulted into *Kandu nasha*, along with *Man shanti* manifested in terms of all symptoms. Improvements in energy level and locomotors activities. After the *Siravedha karma Vicharchika Vyadhi* and symptoms related to it are gone, along with reduction in the stress and anxiety Level. Patient becomes more communicable with other people. Another reason that in *Vicharchika Vyadhi* generalized purification after *Siravedha* therapy i.e. *Mana Shudhhi* in *sarwang suddhi*.

Purification after *Siravedha* therapy i.e. *Pitta*, *Kapha Nirharana*, *Vata Niyaman* after removing Avrodh in *Sarvang Strotas* resulted in *Prakrut Rasa Nirman*, *Samyak Vyana Vahan*, *Mana Shudhhi* that resulted in anxiety scale symptoms. Which are mainly related Rasavaha, *Raktavaha Strotas Dushti*, ,vague symptoms related *Vata vydhi*.

*Siravedha* therapy benefited in anxiety level may it help *Manovaha Strotas Shudhhi, Hruday Shudhhi.* After *Siravedha* therapy subject shows slight improvement i.e. reduction in the symptoms of stress related to *Manovaha Strotas. Siravedha* therapy helped improvement in *Mana* which in term benefited symptom related stress scale. The confidence of the subject improved after the long term sustained benefit of *Siravedha* therapy. This also reflected in self efficacy scale suggestive of great faith in ancient wisdom.

#### CONCLUSION

*1.Vicharchika* as a *kshudra kushta* has *kapha* dominance and even involvement of *tridosha* can be evident from its signs & symptoms.

2. *Siravedha karma* will be find effective in the symptoms of *Vicharchika* and also in holistic health effect.

#### REFRENCES

- 1. Tripathi B.on Carak Samhita of Chakrapanidatta, Nidan Sthan, 4<sup>th</sup> ed,Varanasi Chaukambha Publication;2004. Ch.Ni.5/4.
- 2. Tripathi B.on Carak Samhita of Chakrapanidatta,Sutra Sthan,4<sup>th</sup> ed,Varanasi Chaukambha Publication;2004. Ch.ni 5/3
- 3. Tripathi B.on Carak Samhita of Chakrapanidatta, Sutra Sthan, 4<sup>th</sup> ed,Varanasi Chaukambha Publication;2004. Ch.ni5/5.
- 4. Jadhavji T.on Sushrut Samhita of Dalhanacharya commentary; Chikitsa Sthan; Chaukhambha Surbharti Prakshan;1994. Su.Chi 5/27/29.
- 5. Tripathi B.on Carak Samhita of Chakrapanidatta,Chikitsa Sthan, 4<sup>th</sup> ed,Varanasi Chaukambha Publication;2004. (Ch.ch.7/46) (ch.chi7/26)
- 6. Ashtnag Hradya Hindi commentary, Varanasi Krishndas Academy. (As.S.Ni.14/6-17).
- Tripathi B.on Carak Samhita of Chakrapanidatta, Chikitsa Sthan, 4<sup>th</sup> ed, Varanasi Chaukambha Publication;2004. (Ch.ch.7 /47)
- 8. Gupta K.A. on Ashtnag Sangarah Hindi commentary, Varanasi Krishndas Academy. (As.S.Ni.14/2-3)

- Ashtnag Hradya Hindi commentary, Varanasi Krishndas Academy. (As.H.Su 11/8), (14/10-20)
- 10. Jadhavji T.on Sushrut Samhita of Dalhanacharya commentary; Chikitsa Sthan; Chaukhambha Surbharti Prakshan;1994. (Shusrta su14/32-33).
- Madhav Nidan (madhukosha hindhi commentary 2<sup>nd</sup> part ) Acharya yadunandupadhyaya Chaukambha Publication ,Varanasi 29 sanskarna.(M Ni 49/33)page no195
- 12. Jadhavji T.on Sushrut Samhita of Dalhanacharya commentary; Chikitsa Sthan; Chaukhambha Surbharti Prakshan; 1994.
- 13. Gupta K.A. on Ashtnag Sangarah Hindi commentary, Varanasi Krishndas Academy. As. S. Ni. 14/5.
- 14. Ravidatt Tripathi .on Charak Samhita of Chakrapanidatta, Nidan Sthan, 1<sup>st</sup> part ed,Varanasi Chaukambha Publication;2004. (Ch.Ni 5/6)
- 15. Ravidatt Tripathi .on Charak Samhita of Chakrapanidatta, Nidan Sthan, 1<sup>st</sup> part ed,Varanasi Chaukambha Publication;2004. (Ch.Ni 5/6-7)
- 16. Ravidatt Tripathi .on Charak Samhita of Chakrapanidatta, Chikitsha Sthan, 2<sup>st</sup> part ed, Varanasi Chaukambha Publication;2004. (Ch.Ci 7/9-10)
- 17. Ravidatt Tripathi .on Charak Samhita of Chakrapanidatta, Nidan Sthan, 1<sup>st</sup> part ed,Varanasi Chaukambha Publication;2004. (Ch.Ni 5/7)
- Ravidatt Tripathi .on Charak Samhita of Chakrapanidatta, Chikitsha Sthan, 2<sup>st</sup> part ed,Varanasi Chaukambha Publication;2004. (Ch.Ci 7/14)(29/16-18)
- 19. Jadhavji T.on Sushrut Samhita of Dalhanacharya commentary; Sutra Sthan; Chaukhambha Surbharti Prakshan;1994. (Shusrta su13/3).(Sh.sarira 17/23).
- 20. Conboy L.A Edshten I.Garivaltis H.has published the paper in Harvard Medical School Boston on Ayurveda and Panchakarma: Measuring the effects of a Holistic Health Interventions. The Scientific World Journal 2009; 9: 272-280.