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RESEARCH ARTICLE

TO EVALUATE THE EFFICACY OF RASNA PANCHAK ALONG WITH ASWAGANDHA SHATAVARI GHRITA VASTI IN THE MANAGEMENT OF JANU SANDHIGATA VATA.

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Abstract

Sandhigata Vata is a commonest form of articular disorder which come under Vata Vyadhi mentioned in Ayurvedic classic characterized by the symptoms such as Sandhi Sula, Sandhi Sopha (swelling of joint). Osteoarthritis of the knee joints comes under inflammatory group which is almost identical to Sandhigata Vata described in ayurveda with respect to etiology, pathology and clinical feature. It generally limit the routine activity of the people such as walking, bathing, dressing etc. The prevalence of osteoarthritis generally increase with age. Taking these in consideration about Sandhigata Vata the present dissertation work is carried out entitled “To evaluate the efficacy of Rasna Panchak along with Aswagandha Shatavarighrita Vasti in the management of Janu Sandhigata Vata”. For present clinical study 100 patient were selected randomly from IPD and OPD, Dept. of Kayachikitsa, Govt. Ayurvedic College, Guwahati – 14, Assam, Govt. Ayurvedic College and hospital irrespective of age sex, religion occupation and socio economic status of the of age range from 30 -70 years, which showed the sign and symptom of sandhigata vata. The follow up is done after every 4 week. Assessment of result were done in subjective and objective parameter. The result showed that rasna panchak and aswagandha shatavari ghrita vasti is significant in the management of sandhigata vata.

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Introduction:-

Ayurveda is a holistic science. Ayurveda is considered as the upaveda of atharvaveda which inflicted about the importance of preventive, curative aspect of health. According to this science, a person is healthy, when he is physically, mentally and spiritually happy too and if there is imbalance in equilibrium of dosha, disease developed. Among the three dosha, vata is responsible for all type of disease in old age.^[1] In present era, due to life style modification, change in dietary habit, urbanization ,excessive travelling, redundant exercise like over walking, improper sleep and work and all these lead to vitiation of vata dosha. And that is the reason, incidence of vatavyadhi has been increased.

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Sandhigata vata is also one of the most common disease which has been describe in charak samhita under vatavyadhi. Acharaya charak has describe the disease which accurs due to intake of vata aggravating ahar vihara with symptoms of sotha which is palpable as air filled bag, sandhi shoola (pain), sandhi sotha (swelling) and hanti sandhi gatah as the symptoms of Sandhigata vata has been described by charak.^[2]

Now a days, Janusandhigata vata is becoming a leading problem which cause varying degrees of functional limitation and reduced quality of life. It is the most common form of arthritis, and becoming the leading cause of pain and disability worldwide. The signs& symptoms of Janusandhigata vata which is mentioned in the Ayurvedic classics can be correlated with the signs& symptoms of Knee Osteoarthritis of modern medical science

Osteoarthritis or osteoarthritis is a chronic degenerative disease in which all structures of the joint have undergone pathologic changes. The pathologic sinequa non of disease is articular hyaline cartilage loss, present in a focal and initially, nonuniform manner.

According to World Health Organization (WHO), Osteoarthritis is the second commonest musculoskeletal problem in the world population (30%), after back pain. (50%).

Osteoarthritis is the second most common rheumatologic problem and it is the most frequent joint disease with a prevalence of 22% to 39% in India.

In conventional system of medicine, analgesics including NSAIDs, anti-inflammatory drug, narcotics, corticosteroid and intra articular injection are the options for the treatment of Osteoarthritis which has its own limitation and have adverse side effect lastly knee replacement has been done which is quite expensive for patient.

Many researches has been completed on this disease but complete cure on this disease is still a mirage. So in order to improve quality of life with minimum pain and discomfort. In Ayurvedic classic our Acharya has mentioned common treatment for vata vyadhi i.e repeated use of snehan and swedan, basti, mridu virechan. While Acharya Sushrut has mentioned the treatment for sandhigata vata clearly as snehana, upanaha, agnikarma, bandhana and unmardana.^[3] Acharya vagbhat has described it as sandhigata kupita vata and mentioned the treatment as snehan, daha and upanaha^[4] in vataj vyadhi and also our acharya have given so many special therapeutic procedures for specific disease along with thousand of medicament has been mentioned. The present study has been done on rasna panchak as oral medicine and matra vasti with aswagandha satavari ghrita. Vasti is the best therapy for all vata vyadhis and matra vasti which can be administered in all season and help in maintaining equilibrium of dosha.

Thus considering all the above points, a clinical study on 100 patients from OPD and IPD were done in Govt. Ayurvedic College and hospital, Dept of Kayachikitsa, in order to evaluate the efficacy of rasnapanchak along with Ashwagandha satavari Ghrita Basti in the management of Janusandhigata vata as the subject for the dissertation work which is under the title name "To evaluate the efficacy of rasna panchak along with aswagandha satavari ghrita vasti in the management of janu sandhigata vata (osteoarthritis)".

Aims And Objectives:-

1. To evaluate the efficacy of Rasna panchak along with Ashwagandha shatavari Ghrita Basti in the management of Janu Sandhigata Vata.
2. To decrease the morbidity of the disease and improve the quality of life.

Materials And Methods:-

1. The clinical study was conducted on a single group at Govt. Ayurvedic College and Hospital, Guwahati -14.
2. Source of data=100 patients of Janu Sandhigatavata aged between 30-70 years were selected from the OPD and IPD of Kayachikitsa Department of GACH for the study.

Ausadhi yoga- Rasnapanchak (chakradatta 25.7)^[5]

1. Rasna (Pluchea lanceolata) - 2gm
2. Guduchi (Tinspora cordifolia) -2gm
3. Erandamoola (Ricinus communis) -2gm
4. Devadaru (Cedrus deodara) -2gm

5. Shunthi (*Zingiber officinale*) -2gm

All the course powder of Rasnapanchak kwath dravyas were taken in equal quantity and kwath was prepared as per procedure described in Sharangadhar samhita^[6], and the procedure was explained to the patient and asked to take 20ml kwath twice daily after food for 60 days.

Matra basti with 50ml Ashwagandha Shatavari ghrita basti for 8 days.

Standardization and authentication for drugs Rasnapanchak, Aswagandha shatavari ghrita.**Table 1:-**Showing results of test or analysis of drugs

Rasnapanchak		Aswagandha shatavari ghrita	
Test	Result	Test	Result
Total ash	7.00%	Weight per ml	0.881 g/ml
Acid insoluble ash	2.55%	Refractive index	1.46
LOD	10.225%	Specific gravity	0.97
Alcohol soluble extractive	4.4%	Spreadability	6 cm
Water soluble extractive	21.6%	Adic value	9.35

Inclusion Criteria

1. Patients fulfilling the Ayurvedic as well as modern criteria of diagnosis of OA
2. Patient with sign and symptoms of knee joint.
3. Patients between age group of 30 - 70 years of both sexes were selected.
4. Patients should be fit for basti karma
5. Patients without any previous anatomical deformity

Exclusion Criteria

1. Patients age below 30 years and above 70 years of age.
2. Patients with past history of rheumatoid arthritis ,gouty arthritis ,psoriasis etc
3. Patients with past traumatic history.
4. Complete loss of articular cartilage.
5. Patients not fit for basti.

Diagnostic Criteria:^[7]

Diagnosis was made on clinical sign and symptom of Janu Sandhigata Vata and Knee Osteoarthritis.

1. Vata Purna Dhriti Sparsha -on palpation appears as a bag inflated with air
2. Sandhi Shotha - Swelling
3. Vedana during Prasarana and Akunchana- Pain during movement of joint
4. Atopa- Crepitus in joint
5. Sandhiant - Stiffness of joint

Radiological findings such as narrowing of joint space, osteophytes formation at the joint margin, subchondral bone sclerosis etc.

Observations And Result:-

Total 100 patients were enrolled for the present study but 18 patients dropped out at various stages during the study, finally leaving 82 patients. General observations of 82 patients of Janusandhigatavata are comprehended as under.

Table No 1:-Sexwise Deistribution Of 82 Paitents Of Janusandhigata Vata

Sex	No. of Patients	Percentage
Male	23	28.04%
Female	59	71.95%

Table no.1 this table depicts that 28.04% patients were male and 71.95% patients were females.

Table No 2:-Age Wise Distributon Of 82 Patients Of Janusandhigata Vata

Sl.No.	Age(Years)	No. Of Patients	Percentage
1	30-50	25	30.48%
2	51-60	37	45.12%
3	61-70	20	24.39%

Table no.2 Patients of this series were in the range of 30-70 years. Maximum number of patients in this study, i.e. 45.12% belonged to the age group 51 to 60 yrs, Followed by 30.48% of the age group 30-50 yrs and 24.39% patients were observed in age group 61-70 yrs .

Table No 4:-Occupation Wise Distribution Of 82 Patients

Occupation	No.f Patients	Percentage
Service	17	20.73%
Housewives	43	52.43%
Business	3	3.65%
Retired	9	10.97%
Farmer/Labour	10	12.19%

Table no. 4 This table reflects that 52.43% patients were housewives followed by 20.73% servicemen, 12.19% were farmer/labour, 10.97% were retiredour and 3.65% were doing business.

Table No 5:- Habitat Wise Distribution Of 82patients Of Janusandhigata Vata

Habitat	No. Of Patient	Percentage
Urban	64	78.04%
Rural	18	21.95%

Table no.5 Habitat wise distribution depicts that maximum no. of patients i.e. 78.04% belong to urban area while 21.95% of patients belong to rural area.

Table No 6:-Dietary Habit Wise Distrubtion Of 82 Patients

Diet	No. Of Patient	Percentage
Vegetarian	15	18.29%
Non-vegetarian	67	81.70%

Table no.6 Illustrates that 67 patients (81.70%) patients were on non-vegetarian diet and only 15 patients (18.29%) were on vegetarian diet.

Table No 7:-Showing Incidence Of Body Structure In Relation To 82 Patients Of Janusandhigata

Body structure	No. Of Patient	Percentage
Thin	17	20.73%
Moderate	31	37.80%
Obese	34	41.46%

Table no.7 Most of the patients were obese i.e., 41.46%, followed by 37.80% of patients were of moderate body structure while 20.73% of patients were thin built.

Table No 8:-Showing Relation Of Lifestyle In 82 Patients Of Janusandhigata Vata

Physical Activity	No. of Patient	Percentage
Active	57	69.51%
Sedentary	25	30.48%

Table no. 8 illustrates that maximum number i.e. 57 (69.51%) of patients were having active life style and rest 25(30.48%) patients have sedentary lifestyle.

Table No 9:-Showing Incidence Of Duration Of Illness in 82 Patients Of Janusandhigata Vata

Duration of illness	No. of Patient	Percentage
< 6 months	19	23.17%
6-12 months	17	20.73%
1-3 years	30	36.58%
4-5 years	16	19.51%

Table no. 9 It reveals that 30 patients (36.58%) have a duration of illness between 1-3 years, followed by 19 patients (23.17%) having duration of illness less than 6 months. 16 patients (19.51%) have duration of illness between 4-5 years and 17 patients (20.73%) have duration of illness for 6-12 months.

Table No 10:-Showing Incidence Of Joint Involvement In 82 Patients Of Janusandhigata Vata

Joint involvement	No. of Patient	Percentage
Both knees	48	58.53%
Right knee	14	17.07%
Left knee	20	24.39%

Table no. 10 shows that out of 80 patients, 48 patients (58.53%) have both the knee joint involvement, followed by left knee joint involvement in 20 patients (24.39%) and right knee joint involvement in 14 patients (17.07%)

Table No 11:-Showing The Radiological Finding Before Treatment In 82 Patients Of Janusandhigata Vata

Findings	No. of Patient	Percentage
G ₁	19	23.17%
G ₂	37	45.12%
G ₃	26	31.70%
G ₄	0	0

1. **G₁**: doubtful narrowing of joint space and possible osteophytic lipping
2. **G₂**: definite osteophytes, definite narrowing of joint space
3. **G₃**: moderate multiple osteophytes, definite narrowing of joint space, some sclerosis and possible deformity of bone contour
4. **G₄**: large osteophytes, marked narrowing of joint space, severe sclerosis and definite deformity of bone contour
5. Table no. 11 shows that 37 patients (45.12%) were in grade 2 while 26 patients (31.70%) were in grade 3 and 19 patients (23.17%) were in grade 1.

Table No 12:-Showing Incidence Of Ayurvedic Symptomatology In 82 Patients Of Janusandhigata Vata

Symptoms	No. of Patients	Percentage
Sandhi Shoola	82	100%
Vatapurnadritisparsa	74	90.24%
Prasarana Akunchanayo Vedana	80	97.56%
Hanti Sandhi	77	93.90%
Sandhi Atopa	75	91.46%

Table no.12 Incidence of Ayurvedic symptomatology in 82 patients of janusandhigatavata reveals that 82 patients i.e., 100% were having sandhishoola, 80 patient i.e.,97.56% were having prasaranaakunchanayo vedana , 77 patient i.e., 93.90% were having hanta sandhi while 75 patients (91.46%) were having sandhiatopa and 74 patients i.e., 90.24% have vatapurnadritisparsa.

Results Of Therapeutic Profile:-

Statistical Analysis:

As the sample size was 82, therefore Z test was applied to know the significance of the effect of the Trial Therapy on Janusandhigatavata.

Table no 13:-Effect Of The Therapy On Sandhi Sula (Joint Pain) (N=82)

N	Mean		Mean BT-AT	SD	SE	Z value	P value	Remarks
	BT	AT						
82	2.04	0.76	1.28	0.59	0.065	10.61	P<0.001	Highly Significant

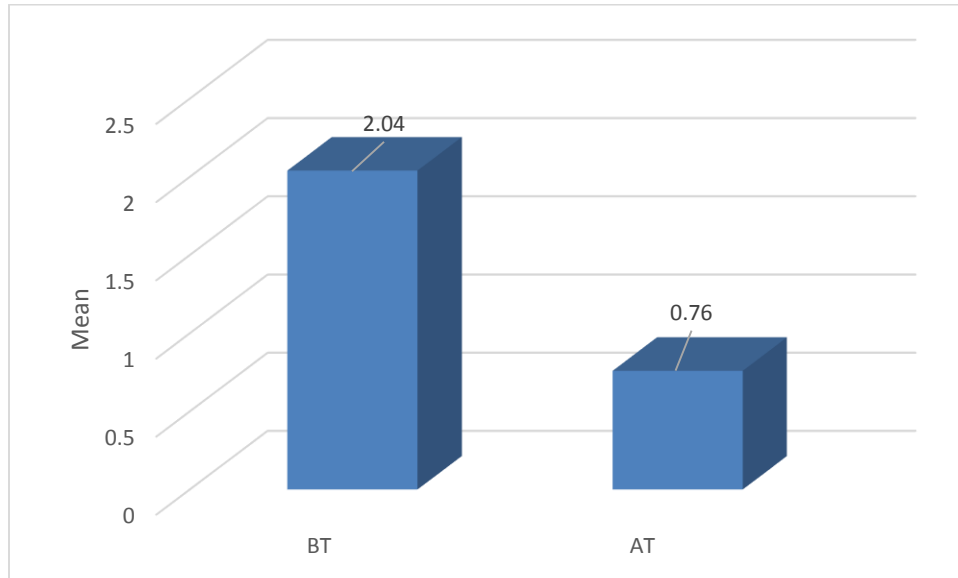


Table no.13 Z= 10.61, P<0.001; hence the result is statistically highly significant. It implies that the effect of the therapy on Sandhi Sula after 60 days i.e. after treatment is highly significant.

Table no 14:-Effect Of The Therapy On Vatapurna Driti Sparsa (Swelling) (N=82)

N	Mean		Mean BT-AT	SD	SE	Z value	P value	Remarks
	BT	AT						
82	1.72	0.4	1.32	0.78	0.08	6.75	P<0.001	Highly Significant

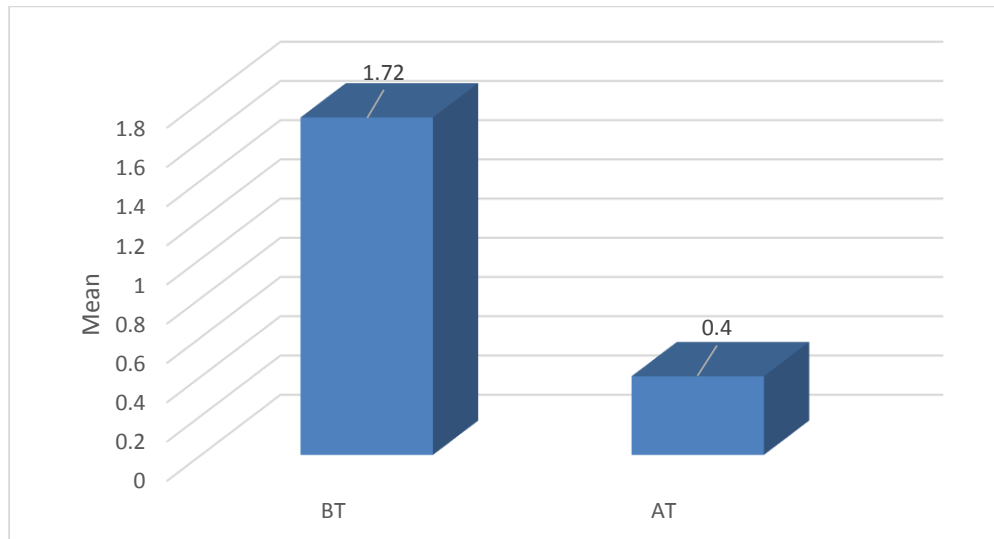


Table no.14 $Z= 6.75$, $P<0.001$; hence the result is statistically highly significant. It implies that the effect of the therapy on Vatapurna Driti Sparsa after 60 days i.e. after treatment is highly significant.

Table no 15:-Effect Of The Therapy On Prasarana Kunchanayo Vedana (Pain On Flexion And Extension) (N=82)

N	Mean		Mean BT-AT	SD	SE	Z value	P value	Remarks
	BT	AT						
82	2.07	0.77	1.30	0.50	0.057	14.03	$P<0.001$	Highly Significant

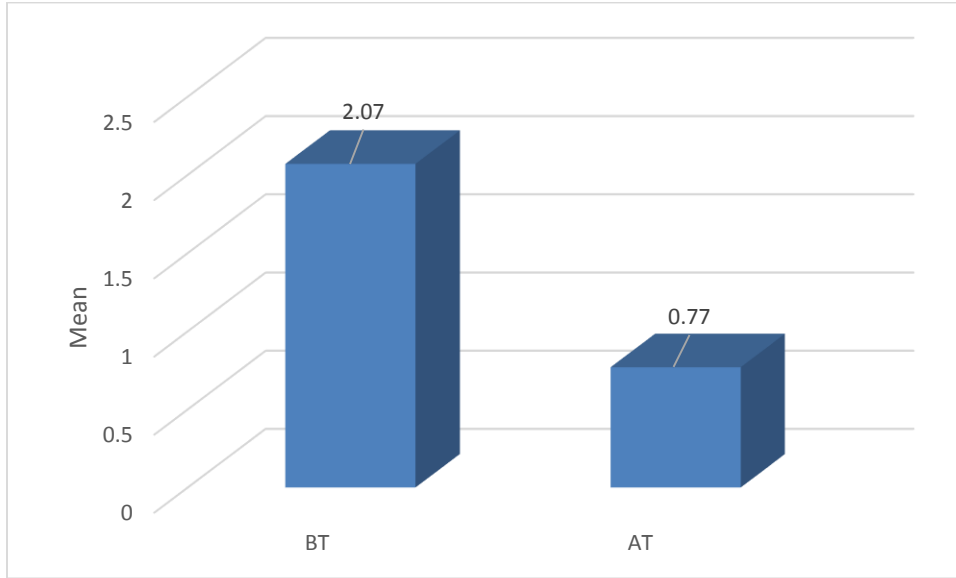


Table no.15 $Z=14.03$, $P<0.001$; hence the result is statistically highly significant. It implies that the effect of the therapy on Prasarana Akunchanayo Vedana after 60 days i.e. after treatment is highly significant.

Table No.16:-Effect Of The Therapy On Sandhi Hanti (Stiffness) (N=82)

N	Mean		Mean BT-AT	SD	SE	Z value	P value	Remarks
	BT	AT						
82	1.8	0.42	1.38	0.58	0.065	12.15	$P<0.001$	Highly Significant

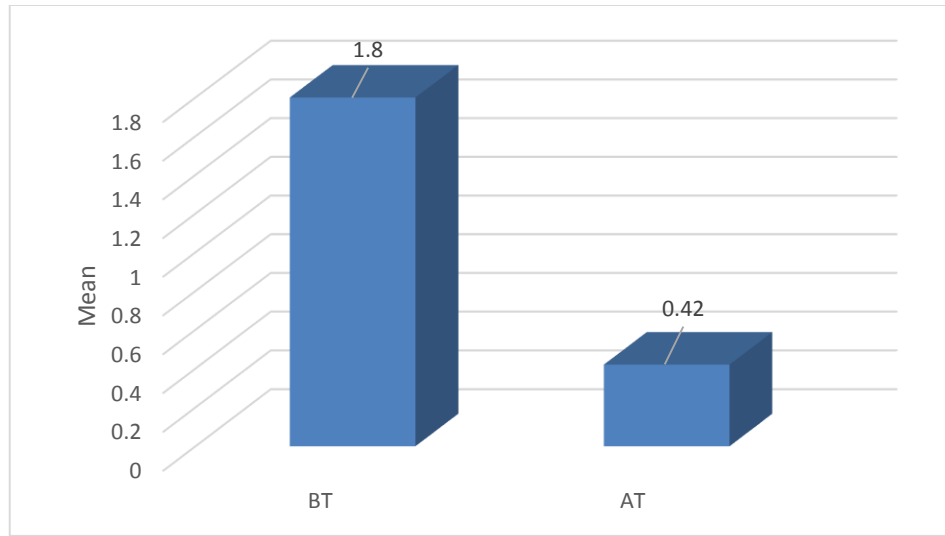


Table no.16 $Z=12.15$, $P<0.001$; hence the result is statistically highly significant. It implies that the effect of the therapy on Sandhi Hanti after 60 days i.e. after treatment is highly significant.

Table No17:-Effect Of The Therapy On Atopa(Crepitation) (N=82)

N	Mean		Mean BT-AT	SD	SE	Z value	P value	Remarks
	BT	AT						
82	2.14	0.84	1.30	0.59	0.068	11	$P<0.001$	Highly Significant

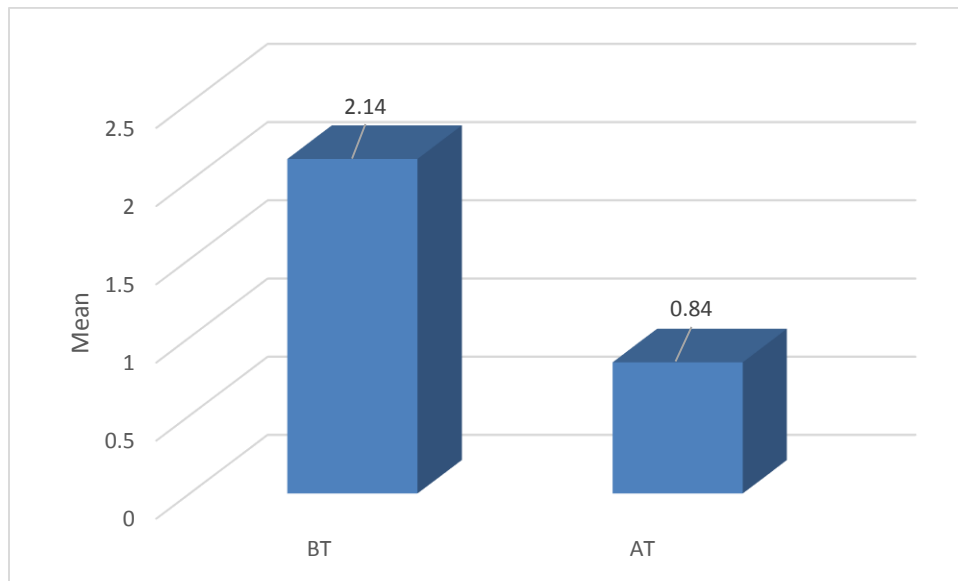


Table no.17 $Z=11$, $P<0.001$; hence the result is statistically highly significant. It implies that the effect of the therapy on Atopa after 60 days i.e. after treatment is highly significant.

The Radiological findings of the 82 patients of janusandhigatavata, BT and AT of the clinical trial shows slight significant improvement on the Radiological findings.

Table No 18:-Effect Of The Therapy On Womac Scoring (N=82)

N	Mean	Mean	SD	SE	Z value	P value	Remarks
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			BT-AT					
82	BT	AT	14.5	8.44	0.93	6.5	P<0.001	Highly Significant
	36.18	21.68						

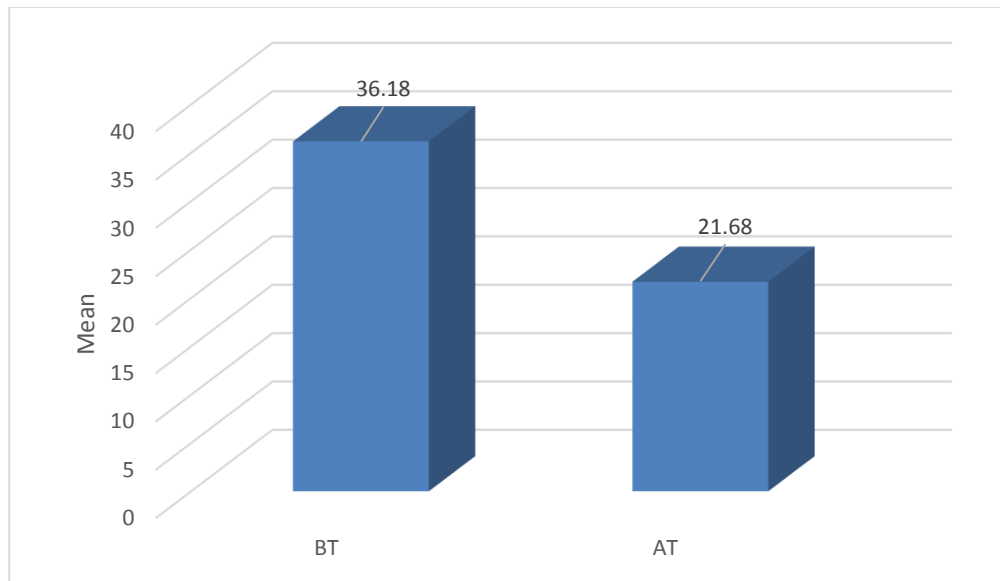


Table no.18 Z= 6.5,P<0.001; hence the result is statistically highly significant. It implies that the effect of the therapy on WOMAC scoring after 60 days i.e. after treatment is highly significant.

Discussion And Conclusion:-

In classic, Sandhigatavata is included under Vatavyadhi in all Samhita as a separate clinical entity. There is an important sign prasarana akunchana vedana as mentioned in Janu sandhigatavata. Now a days this is calculated as ROM. It plays an important role in assessment of effect of therapy as an objective parameter.

Vitiation of vata dosha which take place due to various nidana like Aharaja, Viharaja, Manasa etc. Sandhigatavata is a disease which usually occurs in Vriddhavastha. Vitiation of vata which also occur in two ways i.e dhatukhasayajanya and margoavoradhjanya. Dhatukshya which leads to Vataprakopa. Vata and Asthi have Ashraya-Ashrayi Sambandha which means Vata is situated in Asthi. Increase in Vata diminishes Sneha from Asthidhatu due to its viparita gunas(opposite qualities) to Sneha. So, in Janusandhigatavata, raktasrotas (snehadigunashoonya) is present apart from shleshakakaphakshaya (lack of synovial fluid) in the Asthi which is responsible for the production of Sandhigatavata..

Sandhigatavata which can be correlated with osteoarthritis of knee joint in modern medical science. In modern science, analgesics including NSAIDs and anti-inflammatory drugs are the treatment choice for Osteoarthritis. There is symptomatic relief to some extent which also have a great adverse effect. At the end stage joint replacement is the ultimate solution.so this suggest an special ayurvedic management as the patient are increasing day by day.So a clinical study is done to know the efficacy of rasna panchak along with aswaghandha satavari ghritha vasti in the management of Janu sandhigata vata (osteoarthritis).

Discussion on selection of drugs and mode of action:

The vitiation of vata dosha and its sthanasansharaya at Janu sandhi leads to loss of articular cartilage and periarticular bone remodeling. So, to treat sandhigatavata, drugs acting on both vata and asthi are to be selected. Charaka has mentioned the following principles as curative measures in asthi dusti or asthigata vyadhis. Panchakarma, specially basti with milk and ghee medicated with tikta drugs is indicated (Ch.Su. 28/27). In Sushrut Samhita, sutrasthana, it is stated that asthi dhatu is predominant in prithivi and vayumahabhuta.

For the present study, the treatment was selected as per the above mentioned requirements to treat Janusandhigatavata.

Matrabasti with ashwagandha shatavari ghritha was given which is a type of snehabasti. Acharaya Susruta in (Chikitsa sthan 37/70) states that 6,7,8, or 9 snehabasti should be given. In my study basti was administered to the registered patients for 8 days.

Ashwagandha shatavari ghrithamatrabasti in Janusandhigatavata:

1. Charaka Samhita advocates tikta dravya siddha ksheera or ghrithabasti in asthivikara.
2. In Bhaishajya Ratnavali, ashwagandhaghritha is mentioned in vatavyadhi.

Probable mode of action:

Ashwagandha is a well known rasayana drug. It can subside vata due to its laghu snigdha guna, madhura rasa, madhuravipaka and ushnvirya. Due to its tikta-katu rasa which are dominant with agni-vayu-akashmahabhuta and ushnvirya, it increases jatharagni, which in turn influences all the other agnis. Tikta rasa has also got deepana, pachana, rochana properties (Su. Su 42/10). It also possesses lekhana properties, so it may help in the reduction of body weight and thus help in managing janusandhigatavata. Tikta rasa also has jwaraghna and dahaprashamana properties which may act as anti-inflammatory agent and it can help in reducing pain and swelling of the joints. As it has ushna-laghuguna and ushnvirya, it removes srotorodha, enters even in the minutest channels of the body thereby showing the desired effects. Shatavari which is taken from balya mahakasaya .It has snigdha guru guna, madhura rasa and madhuravipaka which are dominant with prithivi and jalamahabhuta, so it nourishes and helps in increasing the dhatu.

Milk and ghee both are vata-pitta shamaka, rasayana, and balya. Ghee is agnivardhak and yogavahi, so it can help in increasing the bioavailability of the other drugs without losing its own property. It also contains Vit-D which may play an important role in utilization of calcium and phosphorus in blood and bone building. Thus, during the administration of basti for 8 days, the tikta, yogavahi and rasayana properties of the basti helps in the sampraptivighatana of janusandhigatavata.

Selection of oral medicines:

Rasna panchak is a compound drug consist of five drug, which include rasna, eranda, guduchi, devadaru, and sunthi. Rasna and eranda is considered best in vata vyadhi as it has guru snigdha guna. Guduchi and Rasna has rasayana, sothahara, amapachana, vedanasthapana, sulahara, vatahara, jwaraghna and balya property which strengthen the joint. Devadaru also has sothahara, vedanasthapana and depana pachana property and Sunthi have anti-inflammatory property which help in reducing pain and swelling.

Conclusion:-

1. Statistically, positive and effective response of the Trial Therapy – Raspanchak and ashwagandha shatavari ghritha matra basti was found.
2. The Pharmacodynamics Properties of the trial drugs satisfy the chikitsa sutra of Sandigatavata/ Osteoarthritis.
3. Symptoms like pain, restricted movement, swelling, stiffness and crepitus were reduced after treatment of 60 days and patients could perform their daily activities with less effort. Patients could sit well on the ground after treatment, walking distance is increased, can climb stairs, and also improved the routine activity.
4. There was slight significant result regarding radiological findings
5. During the treatment period no major adverse or side effects were seen .Thus it indicate the non-toxicity and safety of the drug.

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