

A clinical study on *amvat* (rheumatoid arthritis) by *vaitran basti* along with *bhallatak siddha kshir*

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ABSTRACT.

Rheumatoid arthritis is a chronic inflammatory polyarthritis which is destructive and de-formative in nature. It is more common in female than male in a ratio of 3:1 and more common in 3rd or 4th decade of life. Treatment used in modern science is inadequate and many times surgical treatment is required. Prognosis of the disease is very bad as disease is progressive and leads to joint deformities.

According to *Ayurveda* symptoms of rheumatoid arthritis sembles to the symptoms of *Amvat*. *Amvat* is said to be *Kashtasadhya* or *Yappya* to treat, due to *Madhyam Rogamarga*. So we may correlate rheumatoid arthritis with *Amvat*.

Charkrapani in *Chakradatta Niruhadhikar* has indicated administration of *Vaitaran Basti* in the management of *Amvat*. *Bhallatak Siddha Kshira* was used in *Ayurveda* for a long time to treat *Amvat*. *Bhallatak* is said to be *Ampachak*, *Shothhar*, *Jvarahar* and

Vataghna in qualities and possess *Rasayan Guna* as per ancient *Ayurvedic Acharyas*. But a very few research work has been conducted on its efficacy in the management of *Amvat*.

Considering all these views in mind study was pinpointed to evaluated the effect of administration of *Vaitaran Basti* alongwith Oral intake of *Bhallatak Siddha Kshir* in the patients of *Amvat*. for this purpose 15 patients who visited the hospital OPD, who were diagnosed as the patient of seropositive rheumatoid arthritis, were admitted in the IPD of Hospital of Kaychikitsa Department, SSVP Ayurved college Dist.Hingoli, Maharashtra, India R.I. Hatta (M.S.) and treatment was given for eleven days and statistical analysis was done for the observations found before treatment and after the completion of the treatment and results were obtained. It was observed that administration of *Vaitaran Basti* alongwith oral intake of *Bhallatak Siddha Kshir* proved to be very effective to reduce sings and symptoms of the

disease like *Shoth* (inflammation), *Shula*(pain), *Pidanasahatva*, *Aruchi*, *Cluma*, *Mandagni*. Pain was reduced significantly within 2-3 days of administration of drugs. *Jvara* was also significantly reduced. So we may say that it is a very effective and successful treatment for the management of the disease *Amvat*. Also erythrocyte Sedimentation rate was highly increased.

KEYWORDS – *Amvat*, Rheumatoid Arthritis, *Vaitaran Basti*, *Bhallatak Siddha Kshir*, *Doshas*, *Akunchan Prasaranayo shula*.

INTRODUCTION

Ayurveda, the science of life has been existing since the creation of this world by *Lord Brahma*. Rheumatoid arthritis is a chronic inflammatory, destructive and deforming polyarthritis. It is associated with systemic disturbance, extraarticular lesions. It is a multifactorial disease with complex genetic and environmental factors including possible infection As the time passes further joint destruction takes place and development of systemic complications occurs.

According to *Ayurvedic* view the symptoms of rheumatoid arthritis can be correlated with the disease *Amvat*. There is *Sandhishula*, *Shotha*, *Graha* and *Pidanasahatva* in the involved joints. *Jvara* is also present alongwith *Agnimandya* and other general symptoms. *Madhavkar* in *Madhavnidan Samhita* mentioned *Amvat* as a disease for the first time. The disease is being chosen for the study due to its increasing prevalence and lack of effective medicaments. Review of the work explained that many treatments had been

tried with little success or in some cases may need prolong management. According to the nature of the disease it is essential to plan such therapy which has *Ama* and *Vatahara* properties. The line of the treatment for the disease as per *Chakradatta Amvatchikitsa Prakaran* include *Langhan*, *Swedan*, use of *Tikta* and *Katu* rasa and if required *Virechan* and *Basti*. *Chakrapani* has indicated to administer *Vaitaran Basti* in the management of *Amvat*. *Bhallatak Siddha Kshir* was used in *Ayurveda* for a long period to treat *Amvat* and significant results were observed. However a very few research work had been conducted on its efficacy in the management of *Amvat*. *Bhallatak* has *Ampachak*, *shothhar*(antiinflammatory) and *Jvarahar*, *Vataghna* properties. So alongwith administration of *Vaitaran Basti* oral intake of *Bhallatak Siddha Kshir* was selected for the purpose of study.

Aims and objects of the study was pinpointed to evaluate the effect of therapy on *Sandhishula*, *Sandishotha*, *Graha* and effect of therapy on erythrocyte sedimentation rate, lymphocyte count, haemoglobin gram percent. Keeping all these views in mind fifteen patients of rheumatoid arthritis were selected for the study and were admitted in IPD of Kaychikitsa Department and results were observed with administration of *Vaitaran Basti* alongwith *Bhallatak Siddha Kshir*.

MATERIALS AND METHODS

Patients suffering from the disease and having symptoms of *Amvat* like *Sandhishul*, *Sandhishoth*, *Graha* were randomly selected irrespective of

age, sex, religion, caste, marital status, educational status and economic status and patients fulfilling the criteria of diagnosis were admitted in the IPD of the hospital for the purpose of the study.

Criteria of Diagnosis –

Selection of Patients – Patient were selected randomly. For that thorough examination of the patients was done and for that a special proforma was prepared. The necessary investigations were done. Haemoglobin gram percentage-hb%, Total leucocyte count-TLC, Erythrocyte sedimentation rate – ESR, Rheumatoid factor, ASO titre if necessary.

Inclusive Criteria of the Patients –

- Male or Female patients irrespective of caste and religion, place and from any socioeconomic status.
- patients of age between the age of seventeen years upto the age of sixty years.
- Patients having positive RA-Factor.
- Patients eligible for *Basti* treatment.

Exclusive Criteria of the Patients –

- Patients below the age of seventeen years and above the age of sixty years.
- Patients giving history of and patients of intestinal ulcers.
- Patients not eligible for *Bastichikitsa*.
- Seronegative rheumatoid arthritis.

Criteria of Assessment –

The effect of therapy was assessed as follows-

- effect of therapy on symptoms of the disease such as *Shula, Akunchan Prasaranayo Shula, Graha, Shoth, Pidanasahtva*.
- the involvement of joints.
- *Doshdushya Strotas* involvement.
- incidence of symptoms of *Sama Avastha* of the disease
- effect of therapy on *Jvar*.
- effect of therapy on haematological parameters.

For the assessment of symptoms general symptoms score method was adopted. for that mark system was adopted

- ‘2’marks to each symptom present before the treatment.
- ‘1’mark to each symptom reduced remarkably after the treatment.
- ‘0’mark to the complete relieved symptom.
- ‘2’ marks for the symptoms showing no improvement after the administration of the therapy.

Percentage was calculated statistically for the assessment of sex of the patients either male or female, age, religion, socioeconomic status, educational and marital status. Percentage according to the involvement of joints, *DoshDhshya-Strotas* involvement and incidence of symptoms and symptoms score percentage was calculated before treatment and after treatment and values were compared. Percentage of symptoms of *Sama Avastha* was calculated before treatment and after treatment. Effect of therapy on *Jvar* was calculated by Paired ‘t’ test. Effect of therapy on haematological parameters was calculated statistically.

Materials Used –

(A) *Vaitaran Basti* – Preparation Of *Vaitaran Basti* -

Vaitaran Basti has been mentioned by *Chakradatta* in *Niruhadhikar* (73/32) in the management of *Amyat*. Ingredients of *Vaitaran Basti* were selected as described by *Chakrapanidatta*. It was prepared by scientific method described in text and administered according to today's lifestyle. For that

- (a) *Gomutra* – 200cc, (b) *Tilataila* – 100cc, (c) *Amlica* (Tamarind) – 25g, (d) *Gud* (Jaggary) – 50g, (e) *Saindhav* – 5g, (f) *Shatpushpa Choorna*-as a *Prakshep* – 10g

Initially *guda*(Joggary)was mixed uniformly with equal quantity of lukewarm water and *Saindhav* was added to it. Thereafter *Tilataila* was added till the mixture becomes homogenous. To this *Amlica Kalka* was added carefully and finally *Gomutra* was added slowly in given quantity and mixed until uniform *Basti Dravya* was obtained. This was then filtered and *Bastidravya* was made lukewarm by keeping it in the tub containing hot water. *Basti* was given by proper method in the leftlateral position of the patient by *Bastiyantara* after lunch in morning hours.

(B) *Bhallatak Siddha Kshir*-Preparation Of *Bhallatak Siddha Kshir* -

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According to *Ayurvedic Acharyas Charak, Sushrut, Vagbhat* and others *Bhallatak* has *KaphaVatghna* and *Rasayan* properties. *Bhallatak Siddha Kshir* was prepared as per described in *Sharangdhar Samhita*. For that - *Shodhit Bhallatak* – 1 piece, Milk – 30cc, water – 120cc was taken. *Shodhit Bhallatak* was taken. It was added to milk and water in a container and kept on *Mandagni* to prepare *Kshir* by scientific method. It was boiled upto only milk in the quantity of 30cc remains. After then it was removed and filtered and was given to the patient orally in a dose of 30cc in the morning once in day.

Basti and *Kshir* was given combinely for 11 days.

Pathyapathya –

During the course of the treatment patients were strictly advised to take only lukeworm water for drinking, not to indulge in *Divaswapa*, rice was prohibited and general instructions were given.

OBSERVATIONS AND RESULTS

In this study of *Amyat*(rheumatoid arthritis) fifteen patients were studied. All the patients having positive R.A. Factor and fulfilling the criteria were selected randomly. The close observations were done and the results obtained by data analysis is presented here with, in tabular form

Table-1

Table showing sexwise distribution of 15 patients of *Amyat*(Rheumatiod Arithritis)

Sr.No	Sex	No. of patients	Percentage
1	Male	1	6.67%
2	Female	14	93.33%

Table 2

Table showing involvement of joints in 15 patients of *Amyat*(Rheumatoid Arthritis)

Sr.No.	Name of Joint	No.of Patients	Percentage
1	Rt. <i>Hasta Anguli Parva Sandhi</i>	5	9.615
2	Rt. <i>Hasta Anguliparva Sandhi</i>	6	11.538
3	Rt. <i>Manibandha Sandhi</i>	4	7.692
4	Lt. <i>Manibandha Sandhi</i>	8	15.384
5	Rt. <i>Kurpar Sandhi</i>	7	13.461
6	Lt. <i>Kurpar Sandhi</i>	2	3.846
7	Rt. <i>Ansa Sandhi</i>	1	1.923
8	Lt. <i>Ansa Sandhi</i>	0	0
9	<i>manyaKasheruka Sandhi</i>	1	1.923
10	Rt. <i>Vankshan Sandhi</i>	1	1.923
11	Lt. <i>VankshanSandhi</i>	1	1.923
12	Rt. <i>JanuSandhi</i>	5	9.615
13	Lt. <i>JanuSandhi</i>	1	17.307
14	Rt. <i>GulphaSandhi</i>	1	1.923
15	Lt. <i>GulphaSandhi</i>	1	1.923

Table-3

Table showing dominant *Dosha-Dhatu-Strotas* involved In 15 patients of *Amyat*(Rheumatoid Arthritis)

Sr.No.	Involvement of	No. of Patients	Percentage
1	<i>Dosha-Tridosha</i>	15	100
2	<i>Dhatu Rasa</i>	15	100
	<i>Dhatu Rakta</i>	15	100
	<i>Dhatu Mansa</i>	15	100
	<i>Dhatu Asthi</i>	15	100
3	<i>Strotas, Rasavaha</i>	15	100
	<i>Strotus Raktavaha</i>	15	100
	<i>Strotus Mansvaha</i>	15	100
	<i>Strotus Ashivaha</i>	15	100
	<i>Strotas Annavaha</i>	15	100
	<i>Strotas Mutravaha</i>	9	60
	<i>Strotas Purishvaha</i>	12	80

Table-4

Table showing incidence of symptoms and symptom score In 15 patients of *Amyat*(Rheumatoid Arthritis)

Symptom	No.of Patients	Percentage	Symptom score			Relief Percentage
			B.T.	A.T.	Diff.	
<i>Shula</i>	15	100	230	85	145	63.043
<i>Accunchan-PrasaranayoShula</i>	15	100	87	72	15	17.15

<i>Graha</i>	15	100	187	78	9	4.812
<i>Shotha</i>	15	100	162	72	90	55.55
<i>Pidanasahatva</i>	15	100	86	82	4	4.651
	Total		752	389	260	34.973

Table-5

Table showing incidence of symptoms of *Sama-Avastha* and effect of therapy on symptoms score

Sr.No	Symptoms	Symptoms		Symptoms			Relief Percentage
		No.of Patients	Percent	B.T.	A.T.	Diff	
1	<i>Shtrotorodha</i>	15	100%	30	6	24	80
2	<i>Balabhransha</i>	15	100%	30	7	23	76.67
3	<i>Gaurav</i>	15	100%	30	1	29	96.67
4	<i>Anilmudhata</i>	10	66.66%	20	0	20	66.66
5	<i>Alasya</i>	12	83.33%	24	7	17	59.03
6	<i>Apakti</i>	14	71.83%	28	3	25	63.78
7	<i>Nishthiva</i>	10	66.66%	20	0	20	66.66
8	<i>Malasanga</i>	12	83.33%	24	1	23	79.86
9	<i>Aruchi</i>	15	100%	30	4	26	86.67
10	<i>Klama</i>	14	71.43%	28	6	22	56.12

Table-6

Table showing effect of therapy on *Jvara* by paired "t" test

B.T.	A.T.	Diff.of Meant ISD	Sea	T	P
99.43+00.61	98.23+0.55	1.2+0.51	0.1	9.16	<0.001

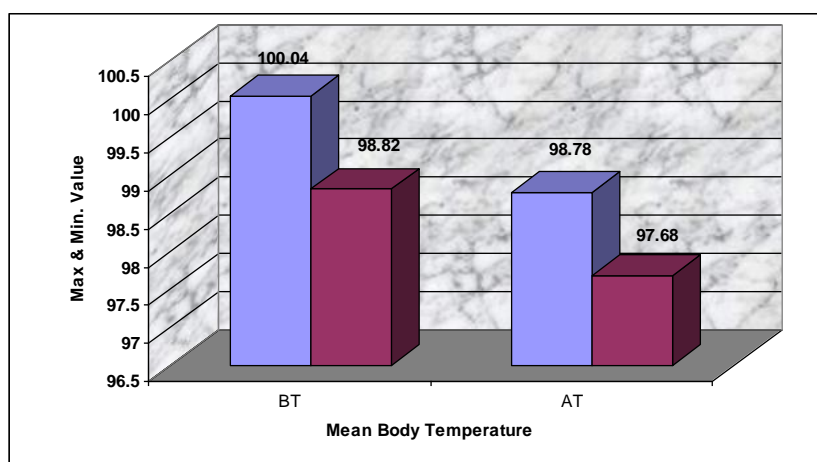
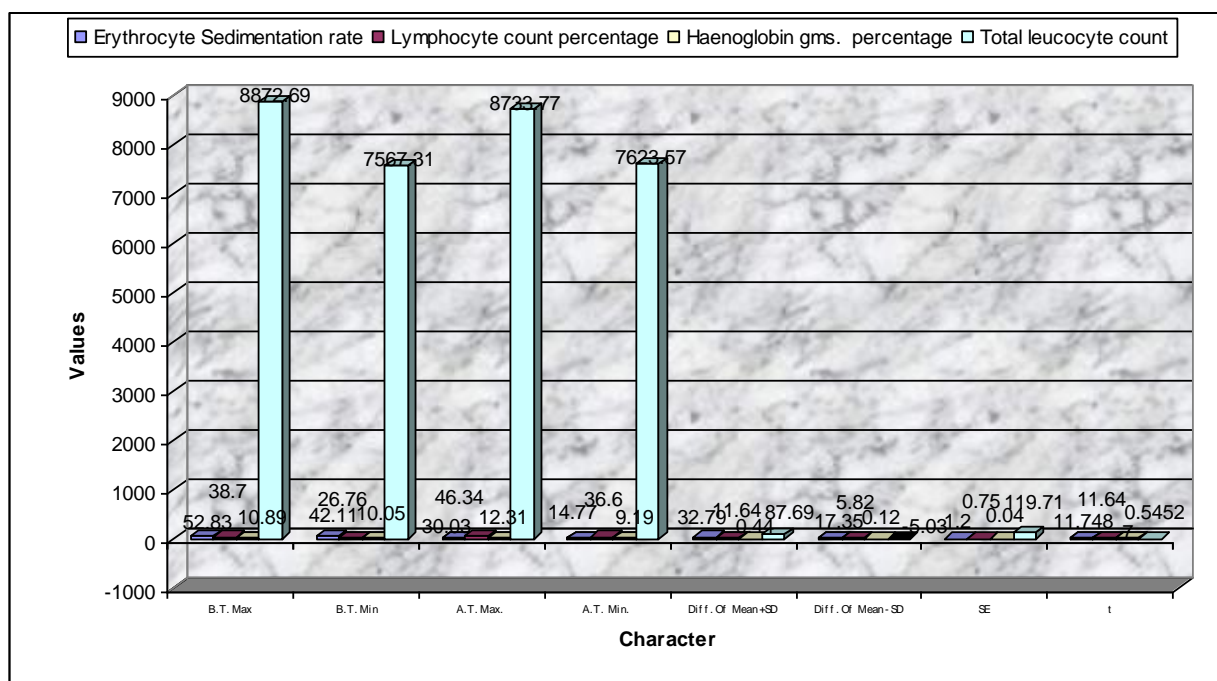


Table-7

Table showing effect of therapy on haematological para-meters in 15 patients of *Amyotrophic Lateral Sclerosis* (Rheumatoid Arthritis)

Sr.No.	Character	B.T.	A.T.	A.T.Max	A.T.	Diff.of means+SD	Difference of mean-SD	SE	t	P
1	Erythrocyte	52.83	42.11	30.03	14.77	32.79	17.35	1.2	11.748	<0.001
2	Lymphocyte Count	38.7	26.76	46.34	36.6	11.64	5.82	0.75	11.64	<0.001
3	Haemotoglobin gms	10.89	10.05	12.31	9.19	0.44	0.12	0.04	7	P<0.001
4	Total Leucocyte	8872.69	7567.31	8733.77	7623.57	87.69	-5.03	120	0.5452	P<0.001



DISCUSSION

Aim of the study was to evaluate the effect of therapy on *Sandhishula*, *Sandhishotha*, *Graha*, *Jvara* and effect of therapy on erythrocyte sedimentation rate, lymphocyte count, haemoglobin gram percent. In this study it was observed that female suffer more than male (93.33%). It is common in lower socioeconomic status patients (59.93%). The reduction in symptoms of *Amyat*, as well as reduction in symptoms of *Sama-Avastha* by more than 50% relief percentage highlighted that *Vaitaran Basti* combined with oral administration of *Bhallatak Siddha Kshir* had definite role to reduce the disease process of *Amyat*. The highlight of observation was that administration of these therapy reduced the pain within 2to3 days. There was near about 50%to60% relief in the symptoms of *Shula*, *Akunchan-Prasaranaya Shula*, *Graha* and *Pidasasahatva*. *Balabrhansha*, *Gaurav*, *Anilamudhata*, *Alasya*, *Apakti*, *Nishthiv*, *Malasanga*, *Aruchi* and *Clum* symptoms were reduced to near about 70%to80%. Effect of therapy on *Jvara* was calculated by Paired “t” test and excellent results in reduction of *Jvara* was observed (**Table-6**). Effect of therapy on haematological parameters was calculated statistically and excellent improvement was observed after treatment (**Table-7**)

Mode of Action Of Drugs -

Mode of Action –

Vaitaran Basti is a *Mridu Kshara Basti*. It constitutes *Amlica*, *Guda*, *Saindhava*, *Gomutra* and *Tilataila* in a particular ratio. As a whole, the properties of *Vaitaran Basti* can be

considered as *Laghu*, *Ruksha*, *Ushna*, *Tikshna Guna* which are opposite to *Guru*, *Snigdha Guna* of *Kapha*. The drugs possess *VataKapha Shamak Guna*. It helps in reducing *Kaphadosha* and *Amadosha* viciation in the disease and hence provides significant improvement in the signs and symptoms of the disease. *Saindhava* is *Sukshma* and *Tikshna* in *Guna*. It causes *Strotoshodhan* by overcoming *Sanga* and helps to pass the drug molecules in the systemic circulation through mucosa. It Liquifies the viscous matter and break down them into tiny particles. *Guda* and *Tilataila* are useful to make the mixture homogenous and so it is quickly absorbed through the gut. It helps in carrying drugs upto microcellular level. *Amlica* is *Ruksha*, *Ushna Amla*, *VataKaphaShamak* in properties which is useful to treat the disease *Amyat*. *Gomutra* is chief content of *Vaitaran Basti*. It is of *Katu Rasa*, *KatuVipak*, *Ushna Virya*, *Laghu*, *Ruksha* and *Tikshna Guna* pacify the *Kapha Dosh*. It has the qualities *Tridoshar*, *Agnideepana*, *Pachan*, *Strotovishodhan* and *vatanuloman*. It helps to destroy the *Samprapti* and to reduce signs and symptoms of the disease. *Basti* is administered through the rectum. So it has faster absorption and provides quicker results. The *Basti Dravya* after reaching large and small intestine gets absorbed from the intestine due to *laghu*, *Ushna*, *Tikshna* and *Ruksha Guna* of drugs of *Vaitaran Basti*. It breaks the obstructions and expels out the marbid material from all over the body thus helps in breaking down the pathogenesis of the disease.

Bhallatak(*Semearpus anaecardium* Linn.) or markingnut has been indicated for *shotha*(inflammation). In

Charaksamhita Chikitsa Sthan ten different doses forms of *Bhallatak* are described for the purpose of *Rasayan*. According to *Sushrut* it possess *Mdhur, Kashay, Katu Rasa, Anurasa-Tikta, UshnaVirya, Laghu, Snigdha, Tikshna Guna, KaphaVatashamak* properties, *Doshaghna Karma* and it is called *Vatari*. It acts as *Vatahar*. It posses qualities of *Deepan, Pachan, Vatahar, Medhya*, It is *Jvarahar Urdhavadoshaghna* and *Agnimandyahar*. Due to its *Deepan, Pachan Ushna* and *Tikshna Guna* is acts as *KaphaVat Shamak*. By its properties signs and symptoms of the disease. get reduced.

Thus it may be possible that property of *Bhallatak Siddha Kshira* may be responsible for *Pachan* and *Deepan* to reduce the *Sama-Avastha*. *Rasayan* effect of *Bhallatak* may help to reduce the *Shula, Shotha* and *Graha* by supplementing *Vaitaran Basti* and giving *Bala* to *Strotus*. The modern contentment of erythrocyte sedimentation rate was also highly significantly reduced which proved the effect of therapy.

It was a sincere effort to treat the patients effectively. So that patients may get rid off the disease. In future planned study should be undertaken on the efficacy of the drugs. To add, effect of these threapy must be seen immunologically also. Hoping best wish to relieve the patient.

CONCLUSION

The conclusion is drawn that based on statistical evaluation of signigfiance, the administration of *Vaitaran Basti* alongwith *Bhallatak Siddha Kshira* is very effective in reducing the signs and symptoms of the

disease. *Jvara* is also significantly reduced, erythrocyte sedimentation rate was significantly increased. Thus it can be concluded that administration of *Vaitaran Basti* alongwith *Bhallatak Siddha Kshira* is significantly effective and successful treatment in the management of *Amvat* (Rheumatoid Arthritis). *Vaitaran Basti* exerts a more systemic action besides exerting local action via large intestine. *Bhallatak* posses anti-inflammatory and *Rasayan* qualities.

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ABBREVIATIONS

BT – Before treatment values

AT – After treatment values.

REFERENCES

1. Gollawalla Medicine For students by A.F.Gollwala and S.A. Gollwala ed-16 by executie distributors, Published by A.F.Gollwala express court Bombay chapter-15, Page 711-713, 714. year 1994.

2. API Textbook of Medicine, 7th ed. edited by Siddharth N.Shah, M.Paul Anand, Published by the association of Physicians of India(2003) ch-XIX. Page No.- 1160, 1164,1161, 1162, 1163.
3. Davidsons's Principles and Practices of Medicine ed-19th, edited by Charistopher Haslette, edwin R Chilvers, Nicholas A.Boon, Nicki R.Colledge, John A.A.Hunter, Published by Edinborg London, New York Philadelphia ST.Louis Sydney Toranto 2002. Ch-20 Page- 976,977, 1002-1007, 1003-1004, 1006-1007.
4. *Madhavkar Madhavnidan, Madhukosh Sanskrit* Commentary by Vijayrakshit, Srikanthadatta and Vidyotini Hindi Commentary by Sudarshan Shastri edited by Yadunandan Upadhyaya, Chaukhamba Prakashan Varanasi, Revised edition reprint2007, NidanStan Ch-25 pgNo. 508,509, 512.
5. *Sushruta, Sushrut Samhita, Nibandha-sangraha* commentary of Dalhana, *Nyayachandrica* commentary of Gaydas edited by Ambikadatta Shastri, Chaukhanba Orientatia Varanasi, reprint edition 2010, Sutrasthan 15/24, page No.81.
6. *Charak CharakSamhita Sutrasthan* Yadavji trikanji acharya editor Varanasi Chaukhamba Krishnadas Academy 2006 Sutrasthan Ch-18, Page 106)
7. *Charak Samhita Chikitsasthan*, Ch.15, pg.No.459, 597. Vidyotini Hindi commentary by Padmabhushan Vaidya SAMvata Shree Satyanarayana shastri, explained by Kashinath Shastri and Gorakhnath Chatarvedi Published by chaukhamba Sansktri Series2009.
8. *Sharangdhar Samhita Purvakhandas, jeevanprabha* Hindi Commentary Ch7, pg.No. 80.
9. *Chakradatta with Ratnaprabha* commentary edited by Priyavrat sharma, Swami Narayan das Prakashan jaipur, reprint 200, *Amvat chikitsa* ch.25 Pg.No.423.
10. *Bhaishjya Ratnavali* edited with *Siddhiprada* Hindi commentary by Siddhinath Mishra published by Chaukhamba Surbharati Prakashan Varanasi, edition2007 Ch-29, Pg.No.223, 232-236.
11. Shastri K.Chaturvedi G.N.editor *Drudhbal Charak Samhita of Agnivesh, Siddhithan* reprint edition ch.1 vwe38-40 varanasi Chaukhamba bharati Academi2003, P-1169.
12. Tripathi Indradeo editor *Chakradatta of chakarpanidatta* 1st ed. ch25 ver 1 Varanasi Chaukhamba Sanskrit Sansthan 2012 P116.
13. *Bhavamishra Bhavprakashmishra*, Shastri B(editor) *Vidyotini* Hindi commentary 6th ed 1984, chaukhamba Sanskrit Sansthan, Varanasi P312-326
14. *Sharangdhara, Sharangadhar Samhita*, Murthy K.R.S.(editor) Chaukhamba Orientalia reprint2012 P.No.75.
15. Sharma P, Dravyaguna Vigyan vol-2, Chaukhamba Bharati

- Academy, edition 2011, Varanasi 2013, P166-170.
16. *Vagbhat, Ashtamngriday* Harishtri Paradkar 9th ed. Varanasi chaukhamba Orientalia.2005 uttarsthana(24 Page 862)
 17. Satyavati G.V. Prasad D N, Dask PK, Singh HD Antiinflammatory activity of *Semecarpus anacardeum* Linn.a preliminary study. India J Physiology and Pharmaca.1969:1, 35-45.
 18. An Ayurvedic Perspective of *Bhallatak* (*Semecarpous anacardium* Linn.) Ilian chezhian R.Roshi Josephe C, Rabinarayan Acharya, Internet.IJRAMISSN-23499834, alternative medicine 2014;1(2), 43-58 <https://www.researchgate.net>.
 19. Role of *Vaitaran Basti* in the management of *Amyvat*, w.s.r to Rheumatoid Arthritis-A Review article by Dewangan Neetu, Shrivasa Saandeep, Khicharya S.D.
 20. Internet www.iamj.in/Posts/images/upload/1445-1448Pdf.
 21. ISSN-23205091, July 2018, vol 6 issue 7, Review article.
 22. Role of *Bhallatak Kshirpaka* in the management of *Amavata*(Rheumatoid arthritis) A clinical study. Vinod N.Ade. Journal of Indian system of medicine <http://joinsysmed.com/article.asp>, ISSN=2320;2015; Page 122-128.
 23. Efficacy of *Bhallatak Kshirpaka Kalpa* On Patients of Rheumatoid Arthritis(*Amyvat*) Cited as Sandhya N.Wagh, Bheemsen Behara April 2017;4(2)20-23. Published by International Academy of Ayurveda Physicians(IAAP) Access from www.japs.co.in, <https://pdfs.semanticscholar.org>.

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