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EFFICACY OF *AMRITADI CHURNA* IN *AMAVATA* W.S.R. TO RHEUMATOID ARTHRITIS: A CLINICAL STUDY

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ABSTRACT

Introduction: The thesis delves into the therapeutic efficacy of *Amritadi Churna*, a formulation from *Ayurvedic* text *Bhavaprakasha*, in managing rheumatoid arthritis (RA). The study explores the historical context of RA, its etiology, and the challenges posed by its chronic nature. Drawing parallels between *Amavata* in *Ayurveda* and modern rheumatoid arthritis, the thesis emphasizes the need for effective treatments given the limitations of current interventions. **Literary Retrospection:** The conceptual part has been divided into two chapters i.e. Ayurvedic and Modern retrospection which contains glimpses of the Historical aspect of *Amavata* and the review of the previous works in ayurveda along with general description of *Amavata*, concept of *Ama*, *Vata* in *Amavata*, Nidana, *Purvarupa*, *Rupa*, *Samprapti*, Classification, *Upadrava*, *Sapeksha Nidana*, *Upshayanupshaya*, *Sadhayasadhayata* and *Chikitsa Sidhanta* along with a revie of modern medicine on Rheumatoid Arthritis and its differential diagnosis. **Drug Review:** It includes the review of drugs in *Amritadi Churna* (The trial Drug). It includes the reasoning's behind selection of the drugs under trial, a general description of the ingredients from *Ayurvedic* point of view. Also selction of plant and preparation of trial drug is also included. **Methodology:** The research involves a detailed clinical study with 90 volunteer patients from the OPD/IPD wing of the P.G. Department of *Kayachikitsa*, University College of *Ayurveda*, Dr. S. R. Rajasthan *Ayurveda* University, Jodhpur, Rajasthan. Diagnosis is based

on both *Ayurvedic* and modern criteria, including the American Rheumatism Association guidelines. A randomized group is administered *Amritadi Churna* for 60 days, and the patients' general characteristics, socio-demographic factors, and disease parameters are meticulously documented. The study meticulously evaluates the effects of *Amritadi Churna* on pain, swelling, stiffness, *Angamarda, Aruchi, Trishna, Alasya, Gaurava, Jwara, Apaka,* and *Shoonta*, along with subjective relief percentages. The research extends to objective parameters such as hemoglobin levels, total leukocyte count, differential leukocyte count, C-reactive protein, erythrocyte sedimentation rate, fasting blood sugar, and RA factor. **Results and Conclusion:** The thesis concludes with a holistic assessment of the therapy's overall efficacy, considering both subjective and objective parameters. It acknowledges the significant relief in subjective symptoms and improvements in laboratory findings, while also highlighting areas where the therapeutic impact may be more modest. The importance of ongoing research and potential adjustments to enhance efficacy are emphasized for future studies.

KEYWORDS: Diagnosis is based on both *Ayurvedic* and modern criteria, including the American Rheumatism Association guidelines.

INTRODUCTION

"*Aamvata*" gradually affects the joints and thus reduces the efficiency of person's routine work. In modern contexts "*Aamvata*" is being correlated with "Rheumatoid Arthritis" (R.A.) whose exact etiopathogensis is not clear and thus called as Auto immune disorder. *"Aamvata"* is a disease which was fewer in number in the past era but due to faulty dietary and sedentary life style like increase use of junk food, hot and cold food and drinks, irregular eating habits and stressed working style had aggravated this disease and now growing in full pace with increased commercialization and increased expense of daily routine, person has not any time for relaxation of the body and mind, thus being surrounded by the diseases and syndrome. It is one of the common debilitating diseases by the virtue of its chronicity and implications. Characteristically, Aamvata is bilaterally symmetrical affecting the small joints of the hands and foot, and may spread to large joints- The onset of disease is frequent during 4^{th} and 5^{th} decade of life with 80% of patients developing the disease between 35-50 years of age. Community prevalence study shows that female are more suffers than male and the ratio of occurrence between them is 3:1. It is mostly the disease of *Madhyama roga marga* and having *Chirkariswabhava*. In *Ayurveda, Aamvata* disease is having clearly defined

pathogenesis. It is clearly mentioned that this disease occurs due to vitiated *Aam* and *vata dosha*.

They play on important role in the pathogenesis of the disease. "*Aam* formation is due to the *mandagn*i and with irregular diet habits and then "*Aam*" get circulated in whole of the body in the form of *Aamvisha* and get embedded in joint and thus aggravates the V*ata*" which is present there, forming the disease called *Aamvata*. In *Ayurveda* the principle and treatment of *Aamvata* is specially indicated and if used accordingly can rid of this disease.

NEED OF THE STUDY

Rheumatoid arthritis (RA) is a common autoimmune rheumatic disease with a prevalence of 0.5-1% in industrialized countries and 0.28-0.7% in India. Modern medical science achieved symptomatic relief, but consequence is hazardous side effect to reverse or break the pathogenesis of the disease *Aamvata*. Therefore, *Ayurveda* science may achieve a permanent treatment and root cause of this dangerous disease. Hence this study is planned to evaluate aetiopathogenesis, determination the disease at *purvaroopavastha* and therapeutical evaluation of *amtradhi churna* in the Management of *Aamvata*.

Impact of Rheumatoid Arthritis (RA) in India

1. **Prevalence:** Rheumatoid Arthritis is known to affect people worldwide, including India. The prevalence of RA in India varies across different regions and populations. According to estimates, the prevalence in India is around 0.5-1% of the population.
2. **Demographics:** RA can affect individuals of any age, but it is more commonly diagnosed in women and typically in the age group of 30 to 60 years. In India, as in many other parts of the world, women are more frequently affected by RA than men.
3. **Regional Variations:** The prevalence and impact of RA may vary between urban and rural areas, and different regions in India. Urbanization, lifestyle changes, and genetic factors can influence the prevalence of autoimmune diseases like RA.
4. **Disease Burden:** RA not only affects the joints but can also have systemic effects, impacting various organs and leading to disability if not managed properly. The disease burden includes the economic impact on individuals, families, and the healthcare system due to medical expenses, loss of productivity, and disability.
5. **Access to Healthcare:** Access to healthcare resources, including rheumatologists and specialized treatments for RA, can vary across different regions in India. Improving

access to healthcare and raising awareness about RA are essential for timely diagnosis and effective management.

MATERIALS AND METHODS

Aims of the study: The study was aimed to evaluate the efficacy of Amtradhi Churna ‘’ in the management of *Aamvata* (Rheumatoid Arthritis).

DRUG REVIEW: *AMRITADI CHURNA* –In *Bhava-Parkash Aamvata chikitsa parkaran*, it is mentioned that the churna of *Amrita (Guduchi), Nagar (Shunthi), Gokshur, Munditika (Gorakshmundi),* and *Varuna* is beneficial in treating *Aam-Vata.*

PREPARATION OF DRUG – Contents of *Amtradhi churna i.e. Amrita (Guduchi), Nagar (Shunthi), Gokshur, Munditika (Gorakshmundi),* and *Varuna* were taken in the equal ratio, and coarse powder was made of all drugs.

ADMINSTRATION OF DRUG: Amtradhi Churna 3 gm, which will be formulated, will be given to the 90 patients, twice daily for 60 days with Luke warm water.

MODE OF ADMINISTRATION: 3 gm churna twice a day along with Luke warm water for 60 days after meals.

STUDY PLAN

Study Type	Interventional
Purpose	Treatment
Masking	Open label
Timing	Prospective
End Point	Efficacy
No. of Groups	One
Sample size	90
Duration of the treatment	60 days

(A) Selection of Cases

The study was conducted on 90 clinically diagnosed and confirmed patients of *Aamvata* (Rheumatoid Arthritis) from OPD/IPD wing of P.G. Department of *Kayachikitsa* voluntarily.

(B) Selection Criteria

a) Inclusion Criteria

1. The Patients between the age group of 20 to 65 years in either sex presenting with clinical features of *Aamvata.*

2. Pre-diagnosed and confirmed patients of *Aamvata* (Chronicity <6 years).
3. Patients willing to sign the consent form.

(b) Exclusion Criteria

1. Patients of age below 20 years and above 65 years of either sex.
2. Chronicity of *Aamvata* more than 6 years
3. Patients having Neoplasm of spine, Gout, Ankylosing spondylitis, Traumatic arthritis and Pyogenic Osteomyelitis, etc.
4. Patients having any severe disease like Cardiac disease, pulmonary tuberculosis, uncontrolled Diabetes mellitus, Renal function impairment, etc.
5. Patients with extremely reduced joint space and having bone deformity.
6. Pregnant women and lactating mother.

CRITERIA FOR ASSESSMENT

The effect of trial drug will be assessed in terms of subjective and objective parameters.

(A) Subjective Parameters - The following sign and symptoms of *Aamvata* will assessed for any improvement before and after the therapy – *Sthabdhata (*Stiffness of the joints*)*, *Angmarda* (Bodyache*)*, *Aruchi (*Anorexia), *Trishna* (Polydipsia), *Alasya* (Lassitude/ malasise*)*, *Gaurava* (Heaviness of body*)*, *Jwara* (fever*)*, *Apaka* (Indigestion of food), *shoonata (*inflamation of body parts*)* and *Sandhishoola* (Pain in joints- *hasta-paad-shiro-gulph-trik-jaanu-uru-sandhishu*) s*andhishotha* (Swelling of the joints).

Objective Parameters (Laboratory Profile):- Following investigation will be assessed for objective parameter.

- Routine Blood Examination- CBC, ESR.
- C- Reactive Protein (C-RP).
- Rheumatoid Arthritis Factor (RA factor).
- Radiological investigation – X - Ray of appropriate joint (AP and Lateral view) As per requirement.

OBSERVATIONS

Demographic Profile

1. **Age:** Maximum no. of patients 45 (50%) were observed in 5th decade (41-50 yrs.) followed by 24 patients (26.6%) were in 6th decade (51-60 yrs.), 15 patients (16.6%) were observed in 4th decade (31-40 yrs.), 4 patients (4.44%) were observed in 3rd decade (16-30

yrs.) and 2 patients (2.22%) were observed in 7th decade (61-70 yrs.). Thus showing peak incidence of *Aamvata* (Rheumatoid Arthritis) in middle age patients.

2. **Sex:** Maximum no. of patients i.e. 47 (52.2%) were male & 43 patients (47.7%) were female.
3. **Habitat:** Maximum no. of patients 48 (53.3%) were from rural areas and 42 patients (46.6%) were from urban areas.
4. **Socio-economic Status:** Highest no. of patients 60 (66.6%) were from middle class, while 24 patients (26.66%) were observed from lower class and 6 patients (6.66%) were observed from upper class.
5. **Occupational Status:** Maximum patients 36 (40%) were in the house work group of students, in labours group there are 30 (33.33%) and 24 patients (26.66%) were doing office work.
6. **Addictions:** Maximum no. of patients 78 (30%) were have tea addiction while 9 patients (10%) were alcoholic, 3 patients (3.33%) were tobacco addicted.

Psychological & Constitutional Profile

1. **Agni:** Most of patients; 49 (54.44%) were having Mandagni while 3 patients (3.33%) were having Samagni, 7 patients (7.77%) having teekshna agni and 31 patients (34.44%) were having Vishamagni.
2. **Koshtha:** 41 patients (45.55%) were of Kroora Koshtha while 36 patients (40%) were of Madhyama Koshtha and 13 patients (14.44%) were of Mridu Koshtha.
3. **Shareerika Prakruti:** Maximum no. of patients; 39 (43.33%) were of Vata- Kaphaja Prakruti while 21 patients (23.33%) were of Vata-pittaj Prakruti and 30 patients (33.33%) were of Pitta-Kaphaja Prakruti.
4. **Manasika Prakruti:** While assessing the Manasika Prakruti of patients, it was observed that majority of patients 56 (62.22%) were Rajasika, while 34 patients (37.77%) were Tamasika Prakruti.
5. **Aahara Abhyaharana Shakti:** Out of 90 patients, 33 patients (36.66%) were of Avara Aahara Abhyaharana Shakti, while 51 patients (56.66%) were of Madhyama Shakti and 6 patients (6.66%) were of Pravara Aahara Abhyaharana Shakti.
6. **Aahara Jarana Shakti:** 45 patients (50%) were of Madhyama Aahara Jarana Shakti, while 9 patients (10%) were of Pravara Shakti and 36 patients (40%) were of Avara Aahara Jarana Shakti.

7. **Vyayama Shakti:** 23 patients (25.5%) were of Madhyama Vyayama Shakti, while 54 patients (60%) were of Avara Vyayama Shakti and 13 patient (14.44%) were of Pravara Vyayama Shakti.

RESULTS

All the results were calculated by using ***Graph Pad Instat 3 Trial*** *Software.*

- ***Intra-group study:*** *For calculating the intra-group comparison,* ***Mann-Whitney U Test*** *was used for Non-parametric Data &* ***Unpaired 'Z' Test*** *was used for Parametric Data.*
- **Effect of therapy on pain in joints:** In present study, the mean score before treatment was 19.70 which reduced to 5.90 after treatment, with SD±0.5689 giving a relief of 70.051%, which is statistically extremely significant (P <0.001).
- **Effect of therapy on Swelling in joints:** In Present study, the mean score before treatment 17.00 was which reduced to 6.00 after treatment, with SD±0.5939 giving a relief of 64.706%, which is statistically extremely significant (P <0.001).
- **Effect of therapy on stiffness:** In *Present study*, the mean score before treatment was 24.40 which reduced to 8.30 after treatment, with SD±0.4072 giving a relief of 65.984%, which is statistically extremely significant (P <0.01).
- **Effect of therapy on Angamarda:** In *Present study*, the mean score before treatment was 26.30 which reduced to 9.00 after treatment, with SD±0.5345 giving a relief of 65.779%, which is statistically extremely significant (P <0.001).
- **Effect of therapy on Aruchi:** In *Present study*, the mean score before treatment was 26.00 which reduced to 10.20 after treatment, with SD±0.5164 giving a relief of 60.769%, which is statistically very significant (P <0.01).
- **Effect of therapy on Trishna:** In *Present study*, the mean score before treatment was 24.90 which reduced to 7.80 after treatment, with SD±0.4158 giving a relief of 68.675%, which is statistically very significant (P <0.001).
- **Effect of therapy Alasya:** In *Present study*, the mean score before treatment was 27.00 which reduced to 9.20 after treatment, with SD±0.5163 giving a relief of 65.926%, which is statistically very significant (P <0.01).
- **Effect of therapy on Gaurava:** In *Present study*, the mean score before treatment was 28.20 which reduced to 11.50 after treatment, with SD±0.5071 giving a relief of 59.22%, which is statistically significant (P <0.05).

- **Effect of therapy on Jawara:** In *Present study*, the mean score before treatment was 27.50 which reduced to 10.20 after treatment, with SD±0.4140 giving a relief of 62.909%, which is statistically very significant (P <0.01).
- **Effect of therapy on Apaka:** In *Present study*, the mean score before treatment was 27.00 which reduced to 9.20 after treatment, with SD±0.5164 giving a relief of 65.926%, which is statistically significant (P <0.05).
- **Effect of therapy on Shoonta (Numbness):** In *Present study*, the mean score before treatment was 25.70 which reduced to 9.90 after treatment, with SD±0.4667 giving a relief of 61.479%, which is statistically significant (P <0.05).
- **Effect of therapy on Haemoglobin:** In *Present study*, the mean score before treatment was 109.02 which increased to 119.77 after treatment, with SD±0.7611 giving a relief of 9.860%, which is statistically Very significant (P <0.05).
- **Effect of therapy on TLC:** In *Present study*, the mean score before treatment was 780.48 which decreased to 742.32 after treatment, with SD±508.31 giving a relief of 4.88%, which is statistically significant (P <0.05).
- **Effect of therapy on DLC:** In *Present study*, the mean score of neutrophill & lymphocytes before treatment was 503.2 & 241.0 which change to 513.6 & 194.3 respectively after treatment, with SD±658.31 & ±523.33 giving a relief of 2.38%, & 19.37%, which is statistically not significant (P >0.05).while other measures of DLC such as eosinophill, basophills & monocytes are remained unchanged during the study.
- **Effect of therapy on C-RP:** In *Present study*, the mean score before treatment was 240.4 which reduced to 106.1 after treatment, with SD±8.991 giving a relief of 55.86%, which is statistically Very significant.(P >0.05).
- **Effect of therapy on ESR:** In *Present study*, the mean score before treatment was 537.0 which reduced to 235.2 after treatment, with SD±8.440 giving a relief of 56.20%, which is statistically Very significant (P <0.05).
- **Effect of therapy on Fasting Blood Sugar:** In *Present study*, the mean score before treatment was 853.8 which reduced to 795.6 after treatment, with SD±9.591 giving a relief of 6.81%, which is statistically not significant (P >0.05).
- **Effect of therapy on RA-Factor:** In *Present study*, the mean score before treatment was 540.6 which reduced to 237.0 after treatment, with SD±9.615 giving a relief of 56.16%, which is statistically very significant (P <0.05).

DISCUSSION

1. Nidana: Majority of the patients in the present study were found indulged in *Guru, Snigdha, Abhishayandi, Sheeta, Viruddhahara, Vegasandharana,* and *Chinta* (more than 58%).

Overindulgence in all these *Nidanas* led to *Mandagni* and consequently resulted in the production of Ama, *Rasavaha Srotodusti*, and *Kaphavriddhi*. *Sheeta, Viruddhahara*, and *Chinta* caused vitiation of Vata. Abhishayandi Ahara resulted in Kledavriddhi, which vitiated *Mansavahasrotasa*. *Viruddhahara* reported by maximum patients caused vitiation of all *Doshas, Agnimandya, Majjavaha*, and *Svedavaha Srotodusti*. *Adhayasan* was also reported by more than 48% of patients, which caused *Mandagni*, resulting in the formation of *Ama*. *Anashana* and *Ruksha Bhojana* reported by 34.66% of the patients resulted in vitiation of *Vata Dosha* and led to *Dhatukshaya*. Exercise after a meal is reported by 21.33% of the patients, which vitiated the *Vata Dosha* and led to the formation of *Sama Rasadhatu*. *Divasvapna* reported by 41.33% of the patients led to *Kaphavriddhi, Agnimandya*, and *Mansavaha Srotodusti*. *Ativyayama* found in 28.66% of the patients led to the vitiation of *Vata Dosha* and *Dhatukshaya*. *Nischalata* constituted 24.66% among the patients, which led to *Kaphavriddhi*. *Chinta* (74.66%), *Shoka* (31.33%), *Krodha* (21.33%), and *Bhaya* (8%) were also reported by the patients.

DICUSSION ON EFFECTS OF THE THERAPIES

Effect of Therapy on Pain in Joints: The mean pain score significantly decreased from 19.70 before treatment to 5.90 after treatment, resulting in a substantial relief of 70.051%. This reduction is statistically extremely significant ($P < 0.001$). The substantial alleviation of pain underscores the therapeutic efficacy of the intervention.

Effect of Therapy on Swelling in Joints: Pre-treatment, the mean swelling score was 17.00, which reduced to 6.00 post-treatment, yielding a relief of 64.706%. This reduction is statistically extremely significant ($P < 0.001$). The substantial reduction in joint swelling is indicative of the therapeutic effectiveness in mitigating inflammatory processes.

Effect of Therapy on Stiffness: The mean stiffness score decreased from 24.40 before treatment to 8.30 after treatment, resulting in a relief of 65.984%. This reduction is statistically extremely significant ($P < 0.01$). The considerable improvement in stiffness highlights the positive impact of the therapeutic approach on joint mobility.

Effect of Therapy on *Angamarda*: The mean score for *Angamarda* reduced from 26.30 before treatment to 9.00 after treatment, yielding a relief of 65.779%. This reduction is statistically extremely significant ($P < 0.001$). The significant alleviation of *Angamarda* underscores the positive impact of the therapy on reducing pain and discomfort.

Effect of Therapy on *Aruchi*: The mean score for *Aruchi* decreased from 26.00 before treatment to 10.20 after treatment, resulting in a relief of 60.769%. This reduction is statistically very significant ($P < 0.01$). The improvement in taste perception signifies the therapeutic benefit in addressing associated symptoms.

Effect of Therapy on *Trishna*: The mean score for *Trishna* reduced from 24.90 before treatment to 7.80 after treatment, yielding a relief of 68.675%. This reduction is statistically very significant ($P < 0.001$). The substantial reduction in thirst reflects the positive impact of the therapeutic intervention.

Effect of Therapy on *Alasya*: The mean score for *Alasya* decreased from 27.00 before treatment to 9.20 after treatment, resulting in a relief of 65.926%. This reduction is statistically very significant ($P < 0.01$). The improvement in lethargy underscores the therapeutic efficacy in addressing fatigue.

Effect of Therapy on *Gaurava*: The mean score for *Gaurava* reduced from 28.20 before treatment to 11.50 after treatment, yielding a relief of 59.22%. This reduction is statistically significant ($P < 0.05$). The alleviation of heaviness indicates a positive impact on the patient's overall well-being.

Effect of Therapy on *Jawara*: The mean score for *Jawara* decreased from 27.50 before treatment to 10.20 after treatment, resulting in a relief of 62.909%. This reduction is statistically very significant ($P < 0.01$). The improvement in fever symptoms suggests a positive therapeutic outcome.

Effect of Therapy on Apaka: The mean score for *Apaka* decreased from 27.00 before treatment to 9.20 after treatment, yielding a relief of 65.926%. This reduction is statistically significant ($P < 0.05$). The improvement in indigestion indicates the therapeutic efficacy in addressing gastrointestinal symptoms.

Effect of Therapy on *Shoonta* (Numbness): The mean score for *Shoonta* reduced from 25.70 before treatment to 9.90 after treatment, resulting in a relief of 61.479%. This reduction is statistically significant ($P < 0.05$). The improvement in numbness reflects the positive impact of therapy on neurological symptoms. The study also investigated the impact of therapy on various hematological and inflammatory markers in patients with rheumatoid arthritis, shedding light on the systemic effects of the therapeutic intervention. The following is a discussion of the findings.

Effect of Therapy on Hemoglobin: The mean hemoglobin score showed a notable increase from 109.02 before treatment to 119.77 after treatment, resulting in a relief of 9.86%. This improvement is statistically very significant ($P < 0.05$). The rise in hemoglobin levels suggests a positive impact of the therapy on addressing anemia associated with rheumatoid arthritis.

Effect of Therapy on TLC (Total Leukocyte Count): The total leukocyte count decreased from 780.48 before treatment to 742.32 after treatment, indicating a relief of 4.88%. This reduction is statistically significant ($P < 0.05$). The decrease in TLC suggests a potential modulation of the immune response by the therapy.

Effect of Therapy on DLC (Differential Leukocyte Count): Neutrophil count increased slightly from 503.2 to 513.6, while lymphocyte count decreased from 241.0 to 194.3 after treatment. These changes result in a relief of 2.38% for neutrophils and 19.37% for lymphocytes. However, these alterations are not statistically significant ($P > 0.05$). Other measures of DLC, including eosinophils, basophils, and monocytes, remained unchanged during the study.

Effect of Therapy on C-RP (C-Reactive Protein): The mean C-RP score significantly reduced from 240.4 before treatment to 106.1 after treatment, resulting in a relief of 55.86%. This reduction is statistically very significant ($P < 0.05$). The substantial decrease in C-RP levels indicates a reduction in systemic inflammation associated with rheumatoid arthritis following therapy.

Effect of Therapy on ESR (Erythrocyte Sedimentation Rate): The mean ESR score showed a significant reduction from 537.0 before treatment to 235.2 after treatment, yielding

a relief of 56.20%. This reduction is statistically very significant ($P < 0.05$). The decrease in ESR reflects a positive impact on the inflammatory status of patients.

Effect of Therapy on Fasting Blood Sugar: The mean fasting blood sugar levels showed a modest reduction from 853.8 before treatment to 795.6 after treatment, resulting in a relief of 6.81%. However, this change is not statistically significant ($P > 0.05$). The impact of therapy on blood sugar levels may be marginal in this context.

Effect of Therapy on RA-Factor: The mean RA-factor score significantly reduced from 540.6 before treatment to 237.0 after treatment, resulting in a relief of 56.16%. This reduction is statistically very significant ($P < 0.05$). The substantial decrease in RA-factor levels suggests a positive modulation of the autoimmune response associated with rheumatoid arthritis.

Discussion on Overall Effect of Therapy: The evaluation of therapy effectiveness in rheumatoid arthritis involved a comprehensive assessment, considering both subjective and objective parameters. The criteria for assessment were categorized into four grades based on the percentage of relief: Mild relief (<25%), Moderate relief (25-50%), Significant relief (50-75%), and Excellent relief (75-100%).

OVERALL DISCUSSION

The clinical trial demonstrated a significant improvement in subjective symptoms associated with rheumatoid arthritis. The therapy provided remarkable relief in pain, swelling, stiffness, and various other symptoms, with an overall subjective relief of 65.29%. On the objective front, the therapy showed excellent relief in parameters like ESR, C-RP, and RA-Factor, indicating a positive impact on systemic inflammation and autoimmune responses. However, the impact on immune cell composition and blood sugar levels was relatively modest, with an overall objective relief of 5.71%. The combined assessment of both subjective and objective parameters suggests that while the therapy excelled in addressing symptoms and inflammation, its impact on certain objective measures might be limited. Further research and adjustments to the therapeutic approach could enhance overall efficacy and provide more comprehensive relief to patients with rheumatoid arthritis.

CONCLUSION

The comprehensive exploration of the study on *Amavata* (rheumatoid arthritis) and the therapeutic intervention with *Amritadi Churna*has provided valuable insights into the multifaceted nature of this chronic disease and the potential efficacy of *Ayurvedic* treatment. The discussion covered diverse aspects, ranging from the traditional Ayurvedic understanding of *Amavata* to the modern clinical evaluation of patients, followed by an in-depth analysis of the therapeutic effects of *Amritadi Churna*. The conclusion synthesizes the key findings and implications of the study.

Traditional Understanding of *Amavata*: The study delved into the classical *Ayurvedic* understanding of *Amavata*, emphasizing its complex etiopathology involving *Ama* and vitiated *Vata Dosha*. The discussion highlighted the intricate interplay of factors leading to the manifestation of *Amavata*, including dietary habits, lifestyle choices, and mental factors. This traditional perspective provided the foundation for the subsequent clinical investigation and therapeutic intervention.

Clinical Evaluation of Patients: The detailed analysis of 90 patients with *Amavata* offered a nuanced portrayal of demographic, socio-economic, and clinical characteristics. The distribution of patients across age groups, gender, and other parameters shed light on the epidemiological aspects of the disease. The emphasis on diagnostic criteria, joint involvement, deformities, and associated symptoms provided a comprehensive clinical picture. This meticulous assessment established a robust baseline for evaluating the impact of the therapeutic intervention.

Therapeutic Effects of *Amritadi Churna*: The heart of the study lay in evaluating the therapeutic effects of *Amritadi Churna*on patients with *Amavata*. The analysis covered a spectrum of subjective and objective parameters, including pain, swelling, stiffness, hematological markers, and inflammatory indicators. The findings underscored the significant relief experienced by patients across multiple domains, emphasizing the positive impact on both symptoms and systemic inflammation.

Subjective Relief: *Amritadi Churna*demonstrated remarkable efficacy in alleviating subjective symptoms such as pain, swelling, stiffness, and associated discomfort. The percentage relief in these parameters fell within the categories of "Significant to Excellent relief," highlighting the substantial improvement in the quality of life for patients. The

therapeutic intervention addressed diverse aspects of patient experience, including joint symptoms, fatigue, and overall well-being.

Objective Relief: The objective assessment involved the examination of hematological and inflammatory markers. *Amritadi Churna*exhibited excellent relief in markers such as Erythrocyte Sedimentation Rate (ESR), C-Reactive Protein (C-RP), and Rheumatoid Factor (RA-Factor), indicating a profound impact on systemic inflammation and autoimmune responses. While modest relief was observed in certain parameters like Total Leukocyte Count (TLC) and Fasting Blood Sugar (FBS), the overall objective impact was characterized as "Mild relief."

Combined Evaluation: The synthesis of subjective and objective assessments portrayed a nuanced narrative of *Amritadi Churna's* therapeutic efficacy. The study's findings highlighted the intervention's success in addressing the symptomatic burden of *Amavata* and modulating inflammatory responses. The comprehensive evaluation laid the groundwork for future research, emphasizing the need for ongoing refinement and optimization of therapeutic approaches.

Implications and Future Directions: The study's outcomes have implications for both *Ayurvedic* practice and integrative approaches in managing *Amavata*. The positive therapeutic effects observed suggest avenues for further exploration, including the optimization of formulation, dosage, and duration of treatment. Additionally, the study encourages collaboration between traditional *Ayurvedic* practices and contemporary medical research to enhance the overall understanding and management of chronic inflammatory conditions.

Limitations and Considerations: While the study provided valuable insights, certain limitations must be acknowledged. The sample size of 90 patients, while substantial, may benefit from expansion to validate the findings. Long-term follow-up studies could provide insights into the sustainability of therapeutic effects. Integrating qualitative assessments, patient-reported outcomes, and measures of quality of life could offer a more holistic understanding of the impact of *Amritadi Churna*on patients' lives.

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