



Effectiveness Of Homoeopathic Medicines In Treatment Of Rheumatoid Arthritis

Dr. Arpita Acharia, Late Dr. Rita Chakraborty

Assistant Professor, Ex professor and HOD

SHMCH, Sumandeep Vidyapeeth

Father Mullers Homoeopathic Medical College And Hospital

STRUCTURED ABSTRACT

‘EFFECTIVENESS OF HOMOEOPATHIC REMEDIES SELECTED BASED ON THE REPERTORY OF THE SYMPTOM OF RHEUMATISM, SCIATICA ETC, BY ALFRED PULFORD MD IN THE TREATMENT OF RHEUMATIOD ARTHRITIS’

BACKGROUND:

Rheumatoid Arthritis (RA) is most common inflammatory joint disease and cause premature mortality, disability and compromised Quality of life⁴⁰. Rheumatoid arthritis is widely prevalence throughout the world, the overall prevalence is 0.8% and most commonly in women, which is 2 to 3 times more in women than compared to men, in India the prevalence has estimated to be 0.7%⁴².

Nearly 15% of people with Rheumatoid arthritis use Homoeopathy as complementary alternative medicine with prime objective to reduce pain⁴⁰. I selected The “REPERTORY OF THE SYMPTOMS OF RHEUMATISM, SCIATICA ETC, by Alfred

Pulford MD which is a regional repertory mainly focus on the information relevant to particular system or a region. And the repertory is not highlighted in the field of homoeopathy and not used in daily clinical practice. So this study is taken to find out the usefulness of homoeopathic remedies using this REPERTORY in the treatment of Rheumatoid Arthritis.

OBJECTIVES:

To study the efficacy of the Repertory "REPERTORY OF THE SYMPTOMS OF RHEUMATISM, SCIATICA ETC" by Alfred Pulford MD in the treatment of Rheumatoid Arthritis.

To study the effectiveness of homoeopathic remedies in the treatment of Rheumatoid Arthritis using DAS28 scale.

METHODS:

The study comprised of 32 cases of Rheumatoid Arthritis patients which was selected based on purposive sampling technique. All the cases were selected according to inclusion and exclusion criteria. Each case was accessed before, during and after the treatment of Rheumatoid Arthritis using:-“DISEASE ACTIVITY SCORE28 (DAS28)”⁴⁹

RESULT:

This study reveals 26 cases (81%) improved and 6 cases (19%) not improved out of 32 Rheumatoid Arthritis cases. A total of 16 patients were found in the age group between 40- 50 (25%) and 50 – 60 (25%) 8 in each group are most commonly effected. The prevalence is more in females than compared to males.(27 females and 5 males).

CONCLUSION:

This study shows the fact that Homoeopathic medicines selected after Repertorising with, The Repertory of the symptoms of Rheumatism, sciatica etc. is very effective in the treatment of RA cases.

KEYWORDS: Rheumatoid arthritis; Homoeopathy; Repertory; Alfred Pulford; DAS28

OBJECTIVES OF THE STUDY

- To study the efficacy of the Repertory "REPERTORY OF THE SYMPTOMS OF RHEUMATISM, SCIATICA ETC" by Alfred Pulford MD in the treatment of Rheumatoid Arthritis.
- To study the effectiveness of homoeopathic remedies in the treatment of Rheumatoid Arthritis using DAS28 scale.

REVIEW OF LITERATURE

The term Rheumatoid arthritis (RA) was first used by Sir Archibald Garrod in 1876 to describe a chronic non-suppurative inflammatory arthropathy¹.

Historical Review:

The beginning of modern knowledge about RA dates from the work of Nichols and Richardson, started in 1901 and published in 1909. The account clearly differentiated “Proliferative arthritis” (now called Rheumatoid A) from “degenerative arthritis” (now also known as osteoarthritis or arthrosis)². In the first Rheumatism review, prepared and published in 1935 by the American Committee for the control of rheumatism the heading for what we now call rheumatoid arthritis was “Atrophic arthritis (Infectious, proliferative, rheumatoid)”, showing a lack of consensus on terminology. In the eighth rheumatism review in 1941, the term RA was first used as the preferred terminology.

DEFINATION:

Is a chronic systemic inflammatory disease of unknown cause characterized by persistent involvement of synovial membrane of multiple joints and variety of systemic manifestations, associated with varied constitutional symptoms and presence of rheumatoid factor.⁵

RA is a chronic disease and although rarely a spontaneous remission may occur, the natural course is almost invariably one of the persistent symptoms waxing and waning in the intensity and a progressive deterioration of joint structures leading to deformations and disability. The inflammatory process primarily affects the lining of the synovium, in contrast to osteoarthritis which primarily involves the cartilage. The inflamed synovium leads to erosions of the cartilage and bone and if the inflammatory process is unchecked leads to joint deformity.

PREVALENCE:

Among studies reported, a prevalence of RA is ranged from 0.28% to 0.7%. Women is affected 3 times more than men. The age at which the disease most commonly start is in women between 40 and 50 years of age and for men somewhat later.^{2,5}

According to the study conducted in Delhi: the prevalence of RA was studied in the adult Indian population. As the first step, a house to house survey of a rural population near Delhi was conducted by two trained health workers. The target population comprised 44551 adults (over 16 years old). The health workers identified the possible cases of RA using a questionnaire. These cases were then further evaluated by the authors using the 1987 revised ARA criteria for the diagnosis of RA. A response rate of 89.5% was obtained and 3393 persons were listed as possible cases of RA by the health workers. Of these, 299 satisfied the revised ARA criteria for the diagnosis of RA, giving a prevalence of 0.75%. Projected to the whole population, this would give a total of about 7 million patients in India.⁵³

The prevalence of RA in India is quite similar to that reported from developed countries. It is higher than that reported from China, Indonesia, Philippines and rural Africa. These findings are in keeping with the fact that the north Indian population is genetically closer to the Caucasians than to other ethnic groups.

ETIOLOGY:

Despite intensive research over many decades, the cause of RA remains unknown⁵. RA has a complex multifactorial aetiology¹. Three areas of interrelated research are currently most promising

1. Host genetic factors
2. Immuno regulatory abnormalities and autoimmunity, and
3. A triggering or persisting microbial infection.

Genetic susceptibility to RA has been clearly demonstrated. The disease clusters in families and is more concordant in monozygotic (30%) than dizygotic (5%) twins. Certain major histocompatibility complex (MHC) class II alleles (and their encoded HLA, or human leukocyte antigens) occur with increased frequency in affected individuals. Several subtypes of HLA-DR4 were initially defined by mixed lymphocyte culture and more recently by DNA sequencing. Only certain HLA-DR4 subtypes predispose to RA (DW4 or DRBI *0401, DW14 or DRBI*0404 and DW15 or DRBI * 0405), whereas others do not. Thus a “Shared epitope” among several MHC class II molecules appears to predispose to RA. Moreover, homozygosity for the amino acid sequence, especially of that carried on HLA-DR4 molecules, has been shown to correlate with disease severity, including more destructive

joint disease, subcutaneous nodules, and extra-articular manifestations, especially rheumatoid lung disease and Felty's syndrome.^{5,6}

RA appears to be an "autoimmune" disease, similar to other MHC class II – associated disorders. Auto antibodies to the FC portion of IgG molecules, or rheumatoid factors are present in the blood and synovial tissues of 80% of RA patients, such cases are termed "seropositive". High titers of serum rheumatoid factor typically of the IgM isotype, are associated with more severe joint disease and with extra-articular manifestations, especially subcutaneous nodules. Despite the extremely strong association of rheumatoid factors with RA, they clearly do not cause the disease. Production of rheumatoid factor commonly occurs in other disorders characterized by chronic antigenic stimulation. Normal individuals occasionally produce rheumatoid factor, especially with increasing age.

An infectious origin for RA has been a continuing hypothesis. Viral infection such as rubella. Ross River Virus and Parvovirus B19 have been shown to produce an acute polyarthritis, but no evidence that they initiate chronic RA. An Epstein-Barr virus protein has also been shown to share the same five amino-acids as the HLA-DR4 (DW14) and HLA-DRI molecules, which are implicated in susceptibility to RA, thus raising the possibility of "molecular mimicry" as a mechanism.⁵

PATHOLOGY AND PATHOGENESIS

- The pathologic hallmark of RA is synovial membrane proliferation and outgrowth associated with erosion of articular cartilage and subchondral bone. Proliferating inflammatory tissue (Pannus) may subsequently lead to destruction of intra-articular and peri-articular structures and result in the joint deformities and dysfunction seen clinically.
- The earliest findings include microvascular injury and proliferation of synovial cells, accompanied by interstitial oedema and peri-vascular infiltration by mononuclear cells, predominantly T lymphocytes.
- Continuation of the process leads to further hyperplasia of lining cells, both DR-positive A (macrophage-like) and DR-negative type B (fibroblast like) and the normally acellular sub-synovial stroma become engorged with mononuclear inflammatory cells. The composition of cellular infiltrate varies, with some

being predominantly T cells, usually CD4+ (helper/inducer) and others having a mixed population of lymphocytes (often CD8 + cytotoxic T cells), plasma cells, macrophages and inter digitating (dendritic) cells. Occasionally, germinal centers rich in B lymphocytes can be seen. The proliferating synovium (Pannus) becomes villous and is vascularised by arterioles, capillaries and venules.

- Roles of both cellular and humoral immune mechanisms in the rheumatoid synovium are supported by molecular and immunopathologic findings. These interacting immune cells produce a variety of cytokines that promote further synovial proliferation and inflammation, as well as bone and cartilage destruction. Humoral mechanisms are supported by the demonstration of local rheumatoid factor production within the synovium, the formation of IgM – activated B cells and IgG immune complexes and activation and consumption of complement. Aggregates of immune complexes within polymorphonuclear leukocytes are often seen in rheumatoid synovial fluid and have been termed “RA cells” or “ragocytes”. Antigen – antibody complexes formed within the joint cavity can become trapped in hyaline cartilage and fibro cartilage.
- Within the synovial fluid, immune complexes activate the complement system, kinins, phagocytic cells, and the release of lysosomal enzymes and oxygen free radicals. These products cause dissolution of connective tissue macromolecules as well as articular cartilage. The ultimate destruction of cartilage, bone, tendons and ligaments probably results from a combination of proteolytic enzymes, metallo proteinases and soluble mediators – collagenase, produced at the interface of Pannus and cartilage, is probably largely responsible for the typical bony erosions.⁵

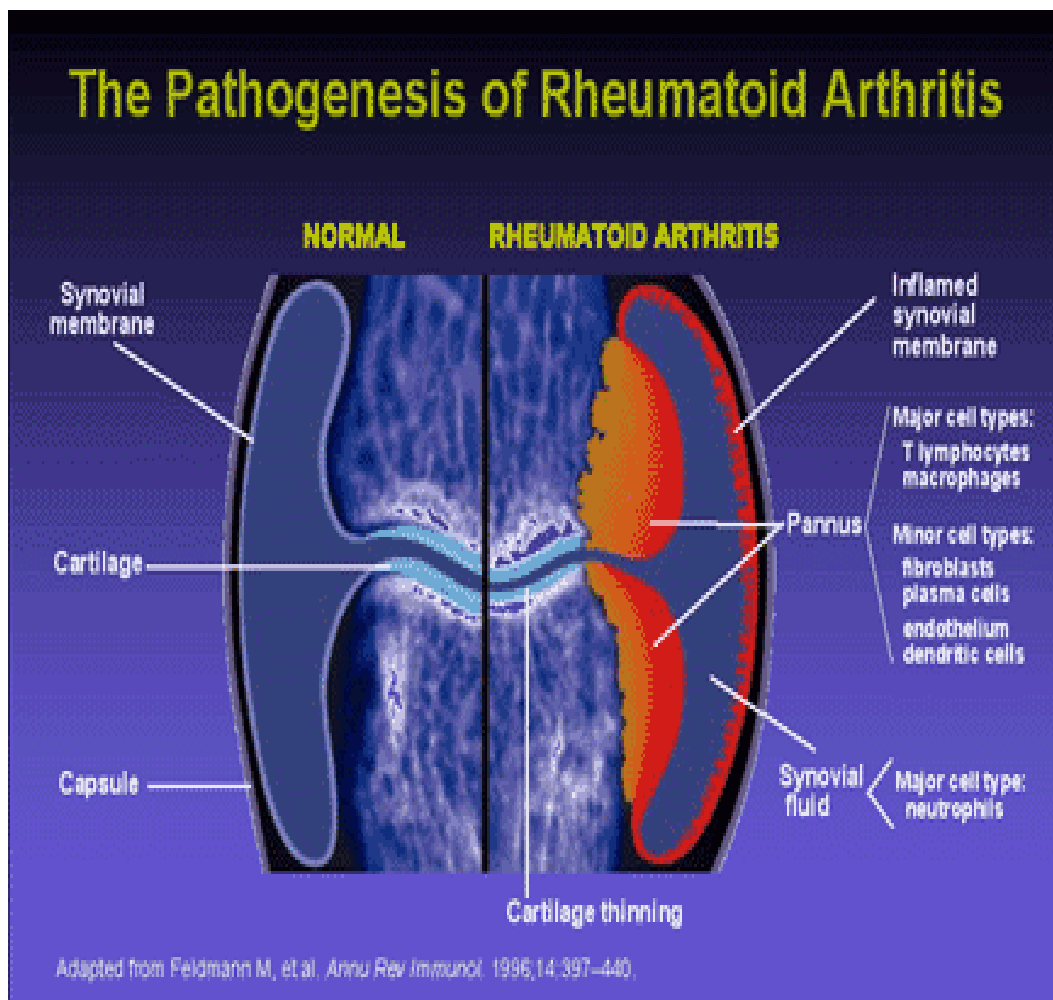


Figure No. 1: Pathogenesis of Rheumatoid Arthritis

CLINICAL FEATURES CONSIST OF

Pain, swelling, and tenderness of the small joints of the hands. It is very important to take a detailed history of the joint symptoms, particularly on the mode of onset, whether gradual or acute, the pattern of joints involved, and any variance in symptoms according to time of day. Since RA is a systemic disease patients may therefore have accompanying symptoms like fever, weight loss, and fatigue.⁷

The mode of onset of RA is highly variable⁵. Several distinct patterns of onset are recognized which can be of some use in predicting the prognosis¹.

Prodromal symptoms may include mild constitutional complaints such as fatigue, weight loss and vasomotor mobility with perspiration, especially over the hands. Stiffness is often a prominent symptom. The stiffness is marked after periods of inactivity (especially in the morning) and often parallels the activity of the disease. The hallmark of rheumatoid arthritis is inflammatory synovitis which manifest as swelling. Pain may occur at rest.

Tenderness, redness and/or heat may occur around the joint. Slow progression of joint symptoms is typical. As the disease progresses, however, joint involvement tends to be bilaterally symmetrical. Rheumatoid nodules may appear over the points of external pressure (particularly along the proximal end of the ulna). These nodules may or may not be tender. Tenosynovitis is common⁶.

DIFFERENTIAL DIAGNOSIS:

The diagnosis of RA and the inference that a single disease state manifests in the wide variety of lesions encountered rest on histopathologic, radiologic, clinical and laboratory findings. Patients can be divided into two groups based on the presence or the absence of rheumatoid factors.

Rheumatoid factors, however can be detected in other types of autoimmune connective tissue disease, in some infections, and in the asymptomatic elderly⁴.

DISEASES WHICH MAY BE ASSOCIATED WITH POSITIVE RHEUMATOID FACTOR TESTS

Autoimmune and Connective Tissue Diseases:

- Rheumatoid arthritis
- Sjogren's syndrome
- Systemic lupus erythematosus
- Progressive systemic sclerosis
- Polymyositis / dermatomyositis
- Fibrosing alveolitis
- Chronic active hepatitis
- Liver cirrhosis
- Sarcoidosis
- Waldenstrom's macroglobulinaemia.

Chronic Infections:

- Infectious mononucleosis
- Infectious hepatitis
- Bacterial endocarditis
- Tuberculosis
- Syphilis
- Yaws
- Leprosy
- Kala-azar
- Schistosomiasis
- Filariasis

MANAGEMENT

The goals of therapy of RA are:

1. Relief of pain.
2. Reduction of inflammation.
3. Preservation of functional capacity.
4. Resolution of the pathologic process and
5. Facilitation of healing.

Since the etiology of RA is unknown and the pathogenesis speculative, therapy remains empirical. A variety of physical therapies may be useful in decreasing the symptoms of RA.

- Rest ameliorates symptoms and can be an important component of the total therapeutic program.
- Splinting to reduce unwanted motion of inflamed joints may be useful.

- Exercise directed at maintaining muscle strength and joint mobility without exacerbating joint inflammation is also an important aspect of the therapeutic regiment.
- A variety of orthotic devices can be helpful in supporting and aligning deformed joints to reduce pain and improve function ⁹.
- A balance is needed between adequate rest and sufficient movement to maintain range of motion¹⁰.
- Physiotherapy plays a major role.

The aims of physiotherapy are:

1. To provide comfort, relieve pain and aid in recovery.
 2. To prevent deformities and loss of function of joints.
 3. To help in functional and corrective rehabilitation.
- Physical modalities of treatment include various forms of superficial and deep heating devices, ultrasound, short wave, exercises, manipulation of joints, splinting and several others. During acute and sub acute stages of the disease, rest, splinting and various forms of heat give relief. As the pain subsides, exercises are started with a view to maintain normal range of movements in all joints and prevent wasting of muscles¹¹.
 - Recently, substitution of dietary omega-6 essential fatty acids with omega-3 fatty acids has been shown to provide symptomatic improvement in patients with RA. A variety of nontraditional approaches have also been claimed to be effective in treating RA, including diets, plant and animal extracts, vaccines, hormones and topical preparations of various sorts. Many of these are costly and none has been shown to be effective⁹.

Surgery:

Surgery plays a role in the management of patients with severely damaged joints. Although arthroplasties and total joint replacements can be done on a number of joints, the most successful procedures are carried out on hips and knees.

Realistic goals of these procedures are relief of pain, correction of deformity and modest functional improvement. Reconstructive hand surgery may lead to cosmetic improvement and some functional benefit. Open or arthroscopic synovectomy may be useful in some patients with persistent monarthritis, specially of the knee. In addition, early tenosynovectomy of the wrist may prevent tendon rupture⁹

CRITERIA FOR THE CLASSIFICATION OF RHEUMATOID ARTHRITIS:

A. Classic rheumatoid arthritis

This diagnosis requires seven of the following criteria. In criteria 1 through 5, the joint signs or symptoms must be continuous for at least 6 weeks.

1. Morning stiffness
2. Pain on motion or tenderness in at least one joint.
3. Swelling (soft tissue thickening or fluid, not bony overgrowth alone) in at least one joint.
4. Swelling of at least one other joint (any interval free of joint symptoms between the two joint involvements may not be more than 3 months).
5. Symmetrical joint swelling with simultaneous involvement of the same joint on both sides of the body (bilateral involvement of proximal interphalangeal, metacarpophalangeal or metatarsophalangeal joints is acceptable without absolute symmetry). Terminal phalangeal joint involvement does not satisfy this criterion.
6. Subcutaneous nodules over bony prominences, on extensor surfaces, or in juxta-articular regions.
7. Roentgenographic changes typical of rheumatoid arthritis (which must include at least bony decalcification localized to or most marked adjacent to the involved joints, and not just degenerative changes). Degenerative changes do not exclude patients from any group classified as having rheumatoid arthritis.
8. Positive agglutination test – demonstration of the “rheumatoid factor” or any method that, in two laboratories, has been positive in not over 5% of normal controls – or positive streptococcal agglutination test.

9. Poor mucin precipitate from synovial fluid (with shreds and cloudy solution). (An inflammatory synovial effusion with 20000 or more white cells/ mm³ without crystals can be substituted for this criterion).
10. Characteristic histologic changes in synovium with three or more of the following: marked villous hypertrophy; proliferation of superficial synovial cells, often with palisading; marked infiltration of chronic inflammatory cells (lymphocytes or plasma cells predominating) with tendency to form “lymphoid nodules”; deposition of compact fibrin either on surface or interstitially; foci of necrosis
11. Characteristic histologic changes in nodules showing granulomatous foci with central zones of cell necrosis, surrounded by a palisade of proliferated mononuclear and peripheral fibrosis and chronic inflammatory cell infiltration

B. Definite rheumatoid arthritis

This diagnosis requires five of the above criteria. In criteria 1 through 5, the joint signs or symptoms must be continuous for at least 6 weeks.

C. Probable rheumatoid arthritis

This diagnosis requires three of the above criteria. In at least one of criteria 1 through 5, the joint signs or symptoms must be continuous for at least 6 weeks.

D. Possible rheumatoid arthritis

This diagnosis requires two of the following criteria; total duration of joint symptoms must be at least 3 months.

1. Morning stiffness
2. Tenderness or pain on motion with history of recurrence or persistence for 3 weeks.
3. History of observation of joint swelling.
4. Subcutaneous nodules.
5. Elevated sedimentation rate or C-reactive protein.
6. Iritis (of dubious value as a criterion except in juvenile arthritis) ².

2010 RHEUMATOID ARTHRITIS CLASSIFICATION CRITERIA

In 2010 a collaborative effort between the American college of Rheumatology (ACR) and the European League against Rheumatism (EULAR) revised the 1987 ACR classification criteria for Rheumatoid Arthritis in an effort to improve early diagnosis with the goal of identifying patients who would benefit from early introduction of disease-modifying therapy.

The criteria consists of 4 domains including the types of joints involved, presence of auto antibodies, laboratory markers of inflammation(ESR), and symptom duration. Application of the newly revised criteria yields a score of 0-10, patients are considered to have definite Rheumatoid arthritis, if they have a score of 6. The new criteria do not include rheumatoid nodules or radiographic joint damage because these findings occur rarely in early Rheumatoid arthritis.

	Target population(who should be tested?):patients who	
	Have at least 1 joint with definite 2010 RHEUMATOID ARTHRITIS CLASSIFICATION CRITERIA ⁹ 1. Clinical synovitis{swelling} 2. With the synovitis not better explained by another disease	
	Classification criteria for Rheumatoid arthritis (score-based algorithm: add score of categories A-D; a score of $\geq 6/10$ is needed for classification of a patient as having definite Rheumatoid arthritis)	
A	JOINT INVOLVEMENT	SCORE
	1 large joint	0
	2-10 large joints	1
	1-3 small joints(with or without involvement of large joints)	2
	4-10 small joints(with or without involvement of large joints)	3
	>10 joints(at least 1 small joint)	5
B	SEROLOGY(at least 1 test result is needed for classification)	
	Negative RA	0
	Low positive RA (weakly positive)	2
	High positive RA (strongly positive)	3

C	ACUTE-PHASE REACTANTS(at least 1 test result is needed for classification)	
	Normal ESR (M= 0 -22mm/hr), (F= 0-29mm/hr)	0
	Abnormal ESR (>30mm/hr)	1
D	DURATION OF SYMPTOMS	
	< 6 weeks	0
	>6weeks	1

CRITERIA FOR CLINICAL REMISSIONIN RHEUMATOID ARTHRITIS

For rheumatoid arthritis to be considered in remission, five or more of the following requirements must be fulfilled for at least 2 consecutive months:

1. Duration of morning stiffness not exceeding 15minutes.
2. No fatigue
3. No joint pain (by history)
4. No joint tenderness or pain on motion
5. No soft tissue swelling in joints or tendon sheaths.
6. Erythrocyte sedimentation rate (Westergren method) less than 30 min/hour for a female or 20 min/hour for a male.

CRITERIA FOR DETERMINATION OF PROGRESSION OF RHEUMATOID ARTHRITIS AND OF FUNCTIONAL CAPACITY OF PATIENTS WITH THE DISEASE

Classification of Progression of Rheumatoid Arthritis

Stage I, Early

No destructive changes on roentgenographic examination. Roentgenographic evidence of osteoporosis may be present. Stage II, Moderate

Roentgenologic evidence of osteoporosis, with or without slight subchondral bone destruction; slight cartilage destruction may be present.

No joint deformities, although limitation of joint mobility may be present. Adjacent muscle atrophy.

Extra-articular soft tissue lesions, such as nodules and tenosynovitis, may be present.

Stage III, Severe

Roentgenologic evidence of cartilage and bone destruction, in addition to osteoporosis. Joint deformity, such as subluxation, ulnar deviation, or hyperextension, without fibrous or bony ankylosis. Extensive muscle atrophy. Extra-articular soft tissue lesions, such as nodules and tenosynovitis, may be present.

Stage IV, Terminal

Fibrous or bony ankylosis Criteria of stage

Classification of Functional Capacity in Rheumatoid Arthritis

Class I: Complete functional capacity with ability to carry on all usual duties without handicaps.

Class II: Functional capacity adequate to conduct normal activities despite handicap of discomfort or limited mobility of one or more joints.

Class III: Functional capacity adequate to perform few or none of the duties of usual occupation or of self-care.

Class IV: Total or almost total incapacitation, with patient bedridden or confined to wheelchair, able to perform little or no self-care.

DIFFERENT STUDIES IN HOMOEOPATHY:

RA being an autoimmune disease in nature, needs for constitutional medications; here Homoeopathy offers excellent treatment for the cause of RA in a very low cost. The pain control is effective without any side effects. The treatment can also have an important role to play in controlling the progress of the condition and delaying the onset of complications³. In Homoeopathy treatment is given on the basis of our principle- “Similia Similibus curentur”. Where remedies are selected on the basis of symptom similarity in suitable potency, which differ from patient to patient, to stimulate the defence mechanism of the host and annihilate the disease in its whole extent. And Repertory plays an important role to drive a similar remedy to seek for. Several studies have been done in the field of Homoeopathy to know the effectiveness of homoeopathic treatment in Rheumatoid Arthritis, few are as follows:

- A study carried out based on: A STUDY ON HOMOEOPATHIC THERAPY IN RHEUMATOID ARTHRITIS: EVALUATION BY DOUBLE-BLIND CLINICAL THERAPEUTIC TRIAL¹⁴: 23 patients with rheumatoid arthritis on orthodox first line anti-inflammatory treatment plus homoeopathy were compared with the similar group of 23 patients on orthodox first-line treatment plus inert preparation. There was a significant improvement in subjective pain, articular index, stiffness and grip strength in those patients receiving homoeopathic remedies.
- A similar study on Rheumatoid arthritis: TO EVALUATE THE ROLE OF HOMOEOPATHIC MEDICINES AS ADD –ON THERAPY IN PATIENTS WITH RHEUMATOID ARTHRITIS ON NSAIDs¹. it shows that Homoeopathic constitutional similimum improves the Quality of life of Rheumatoid Arthritis by reducing intensity of pain, limiting disability and reducing disease activity, thus causing improvement in general and disease condition in particular. It also limits the need of analgesics and DMARDs in rheumatoid arthritis.
- Another study on: Role of Homoeopathic mother tincture in Rheumatoid Arthritis: An experimental study: The study was to assess the anti-inflammatory analgesic and anti-arthritis effect of some homoeopathic mother tinctures.
- A Homoeopathic therapy in Rheumatoid Arthritis, Evaluation by double – blind clinical therapeutic trial. 23 patients with Rheumatoid Arthritis on orthodox first-line treatment plus an inert preparation. There was a significant improvement in subjective pain, articular index, stiffness and grip strength in those patients receiving homoeopathic remedies, whereas there was no significant change in the patients who received placebo. No side effects were observed with Homoeopathic remedies.
- Immunological studies on Rheumatoid Arthritis treated with homoeopathic drugs – results of pilot study.

- Complementary and alternative medicine use in Rheumatoid arthritis :- An audit of patients visiting a tertiary care centre.

All these studies reflect the scope of Homoeopathy in the treatment of Rheumatoid Arthritis. To select the right similimum for the patient, to bring about the correct one Homoeopathic repertory serves the best. In this aspect the repertory which based on Rheumatism in particular that is "REPERTORY OF THE SYMPTOMS OF RHEUMATISM, SCIATICA ETC" by Alfred Pulford MD was indeed helped alot in selection of remedies in the treatment of Rheumatoid Arthritis.

A BRIEF NOTE ABOUT DISEASE ACTIVITY SCORE 28(DAS28)⁴⁴:

Introduction:

THE DAS28 (Disease Activity Score 28) is the system developed and validated by the EULAR (European League against Rheumatism) to measure the progress and improvement of Rheumatoid arthritis.

DAS28 values range from 2.0 to 10.0 while higher values mean a higher disease activity. A DAS 28 below the value of 2.6 is interpreted as remission.

Purpose :

To analyse the pain , tenderness , swelling and physical impact of 28 joints involved in RA.

“28” describes the number of different joints including in the measurement:

- Proximal interphalangeal joints(10joints)
- Meta carpophalangeal joints(10)
- Wrists(2)
- elbows(2)
- shoulders(2)
- knees(2)

When looking at these joints, both the number of the joints with tenderness upon touching and swelling are counted. In addition, the Erythrocyte sedimentation rate is measured. Also, the patient makes a subjective assessment of disease activity during the preceding 7 days on a scale between 0 to 100, where 0 is “no activity” and 100 is “highest activity possible”.

Method of use:

With the above measure parameters, DAS28 is calculated as:

$$\text{DAS28} = 0.56 \times \sqrt{\text{TEN28}} + 0.28 \times \sqrt{\text{SW28}} + 0.70 \times \ln\{\text{ESR}\} + 0.014 \times \text{SA}$$

- TEN28: number of joints with tenderness upon touching
- SW28: number of swollen joints
- ESR: measured erythrocyte sedimentation rate
- SA: subjective assessment of disease activity by the patient during the preceding 7 days on a scale between 0 to 100.

MIASMATIC BACKGROUND¹⁶:

“Miasms are like entrenched enemies”. They make such breaches in the physical and mental economy that the debilitated vital force cannot repair them.

The holistic approach of homoeopathy holds good even in miasmatic understanding of the case. One cannot go just by one or two expressions the presentation, pathological changes and functional deviations of the case in relation to time dimension need to be considered.

Rheumatoid arthritis is a chronic non-suppurative inflammatory disorder. Initially there will be only functional changes, which may later progress into irreversible structural changes. The rheumatoid complaints are implanted on constitutions initiated by tubercular, sycotic or syphilitic miasms.

H.A. Roberts in his book “Principles of Art and Cure” say that inflammatory rheumatism comes under sycotic miasm. There will be tearing pain in joint, < during rest, < cold and damp > moving. Stiffness and lameness are characteristic of sycotic stigma¹⁴.

In ICR, Area-C under sycosis it is said that “Over stimulated, hypertensive and responsive system under continuous bombardment of adverse environmental inputs is driven to disorientation. This leads to inappropriate, inefficient and aberrant immune response”. Because of aberrant immune response”. Because of aberrant immune response certain tissues get damaged as a result of antigen antibody reaction. Rheumatoid arthritis falls under this category. On grounds of analogy, all these are considered to belong to the sycotic expression. They are worse in cold, damp weather and by rest.

Wrong recognition of self as “Not Self” leads to autoimmune diseases in which tissues/organs get destroyed. Necrosis of bone, cartilage, periosteum leading to crippling deformities of joint with functional defects as seen in rheumatoid arthritis suggests it primarily as a degenerative disease (syphilitic) and secondarily a sycotic manifestation¹⁵.

Miasm, the dyscrasia of the person, constitutes a major part of the totality. Miasm and the symptoms are nothing but the two sides of the coin, and one cannot be considered whilst ignoring the other. Anti- miasmatic medicines help to clear up the presenting symptoms from their root or origin and clear up the susceptibility to get infection and there by strengthening the constitution¹⁶.

Curable disease may be cured by any potency of the drug provided it is the most homoeopathic remedy to the disease confirmed, but the speed with which the cure will be effected depends on the potency of the drug as well¹⁷.

Rheumatoid Arthritis presents in all three miasmatic phase i.e. psora, sycotic, syphilitic based on progress of the condition. The initial stage of Rheumatoid Arthritis without bone destruction is psora, formation of Rheumatoid nodules under the skin and joint space, tophi deposits in joints and connective tissue are sycotic origin, when the destruction of bones starts, the condition becomes syphilitic.

PSORA: Especially of functional and inflammatory in nature, the rheumatic pains of psora generally neuralgic in type; ore bruised and pressive pains. Sensation of numbness, tingling, dryness, heat and burning of hands and feet are characteristics of psora.

SYCOSIS: Rheumatism with numbness & paralytic weakness of extremities, easy spraining of joints, joints and connective tissues are affected are sycotic. Stitching, pulsating and wandering pains are sycotic pallid, oedematous, puffy, stiffness, soreness and lameness are characteristic.

SYPHILIS: The syphilitic stigmata can affect the bony structure, which may be changed. Various deformities and atrophy or emaciation of the extremities may occur. Pain in long bones is syphilitic, where pain is of burning, bursting and tearing type. There is lack of nutrition of the bones.

Miasmatic Comparison

Key word	Psora Sensitising Miasm	SycosisM iasm of Incoordination	Syphilis Degenerating Miasm	Tubercular Response, Reactive Miasm
General manifestations	<ul style="list-style-type: none"> • Psora develops itch • Hypoplasia is psoric • Lack, scanty, less and absence denote psora • Weakness is psoric. 	<ul style="list-style-type: none"> • Sycosis develops catarrhal discharges. • Hyperplasia is Sycotic • Hypertrophy is Sycotic • Exaggeration or excess denotes Sycosis • Restlessness (especially physical) is sycotic. 	<ul style="list-style-type: none"> • The syphilitic miasm has virulent open ulcers. • Dystrophy is syphilitic • Destruction and degeneration denotes syphilis • Destructiveness is syphilitic. 	<ul style="list-style-type: none"> • The tubercular miasm has haemorrhages. • Alternation of „hypo“ and dysplasia is tubercular. • Alternation and periodicity is tubercular. • Changeableness is tubercular.
2. Diathesis	<ul style="list-style-type: none"> • Eruptive 	<ul style="list-style-type: none"> • Rheumatic and gouty • Lithic and uric acid • Proliferative 	<ul style="list-style-type: none"> • Suppurative or ulcerative 	<ul style="list-style-type: none"> • Scrofulous • Haemorrhagic

3. Organs and Tissues Affected	Ectodermal tissues, nervous system, endocrine system, blood vessels, liver and skin.	Endodermal tissues, soft tissues. Attacks internal organs, the blood, and the pelvis and sexual organs.	Mesodermal tissues and bones and the glandular tissues particularly the lymphatics.	Glandular tissue. The patient is poor in bone, flesh and blood.
4. Nature of Diseases	Deficiency disorders			
5. Sensations (Comparison of Extremities Symptoms)	<ul style="list-style-type: none"> • Heat and burning of hands and feet. • Neuralgic pains. • Sore, bruised, pressure pains are psoric. 	<ul style="list-style-type: none"> • Rheumatism, numbness and paralytic weakness of extremities. • Stitching, pulsating, shooting, tearing and wondering pains. • Soreness, stiffness, lameness are also characteristic. • Gouty concretions due to rheumatic affection with pain in the joints or periosteum with inflammatory deposits. • Proliferative variety of 	<ul style="list-style-type: none"> • Burning, bursting and tearing sensations are syphilitic. 	<ul style="list-style-type: none"> • Cramps in lower extremities, legs, feet and toes. • Drop wrist – weakness or less of power in tendons about joints. • Joints easily sprained. • Soreness or pain in wrist joints.
		inflammation or growth of any tissues.		

6. Modalities of Extremities Symptoms	Aggravation: Winter, between sunrise and sunset, cold fromstanding.	Aggravation: Approach of storm, or during a thunderstorm damp humid atmosphere, rainy weather, cold rest, changes in weather, from meat stooping, bending and beginningto move.	Aggravation: Night, from sunset to sunrise, seaside, sea voyages, thunderstorms, summer and warmth, extremes of temperature, movement, perspiration, warmth of bed.	Aggravation: Night, from thunderstorms, mid greasy and oily fruits, closed room, morning.
	Amelioration: Summer, from heat by natural discharges such as urine, sweat, measles. Physiological eliminative process like diarrhea, hot application, scratching, the appearance of suppressed skin eruptions.	Amelioration: By moving, slow motion, stretching, rubbing, pressure, dry weather, unnatural discharges return of suppressed normal discharges.	Amelioration: Sunrise to sunset in lukewarm climates, during the winter cold, changes in position and any abnormal discharges.	Amelioration: Quiet, rest, warmth, dry weather, open air and in daytime. Amelioration from more bleeds ischaracteristic.

REPERTORY

Hahnemann Says

Aphorism 8,153: More importance should be given to the characteristics which is defined as the more striking, singular, uncommon, peculiar sign and symptom which would help in finding similimum¹¹.

As per Samuel Johnson's dictionary of English language, one of the most famous dictionaries in history, published in 1755, „Repertory means A treasure or a book in which anything can be found. His dictionary was enormously popular and highly respected for its epic sense of scholarship during the time of Hahnemann. However, our master Dr. Samuel Hahnemann's Materiamedicapura led the way for the chapters of our repertories, and that book gave an idea to the formation of repertories.

The Repertory makes our task of finding similar easier. There are different types of repertories like GENERAL REPERTORY or PARTICULAR (REGIONAL) REPERTORY. The Particular like based on Clinical condition

or related to a particular parts/region.

Pulford's repertory is one among the Regional Repertory .Pulford's repertory, „The Repertory of the symptoms Rheumatism, sciatica etc., is a regional repertory arranged alphabetically with Hahnemann Schema, arranged GENERAL TO PARTICULAR.

Dr. Alfred Pulford said: In vain has been the search for a work on Rheumatism that was at once up-to-date, available and reliable, but so far have not been able to find one, and like bell with his immortal work on Diarrhea, etc., have gathered together in the past twelve years reliable and verified symptoms and put them in convenient form, but as my script is almost unreadable. And give my friends the benefit, for which reason this work appears among you.

The publication of this work was offered to Boericke and Tafel, but as they already has a ten year old work on hand they hardly felt like printing another one, and I inferred from this that there would not be any other work published on Rheumatism as long as a copy of the ten year old edition could be sold.

Rheumatism, while a very prevalent disease, seems to me to have been a very much neglected subject as far works goes. That there is and has been a demand for works on this subject is evinced by the large number of subscriptions already received for this little book.

It is the sincere wish of the compiler of the repertory that it may prove as great a convenience to his fellow physicians as it has to himself⁵¹.

PLAN AND CONSTRUCTION:

- In compiling this repertory the object has been to arrange and classify groups and conditions of symptoms in such a manner that they may be readily available.
- In cases, where many remedies have been stated, the more important ones have been emphasized.
- Where only one or two are named it has not been deemed necessary to follow out this plan, so that you find a remedy not in capitals or *italics* do not pass it by as unimportant, for it may be very important.

Year of publication: 1898 Number of remedies: 220 Number of chapters: 28 Number of pages: 112

TYPOGRAPHY OF MEDICINES: (3 Graduations)

- Bold capital (3marks)
- Italics (2marks)
- Roman (1mark)

TYPOGRAPHY OF RUBRICS: 2 graduations

- Bold capital
- Roman

The BOOK starts from

- Preface
- Introduction
- Chapters
- Regional Index(alphabetically Arranged)
- Errata(correction)

ARRANGEMENT OF CHAPTERS:

Rubrics are arranged alphabetically. Chapters are arranged Anatomical schema. Total chapters: 28

Follows DEDECTIVE LOGIC i.e from Generals to Particular.

It starts within general Aggravation than Ameliorations follows by Parts Affected than follows by accompanying symptoms.

CRITICAL STUDY OF CHAPTERS:

SL.N O	CHAPTERS	FEATURES
1.	Aggravation	<p>This chapter have rubrics related to in general aggravation.</p> <p>No. of rubrics- 109 Cross reference:12 Few rubrics:</p> <p>AGGRAVATIONS,</p> <ul style="list-style-type: none"> • ALONE, when: phos.,Stram. • COLD: Amm.c., <i>calc.</i>, Cist., Graph., Kali c., RHUS, SIL.; Reverse: PULS • DRAWING, up limbs: Rhus; Reverse:Sulf
2.	Amelioration	<p>This chapter shows in general Ameliration</p> <p>No. of rubrics- 59 Cross reference: 02 Few rubrics:</p> <p>AMELIORATIONS:</p> <ul style="list-style-type: none"> • -AIR, from open: Acon., PULS • ELAVATING knee: Calc. • MOTION: Acon., Aloe., <i>Ars.</i>, <i>Calc.</i>, Caps., Caust., Dios., <i>Eup.perf.</i>, <i>Ferr.</i>, Kali.c, Men yanth., Phos.ac, Cina., <i>Puls.</i>, Rhod., RHUS, Ruta, Senec., Staph., Sulf., Tongo, Zinc.
3.	Neck	<p>This chapter contains rubrics related to Neck along with various sensations and accompanying symptoms.</p> <p>No. of rubrics- 71</p> <p>Cross reference: 10</p>

		<p>NECK</p> <ul style="list-style-type: none"> ● ACHING: Onos, Sep. ● BROKEN, sensation as if N. were: Chel. ● HEADACHE extends to nape of N.: Lyc.
4.	Shoulders and Arms	<p>This chapters consists rubrics related to shoulder joint and arms with various sensations and accompaniments.</p> <p>No. of rubrics- 100 Cross reference:14 Few rubrics:</p> <p>SHOULDERS AND ARMS</p> <ul style="list-style-type: none"> ● -ACHING and tenderness on top of r. trapezious: Phyto ● -BURNING throbbing in A.: Bell ● -CRAMPS of A.: Cup ● -HEADACHE extending over S: Glon. ● -PAIN Joints of S. on bending A. backward: CALC., <i>Ign.</i>, RHUS ● -WEAKNESS in A.(great): Phos
5.	Upper Extremities	<p>This chapter deals with upper extremities in general with its various sensations , extensions and accompaniments.</p> <p>No. of rubrics- 55 Cross reference: 05 Few rubrics:</p> <p>UPPER EXTREMITIES</p> <ul style="list-style-type: none"> ● NUMB, become while at work: Phos ● PARALYZED, hang as if: Acon ● SHOULDER, numbness from, to finger tips: Ox.ac.
		<ul style="list-style-type: none"> ● TOO large, sensation as if head and U.E. were: Aran., Bapt. ● WORK, become numb while at: Phos.

6.	Elbows	<p>This chapter have rubrics related to Elbow joints with its various sensations and accompaniments</p> <p>No. of rubrics- 27 Cross reference:03 Few rubrics:</p> <p>ELBOWS</p> <ul style="list-style-type: none"> ● ACHING and lameness on outer and under side of l.(above): Abrot. ● JERKING tearing in: RHUS ● KNEE, drawing in l. alt. with same in E.: Bry.
7.	Forearms	<p>It have rubrics related to forearms and its various sensations and accompaniments</p> <p>No. of rubrics- 28 Cross reference:04 Few rubrics</p> <p>FOREARMS</p> <ul style="list-style-type: none"> ● ACHING and soreness: Eup.perf. ● LOSS of power: RHUS ● PAIN Cramplike, in muscles: Calc.,Cina, Col.,Cup. ● STIFFNESS: <i>Rhus</i> ● SWOLLEN: <i>Crotal.</i>, <i>Rhus</i>.
8.	Wrists	<p>It have rubrics related to wrists and its various sensations and accompaniments</p> <p>No. of rubrics- 35</p>

		<p>Cross reference: 07 Few rubrics WRISTS</p> <ul style="list-style-type: none"> • FINGERS, stiffness of W. and , with pain: Caul. • DISLOCATION of bones of W. and tarsus: Ruta. • STIFFNESS: <i>Calc.</i>, <i>Merc.</i>, <i>Rhus</i>, SULF See Pain with. • SWELLING: Bufo, Ruta.
9.	Hands	<p>It have rubrics related to Hands and its various sensations and accompaniments</p> <p>No. of rubrics- 109 Cross reference:12 Few rubrics</p> <p>HANDS</p> <ul style="list-style-type: none"> • AGREEABLE thrilling through: CANN.I. • BECOME rigid: Merc. • LAME, feel bruised and: Kali bi • PAIN; Rheumatic: Caul., Led., Phyt., Rhus. • STIFF and numb: Bufo. • SWELLING: Ferr.,Hep., LAC CAN.,Rhus.
10.	Fingers	<p>It have rubrics related to Fingers and its various sensations and accompaniments</p> <p>No. of rubrics- 111 Cross reference:18 Few rubrics</p> <p>FINGERS</p>

		<ul style="list-style-type: none"> ● ACHING: Dios.,Fagop., Thuya. ● ARTHRITIS rheumatoid: Calc ● DRAWING and tearing in joints: BELL. ● NUMBNESS: Abrot., Apis, Caps., Con., Phos., Sec., ● PAIN; JOINTS, Arthritic: Act.s.,Ant.c. ● SWELLING : Berb., Bry.,Bufo, Calc., Hep., Lyc., <i>Rhus</i>
11.	Spine, cord and vertebrae	<p>It have rubrics related to Spine, Cord and vertebrae and its various sensations and accompaniments</p> <p>No. of rubrics- 82 Cross reference: 07 Few rubrics</p> <p>SPINE, CORD AND VERTEBRAE</p> <ul style="list-style-type: none"> ● ATROPHY ,S., progressive muscular: Ars., Plumb ● COCCYX, stiffness of V. beginning in, and going up to nape of neck: Ars. ● DIARRHOEA and headache with burning in S.: Pic. ac. ● DRAWING, tearing in and S.: Caps. ● INJURIES, tendency to convulsions from, to S.: Zinc ● PARALYSIS; complete: PLUMB., ACET.
12.	Back	<p>It have rubrics related to Back and its various sensations and accompaniments</p> <p>No. of rubrics- 84 Cross reference:25 Few rubrics</p> <p>BACK</p>

		<ul style="list-style-type: none"> ● ABDOMEN, burning in, with cold sweat on B. and breast: Cub. ● ACHING: AESC., Apis, Calc., Cann. i., CIM., Helon., Nux, Puls. ● DRAWING in: Ars., Cham., Natr. M., Thuya ● HYPERAESTHESIA, EXCESSIVE: Tarent.H ● PAIN; Rheumatic: Bell., Cim., Dulc., Kali c. ● RHEUMATIC drawing in B.: Carbo v.
13.	Scapular region	<p>It have rubrics related to Scapular region and its various sensations and accompaniments</p> <p>No. of rubrics- 34 Cross reference:14 Few rubrics</p> <p>SCAPULAR REGION</p> <ul style="list-style-type: none"> ● BORING and bruised feeling: Mag. M ● DRAWING in: Berb. ● PAIN; Lancinating: Ginseng, Glon. ● SENSATION of cold wind blowing on: Caust. ● TENSION, painful: Carbo an.
14.	Renal region	<p>It have rubrics related to Renal region and its various sensations and accompaniments</p> <p>No. of rubrics- 39 Cross reference:18 Few rubrics</p> <p>RENAL REGION</p> <ul style="list-style-type: none"> ● BRUISED sore sensation: Thuya. ● DRISTESS in, great: Lact.ac.

		<ul style="list-style-type: none"> ● PRESSURE: <i>Berb., Kali. c.</i> ● PAIN; Dull aching: <i>Hydrast.</i> ● URINATE, pain in, and in bladder if desire to, is not complied with: <i>Con.</i>
15.	Small of back	<p>It have rubrics related to Small of back and its various sensations and accompaniments</p> <p>No. of rubrics- 51 Cross reference: 26 Few rubrics</p> <ul style="list-style-type: none"> ● ACHE, tired, across, down thighs, during rest: <i>Dulc.</i> ● BRUISED feeling and throbbing: <i>Kali c.</i> ● KINK in, hindering deep inspiration: <i>Acon.</i> ● NUMB sensation: <i>Acon.</i> ● PAIN; Like labor pains: <i>Puls</i> ● PAIN; Stiffness and: <i>Lyc., Puls., Sil.</i> ● PAIN; Walking difficult , which makes: <i>Bry.</i> ● STIFFNESS: <i>Carbo an., Kali c., Rhus.</i>
16.	Lumbar region	<p>It have rubrics related to Lumbar region and its various sensations and accompaniments</p> <p>No. of rubrics- 24 Cross reference: 08 Few rubrics</p> <p>LUMBAR REGION</p> <ul style="list-style-type: none"> ● BURNING and aching: <i>Helon.</i> ● KINK in, hindering deep inspiration: <i>Acon.</i> ● LUMBAGO ; Alt. with piles: <i>Aloe</i> ● LUMBAGO; From a strain: <i>Arn., Calc.fluo., Nux,</i>
		<p><i>Rhus, Ruta.</i></p> <ul style="list-style-type: none"> ● SPECIAL affinity for: <i>Berb. CALC. FLUO., RHUS.</i>

17.	Sacral region	<p>It have rubrics related to Sacral region and its various sensations and accompaniments</p> <p>No. of rubrics- 27 Cross reference: 13 Few rubrics</p> <p>SACRAL REGION</p> <ul style="list-style-type: none"> ● ACHING, tension as from a heavy load: China. ● BRUISED feeling: Col., Ginseng. ● PAIN; Blow or fall, as after a violent: Arn. ● PAIN Severe, across: Form. ● STOOL, pain in, during: Carbo an.
18.	Coccygeal region	<p>It have rubrics related to Coccygeal region and its various sensations and accompaniments</p> <p>No. of rubrics- 28 Cross reference: 07 Few rubrics</p> <p>COCCYGEAL REGION</p> <ul style="list-style-type: none"> ● HAEMOPTOE alt. with coxalgia: Led. ● NEURALGIA during menses: Cic. ● PAIN; Lancinating, shooting :Tarent. H. ● SITTING, neuralgia < on: Kali bi.
9.	Lower Extremities	<p>It have rubrics related to Lower Extremities and its various sensations and accompaniments</p> <p>No. of rubrics- 78</p>

		<p>Cross reference:25</p> <p>Few rubrics</p> <p>LOWER EXTREMITIES</p> <ul style="list-style-type: none"> ● ACHING and soreness: <i>Eup.perf.</i>, Rhus. ● BLUE, cold, almost immobile: Ox. ac. ● DRAWING , acute , as far as knees:Puls ● IMMOBILE, blue, cold, almost:Ox.ac. ● PAINFUL heaviness: Sulf. ● PARALYZED, r. feels as if: Chel. ● SCIATICA; Of females: Puls., Ran. Bulb. ● TOTTERING: Lathyrus, Nux. ● WALK, seems as if one could , forever: Fluo.ac.
20.	Hips	<p>It have rubrics related to Hips and its various sensations and accompaniments</p> <p>No. of rubrics- 68 Cross reference: 54 Few rubrics</p> <p>LOWER EXTREMITIES</p> <ul style="list-style-type: none"> ● BROKEN, painful as if: Phos ● COLDNESS in gluteal region: Calc ● DISLOCATED, joints pain as if:<i>Puls.</i> ● DRAWING: <i>Acon.</i>, <i>Carbo v.</i>, <i>Dulc.</i>, <i>Lyc.</i>, Rhus, Sep., Zinc. ● JOINT, almost immovable: Con. ● NATES painful as if suppurating: Phos ● PAIN; From, to small of back: Fagop.

21.	Thighs	<p>It have rubrics related to Thighs and its various sensations and accompaniments</p> <p>No. of rubrics- 71 Cross reference:51 Few symptoms</p> <p>THIGHS</p> <ul style="list-style-type: none"> ● ACHING and soreness: Calc. p. ● HEAVINESS and numbness: Aloe ● PAIN;Drawing: Carbo v., Cup., Natr. m., Phos.ac., Stram., sulf ● PAIN ; Severe: Caul. ● SENSATION as if dogs were gnawing flesh and bones of T. and feet: Nit.ac. ● WEARINESS as after excessive effort: Rheum.
2.	Knees	<p>It have rubrics related to Knees and its various sensations and accompaniments</p> <p>No. of rubrics- 125 Cross reference: 55 Few rubrics</p> <p>KNEES</p> <ul style="list-style-type: none"> ● BEATEN, joints pain as if: Arn., Led. ● DRYNESS and and burning in patellae: Bufo ● GOUTLIKE tension: Phos ● HOUSEMAID'S: Iod.,Sticta. ● SENSATION as if articular surfaces were separated: Cham ● STIFFNESS: Ars., Caust., Bry., Nux, Rhus, Sulf ● SYNOVITIS: Apis, Bell., Calc. fluo., China, Rhus,
		Sulf.

23.	Legs	<p>It have rubrics related to Legs and its various sensations and accompaniments</p> <p>No. of rubrics- 74 Cross reference: 53 Few rubrics</p> <p>LEGS</p> <ul style="list-style-type: none"> ● ASLEEP, seem as if on rising from sitting: Puls ● BRUISED sensation: Cham., Col ● CORDS were tied about, sensation as if: China. ● DEBILITY felt mostly in: Arg.nit. ● JERKING and tearing, deep: Ars ● PAINFUL ,varices, during pregnancy: Mill. ● TWITCHING :Merc.
4.	Ankles	<p>It have rubrics related to Ankles and its various sensations and accompaniments</p> <p>No. of rubrics- 52 Cross reference:21 Few rubrics</p> <p>ANKLES</p> <ul style="list-style-type: none"> ● ACHE; Sep. ● HEAVINESS , painful: Cup ● Inflammation, rose colored, gouty of joints:Phos ● PAIN; Sprain , as from a: <i>Phos.</i>, SULF. ● WALKING, A. weak, turn easily when: Carbo an., Caust.,<i>sep.</i>

25.	Feet	<p>It have rubrics related to Feet and its various sensations and accompaniments</p> <p>No. of rubrics- 143 Cross reference: 87 Few rubrics</p> <p>FEET</p> <ul style="list-style-type: none"> ● ANT hill, F.turned , children walk on: Bruc. ● BALLS, tearing in heels and: Lyc. ● BEATEN, soles painful as if: Puls ● CRAMP: Caust.,Colch., Pet., Sec., Sil. ● DANCING, cramp in soles on walking or: Bar.c. ● HEELS; Throbbing and crawling in both: Natr. c. ● RIGID and stiff mornings:Led.
26.	Toes	<p>It have rubrics related to forearms and its various sensations and accompaniments</p> <p>No. of rubrics- 66 Cross reference:33 Few rubrics TOES</p> <ul style="list-style-type: none"> ● BENT backward or spread apart: Sec ● CORNS: Ant.c.,ARN.,Ran.scler., Sulf. ● CRAWLING and burning: Berb. ● PAINFULNESS: Con. ● REDNESS and heat: Nit.ac. ● TIPS very painful when walking: <i>Kali c.</i>
		<ul style="list-style-type: none"> ● ULCERS on T. and soles:Ars

27.	General symptoms	<p>It has rubrics related to in general affections of the body.</p> <p>No. of rubrics- 281</p> <p>Cross reference: 192</p> <p>Few rubrics</p> <p>GENERAL SYMPTOMS</p> <ul style="list-style-type: none"> • AFFECTIONS, chronic, after injuries or shocks: Natr.m. • ASTHMA alt with Rheumatism: Caul. • BONES: All, sensitive to touch, esp. of lower limbs: Mang.ac. • BURNING deep in limbs after retiring: Fagop • CONSCIOUS with opisthotonos: Nux.
28.	Accompanying symptoms 1. Mind	<p>No. of rubrics- 89 Cross reference:00 Rubrics</p> <ul style="list-style-type: none"> - DEATH , fear of: Acon., Ars., Sec - HALLUCINATIONS: Stram. - HOMESICK, cries all the time: Caps. - MOROSENESS: Agar., Bry., Caust.,
	2. Vertigo	<p>No. of rubrics- 17 Cross reference:00 Rubrics</p> <ul style="list-style-type: none"> - EATING , after: Puls - LYING , when: Con.
		<ul style="list-style-type: none"> - STAIRS, < ascending: Calc.

	3. Scalp	No. of rubrics- 22 Cross reference: 05 Rubrics <ul style="list-style-type: none"> - ALOPECIA, S. painful: Kreos. - DRAFT, sensation as if a cold, blew on : Pet.
	4. Head	No. of rubrics- 24 Cross reference:00 Rubrics <ul style="list-style-type: none"> - DULLNESS of: Natr. m. <i>Nux.</i> - PERSPIRATION < pain in occiput (Gels): Opi.
	5. Eyes	No. of rubrics- 19 Cross reference:00 Rubrics <ul style="list-style-type: none"> - DISTORTED : Bell - CONGESTED: <i>Acon.</i>, ARN., Bell., Kali brom.
	6. Ears	No. of rubrics- 22 Cross reference:01 Rubrics <ul style="list-style-type: none"> - BELL, noise as from: Led - HUMMING in, as from a bee :Abrot.
	7. Nose	No. of rubrics- 09 Cross reference:00 Rubrics <ul style="list-style-type: none"> - BLUENESS around: CINA, Kreos. - YELLOW: Chel.

	8. Face	No. of rubrics- 28 Cross reference:00 Rubrics - ACNE itch violently: Caust. - ITCHING of: Fagop
	9. Mouth	No. of rubrics- 21 Cross reference:00 Rubrics - ACCUMALATION of water in: Carbo v., Mag.m. - FETID odor from: Caps., Merc., Staph. - TONGUE; Clean: Ipec., Rhus
	10. Throat	No. of rubrics- 14 Cross reference: 00 Rubrics - COLD sensation in: Cepa - DYSPHAGIA, mornings: Ox.ac.
	11. Appetite and Thirst	No. of rubrics- 05 Cross reference:00 Rubrics - APPETITE canine: Calc., <i>Cann.i</i> , Iod.,Lyo., Merc., Psor., Staph., <i>Sulf</i> . - DESIRE; Bitter things: Natr.m. - THIRST; Chilliness after drinking: <i>Caps</i> .
	12. Stomach	No. of rubrics- 12 Cross reference:00

		Rubrics <ul style="list-style-type: none"> - COMPLAINTS from gluttony: <i>Ant.c.</i>, <i>Cepa.</i>, <i>Nux.</i> - PAIN in: <i>Dios.</i>, <i>Lyc.</i>, <i>Nux.</i>
	13. Abdomen	No. of rubrics- 22 Cross reference:00 Rubrics <ul style="list-style-type: none"> - HOT, tender and tense: <i>Cup</i> - TENDERNESS: <i>Bell.</i>
	14. Anus, rectum and stool	No. of rubrics- 04 Cross reference:00 Rubrics <ul style="list-style-type: none"> - ANUS, biting at: <i>Dulc</i> - CONSTIPATION, Obstinate: <i>Plumb</i> - RECTUM, cramp pain in: <i>Eugenia</i>
	15. Urine	No. of rubrics- 05 Cross reference:00 Rubrics <ul style="list-style-type: none"> - BLADDER, Catarrh of: CHIMAPH, <i>Dulc</i> - URETHRA, burning along whole: CANN.S. - URINE;Smoky: <i>Tereb.</i>
	16. Chest	No. of rubrics- 30 Cross reference:08 Rubrics <ul style="list-style-type: none"> - ACHING in sternum: <i>Pothos</i> - SPASMS of C. alt. with vomiting: <i>Cic.</i>
	17. Heart	No. of rubrics- 23 Cross reference:01

		Rubrics <ul style="list-style-type: none"> - APPLICATIONS, pain shifts to, from external: <i>Kalm.</i> - CRAMP in: <i>Ars</i>
	18. Sleep and Dreams	No. of rubrics- 05 Cross reference:00 Rubrics <ul style="list-style-type: none"> - DREAMS , bad, vivid: <i>Sil</i> - SLEEP, cannot unless legs are crossed: <i>Rhod</i>
	19. Chill, heat and sweat	No. of rubrics- 05 Cross reference:00 Rubrics <ul style="list-style-type: none"> - CHILL alt. with heat: <i>Ars</i> - HEAT and restlessness: <i>Acon.</i> - SWEAT ; And chilliness: <i>Col</i>
	20. Skin	No. of rubrics- 11 Cross reference:00 Rubrics <ul style="list-style-type: none"> - BLUE: <i>Cup.,Nux.</i> - WRINKLRD: <i>Sulf.</i>

SPECIAL FEATURES:

- It starts with general modalities AGGRAVATION AND AMELIRATION than followed by the part effect in Anatomical schema.
- General modality represented in capitals AGG. or AMEL. And modality related to a particular part is represented by small letters Agg. orAmel.
- Cross references are given wherever necessary inorder to find the appropriate rubric. This is given after the word “see” in brackets immediately after the remedy
- In each chapter the rubrics, all important symptoms, their concomitants & modalities are given.
- 27th chapter GENERAL SYMPTOMS denotes the general affinity of the body effectation.

- 28th chapter deals with accompanying symptoms from MIND to SKIN. Helps for differentiating the drugs at the end.

ADAPTABILITY:

- Cases of complete symptoms
- Cases with prominent sensations and modalities
- Cases with general symptoms.

WORKINGOUTMETHOD:

- We can work out same like BTBP: (H A Robert's method)
 - Location
 - Sensation
 - Modalities
 - Concomitants
 - Mind symptoms for differentiation

LIMITATIONS:

- Can't used other conditions.
- Mainly used as reference work.
- Less number of medicines in each rubrics. In places there is only one remedy.

Materia Medica – Reference

- The remedies are the building blocks of Homoeopathic discipline, and their pictures remain forever valid. Their contours have been delineated by masters of old in the records of provings and cures which constitute the foundations of Homoeopathic literature¹³.
- Certain remedies have peculiar affinity for certain tissues; some affect synovial membrane, others affect muscular, tendinous or other tissue, while being affected by like modalities or like locations may refer us to certain remedies where the sensations exhibited by the provings and by clinical verifications are totally dissimilar to the case under observation.¹

- Bernard Baeherin his writings. “The Science of Therapeutics According to the Principles of Homoeopathy” volume II suggest that, due to vagueness of the disease it is difficult to decide what medicines have curative effect upon the disease. Large medicines have been employed with more or less pretended effect, yet in similar cases same remedy always does not produce same curativeresult²⁰.
- Harris Ruddock in his book Ruddock’s Homoeopathic vade Mecumexplains that the disease rheumatoid arthritis is very obstinate and difficult to cure if actual t issue changes have occurred, the arrest of symptomsshouldbedone. Massageandhotwaterbathcanbegiven²¹.
- Richard Hughes “The Principles and Practice of Homoeopathy” says that rheumatic gout retains name in preference toRheumatic Arthritis. The cardinal facts about it are first, the great predominanceofwoman among its subjects, second, the frequent co- existence in them of menstrual perturbation ordisorder. The remedies he suggested by this concatenation of uterine and rheumatoid troubles are **pulsatilla, Sabina, ActeaRacemosa**. He says inlong cases where disorganization of joints takes place. There ishardly hope to do much with internalmedicine²².
- In guiding symptoms of our material medica by Herring C under **Kalmia Latifolia**, Limbs in general, Acute Rheumatism, Pains <on least motion and during evening, or soon after going to bed, Rheumatoid pains from sudden chill or exposure to coldwind.
- In **SalicylicumAcidum** Rheumatoid Arthritis occurring in some women duringclimaxis, when the medicine was given the pain disappeared, the engorgements and nosoditis of fingers subsided and the hands could again beused²³.
- In concise text book of twelve tissue remedies by T.C. Mondal, under Calcarea sulph,Pathophysio– chemical action, Calc. **sulph** deficiency causes separation of old cells from growing t issues. They circulate in the body and become antigenic in nature. Thus the body producesauto- immune bodies against these cells.Therefore **Calc. sulph** is useful in auto- immune disorders. Eg. Rheumatoid Arthritis²⁴.
- In characteristic MateriaMedica by William H. Burt³ under **AcidumBenzoicum**– Grand characteristics – shifting rheumatoid pains in the joints. Rheumatism with foetidurine.

- Under **Rhustox**– Grand characteristics – Rheumatoid pains, that affect every part of the body, all aggravated by rest and relieved by motion²⁶.
- In highlights of Homoeopathic Materia Medica including therapeutic index by J.P. Jain in therapeutic index under Arthritis –

Rheumatoid : Acon, Ars, Bry, Caul, Cimic, Colch, Dulc, Kali- I, Kalm, Lac. ac, Led, Merc, Phyt, Puls, Rhod, Rhus-t, Ruta, Spig, Viol-o²⁷.

- In Rheumatic Remedies by Herbert A. Roberts
 - Under **ActeaSpicata** . It has an affinity for the small joints, especially of hands and feet. It resembles **Caulophyllum** very closely in attacking the small joints, yet **caulophyllum** almost always has derangement of the female sexual system accompanying its rheumatic conditions, while **ActeaSpicata** has an affinity for men. It may be differentiated from **Ledum** by its hot swollen joints and aggravation.
 - In **Bryonia alba**– a major remedy in all types of rheumatic troubles where its modalities are marked. In rheumatic complaints the <from motion is not unusual, but this modality together with the relief from lying on the painful side and >from perspiring are the strongest leaders for its usefulness.
 - In **Colchicum Autumnale** – a remedy often called for in cold damp weather or locations, especially in spring or autumn. It acts on the fibrous tissues, on the periosteum and synovial membranes of joints, especially the small joints; it does not tend to suppuration.
 - In **Natrum Muriaticum** has marked rigidity of all joints. **Natrum muris** compatible after **Kali. mur** in articular and chronic rheumatism, after **Calc. phos** in chronic rheumatism of joints¹⁹.
- In “A Text Book of Materia Medica and Therapeutics characteristics, Analytical and Comparative” by A.C. Cowper thewaite in clinical index under rheumatism of small joints following remedies re mentioned.

ActeaSp, Gaul, Colch, Kali.bich, Lact.ac, Led, Lith, Rhod, Sticta²⁸.

➤ In “Homoeopathic Therapeutics” by Samuel Lilienthal, under Rheumatism –

- *Rheumatism and Swelling of Joints:*
 - Acon, Ant, Apoc, Andr, Arn, Ars, Asclep, Bell, Bry, Chin, Colch, Clem, Ham, Hep, Lyc, Mang, Merc, Nux-v, Rhod, Rhus, Sulph, Verat.vir.
- *Rheumatism, with Curative and Stiffness of the Affected Part:*
 - Ant, Bry, Caust, Guaiac, Lach, Sulph. 2. Amm. m, Coloc, Graph, Lyc, Nat.m, Nux.v, Rhus, Sep.
- *If by being in water or by exposure to damp and wet weather:*
- Calc, Nux.m, Puls, Rhus, Sep; 2. Bell, Bor, Bry, Carb.v, Caust, Colch, Dulc, Hep, Lyc, Sulph
- *If by every change of weather:*
 - Bry, Calc, Carb.v, Dulc, Graph, Lach,
 - Mang, Nux.m, Rhod, Rhus, Sil, Sulph, Veratr.
- **Time of Aggravation:**
- *Evening:* Puls, Bell, Rhus, Colch, Coloc. Before midnight: Bry
- *Evening and Night:* Acon, Arn, Ars, Bry, Cham, Chin, Dulc. Graph, Hep, Merc, Phos, Puls.
- *From noon to midnight:* Bell, Rhus
- After midnight: Ars, Merc, Sulph, Thuj.
- Towards morning: Ars, Bov, Kali.carb, Nux-v, Rhus, Thuj.
- **TEMPERATURE:**
 - Acon, Bry: Cold dry air.
 - Dulc, Rhus, Colch, Veratr: Cold damp air
 - Dulc: From taking cold, neck stiff, back painful, loins lame. Rhus: Exposure to chill and rain.
 - **Rhod:** Aggravation during thunderstorm. Puls: Exposure to protracted wet weather.
 - **Calc. phos:** Rheumatism pertaining to cold weather, getting well in spring and returning in the fall.

- **Benz.ac**: Articular rheumatism, with strong-smelling ammoniacal urine.
 - **Salicylic.ac**: Acute inflammatory articular rheumatism, extremely painful, with heat and red swelling of the joint or joints affected.
 - **Amm.phos, Benz.ac, Caust, Thuja**: Arthritis deformans²⁹.
- In Allen's handbook of materia medica under **Causticum**, clinical, RA, especially in persons who suffer from great weakness of limbs, aggravated by east wind, limbs become distorted²⁵.
- In clinical Materia Medica by Farrington under **Chamomilla** **Matricaria** – Rheumatic pains drive the patient out of bed, and compel him to walk about. Stitching pains jump from place to place, but unlike **Pulsatilla**, they leave a sense of weakness and numbness.
- The analogous remedies here are: **Rhus tox**, which lacks the excitement of **Chamomilla**, **Ferrum metallicum** Rheumatism better from moving about slowly and **Veratrum album**, maddening pains, compelling the patient to walk about³⁰.
- In Comparative Materia Medica under **Lachesis** and other Allied Remedies, it is given that **Causticum**, like **Lachesis**, cause trembling, weakness, paralysis, contractions of tendons, curvature of joints, nightly pains. Both may be employed in the arthritis deformans. In the former it is dry, cold weather, or snowy air, in the latter, it is damp, warm air, as in spring or before a thunderstorm³¹.
- In Quick Bedside Prescriber under Rheumatism –
- Bad weather excites attacks – (a) **Calcarea, Dulcamara, Rhus-tox, Lycopodium and Hepar-sulph.**
 - When change of weather cause a relapse – **Calcarea, Silicea, Sulphur, Dulcamara,**
- Rhus tox and Lachesis.**
- Rheumatism – deformed and swollen joints – reformed and swollen joints after attack of Rheumatism (**Iodium**).
 - Rheumatoid Arthritis (arthritic pain in fingers) pain in heels, weakness and shaking of hand in writing (**Antimonium – crudum**)³².

- In Homoeopathic Systematic Materia Medica K.N. Mathur under **Mezereum** –
Inflammatory Rheumatism worse from warmth of bed, and at night.
- Pain in periosteum of long bones, worse at night in bed, least touch, in damp weather (Merc, Phyt). Bones especially long bones inflamed, swollen, nightly pains going from above downwards after abuse of Merc³³.

METHODOLOGY

METHOD OF COLLECTION OF DATA

STUDY DESIGN:

This is a prospective clinical study, analyzing the changes in DAS28 pain scale before, during and after study period.

SAMPLE SIZE:

The sample consist of 32 cases of Rheumatoid Arthritis were selected by purposive sampling technique. All the cases were selected according to inclusion and exclusion criteria.

SOURCES OF DATA:

A minimum of 32 cases of Rheumatoid Arthritis were considered for the study from OPD, IPD, peripheral centres of Father Muller Homoeopathic Medical College, Deralakatte, Mangaluru.

METHOD OF COLLECTION OF DATA:

- 32 cases of Rheumatoid Arthritis were selected by purposive sampling technique.
All the cases were selected according to inclusion and exclusion criteria.
- The subject has been explained about research phenomenon in their own language, after confirming that he/she has understood the whole phenomenon his or her consent was obtained in the written form (Annexure III[c]).
- The data has been presented in standardized case record.
- All cases wererepertorized by using repertory of the symptom of rheumatism, sciaticaetc by Alfred

Pulford MD. Selection of remedy will be done with due reference to MateriaMedica.

- Follow up were taken once in 15days, or a month for a minimum period of 6 months.and the changes were recorded.
- Each case were assessed before, during and after the treatment of Rheumatoid Arthritis using:-“DISEASE ACTIVITY SCORE28(DAS28)”¹⁰

INCLUSION CRITERIA

- Age group of 18 years and above of the ages.
- *Cases were diagnosed by 2010 Rheumatoid Arthritis classification criteria; a score of $\geq 6/10$*
- ESR (more than 30mm/hr) and RA factor (positive)

EXCULSION CRITERIA

- Rheumatoid arthritis with any other systemic diseases.

RESEARCH HYPOTHESIS

Homoeopathic remedies selected on the basis of "Repertory of the symptoms of Rheumatism, sciatica etc.," by Alfred Pulford MD are effective in treatment of Rheumatoid Arthritis.

NULL HYPOTHESIS

Homoeopathic remedies selected on the basis of “Repertory of the symptoms of Rheumatism, sciatica etc.,” by Alfred Pulford MD are not effective in treatment of Rheumatoid Arthritis.

TOOLS USED IN THE STUDY

- Standardize case record.
- DAS28 pain scale.
- Pulford’s repertory.

PLAN FOR DATA ANALYSIS:

- Data analysed by using Descriptive Statistics.
- The results were presented using frequency tables, percentage diagram and graphs.
- Prescription was based upon the Pulford's repertory with reference to Materia medica.
- The significance of treatment was bases upon the DAS28 pain scale analysis.
- Clinical assessment of the subject analyzed by using of ANOVA with the help of sample size calculation

SAMPLE SIZE CALCULATION

Sample size is calculated based on the below mentioned formula

$$n = \frac{(Z_{\alpha} + Z_{\beta})^2 \sigma^2}{(X_1 - X_2)^2}$$

($Z_{\alpha} = 3.29$ in 85% CI, $Z_{\beta} = 1.64$ in 95% power)

$N = 16$

Sample size = 32

[Using the Pre & Post mean values of a Retrospective study done in Nasik with Homeopathic treatment.⁴³]

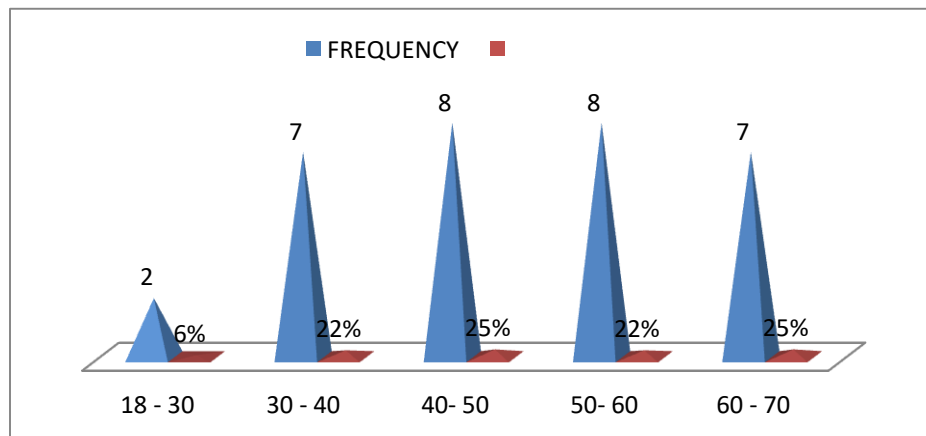
RESULTS

32 Rheumatoid Arthritis cases were studied for a period of 6 months and the following observations was made. The result showed a significant level of improvement statistically. The result is as follows:

Table 4: Distribution of RA cases according to age

AGE GROUP	FREQUENCY	PERCENTAGE
18 - 30	2	6%
30 – 40	7	22%
40 – 50	8	25%
50 – 60	8	25%
60 – 70	7	22%

In this study, total 16 patients were found in the age group between 40- 50 (25%) and 50 – 60 (25%) 8 in each group are most commonly effected, followed by the 14 patients in the age group of 30 – 40(22%) and 60- 7- (22%) and 2 patients in the age of 18 – 30 (6%).

**Figure 2: Distribution of RA cases according to Age****Table 5: Distribution of RA cases according to gender**

SEX	FREQUENCY	PERCENTAGE
MALE	05	16%
FEMALE	27	84%
TOTAL	32	100%

Among the 32 cases of RA , the prevalence is more in females than compared to males.(27 females and 5 males).

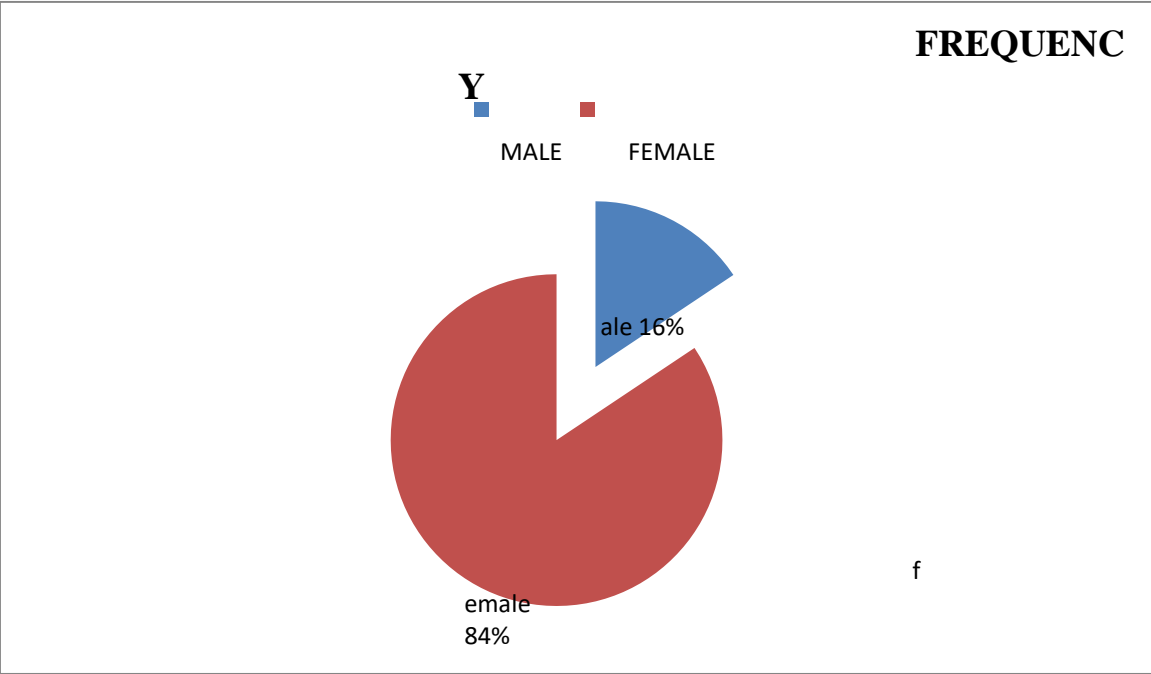


Figure 3: Distribution of RA cases according to gender

Table 6: Distribution of RA cases according to remedies

Remedies	Frequency	Percentage
Rhustox	16	50%
Pulsatilla	6	19%
Natrummur	4	13%
Nux vomica	2	6%
Calcarea carb	1	3%
Ignatia	1	3%
Lycodium	1	3%
Lachesis	1	3%

Among 32 cases of RA, Rhustox is prescribed in 16 cases(50%), Pulsatilla in 6 cases(19%), Natrummur in 4 cases(13%), Nuxvom in 2 cases(6%), Calc carb, Ignatia, Lycopodium and Lachesis for 1(3%) case each.

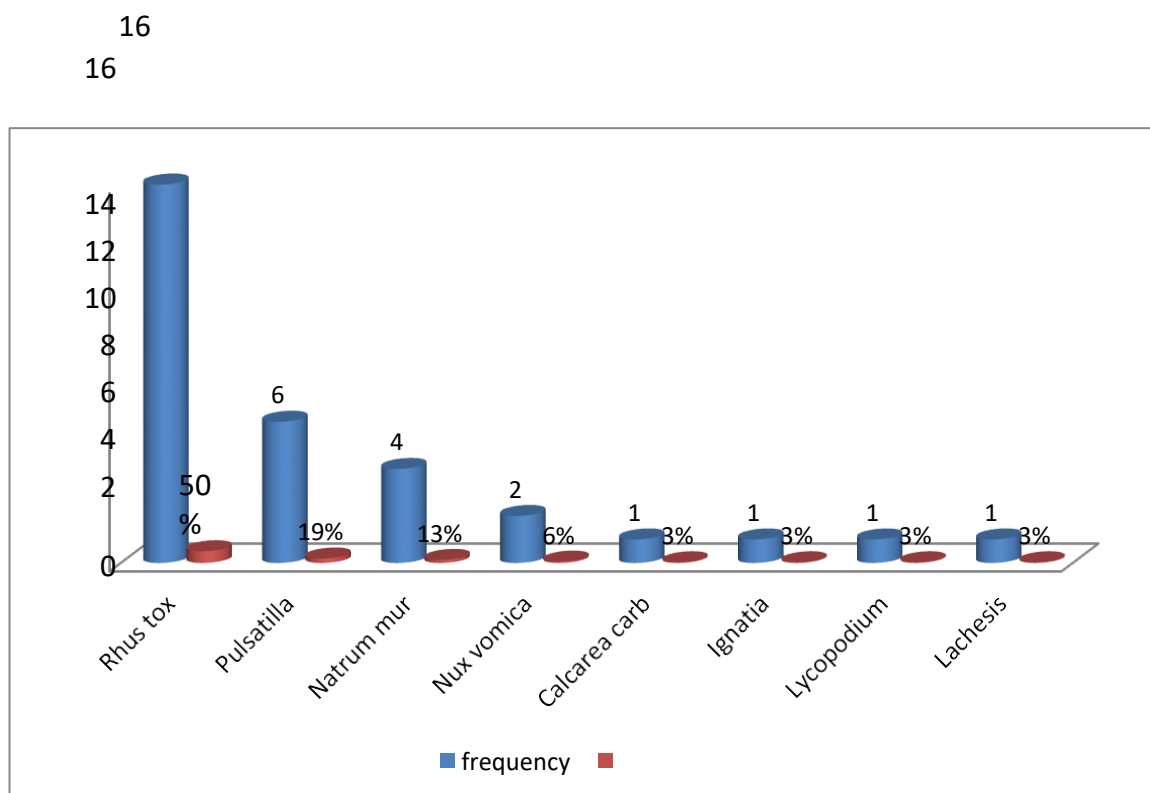


Figure 4: Distribution of RA cases according to Remedies.

Table 6: Distribution of RA cases according to result

Result	Frequency	Percentage
Improved	26	81%
Not improved	06	19%
Total	32	100%

Among the 32 patients of RA , it has been seen that after 6 months of homoeopathic treatment 26(81%) out of 32 shows improvement and 6 (19%) no improvement.

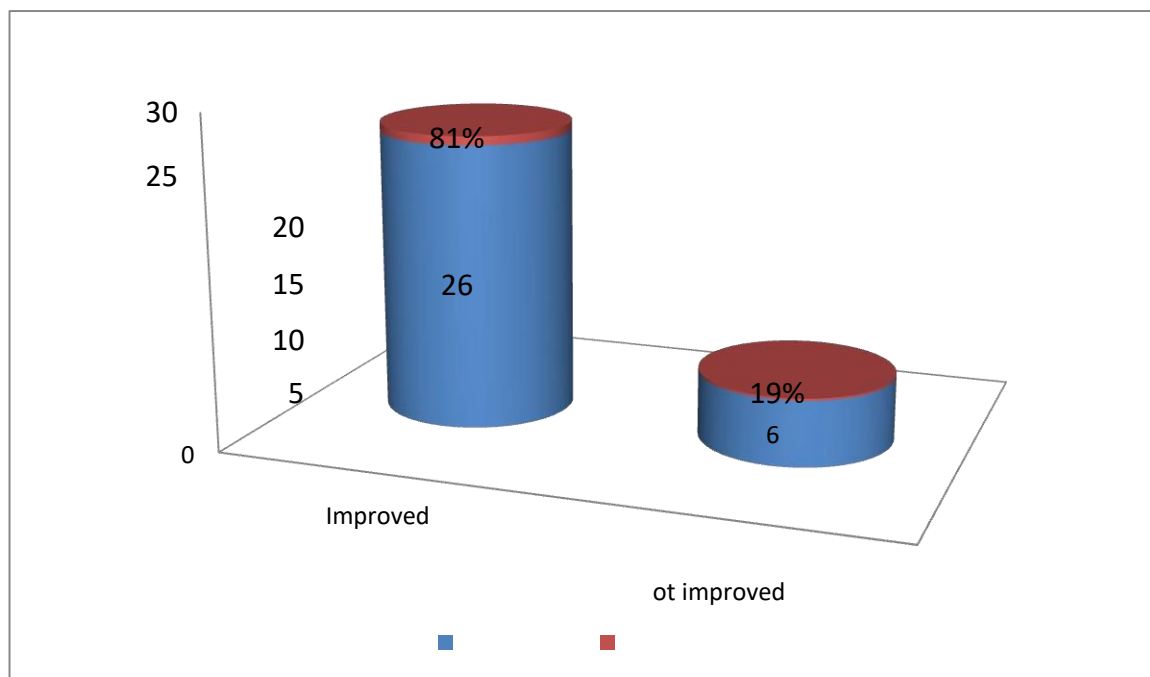


Figure 5: Distribution of RA cases according to Result

Table 8: Distribution of RA cases according to frequently used rubrics

SL. No	Rubrics	Frequency	Percentage
1.	Aggravation- morning(see a.m)	32	100%
2.	Aggravation- cold	20	62.5%
3.	Aggravation-lying	06	18.75%
4.	Aggravation- rising	10	31.25%
5.	Aggravation- weather damp	13	40.62%
6.	Ameliraion- warmth	11	34.37%
7.	Ameliration-pressure	03	9.37%
8.	Shoulders and arms – rheumatism;s	28	87.5%
9.	Wrists- rhematism	32	100%
10.	Wrists- stiffness	30	93.75%

11.	Fingers- rheumatism	32	100%
12.	Fingers – swelling	28	87.5%
13.	Fingers- stiffness	30	93.75%
14.	APPETITE AND THIRST- APPETITE Diminished or lost	25	78.12%
15.	Sleep and dreams- sleep disturbed	20	62.5%

In 32 (100%) cases the rubrics AGGRAVATION- MORNING (See A.M), WRISTS- RHEUMATISM AND FINGERS- RHEUMATISM and FINGERS- RHEUMATISM were used. In 30 (93.75%) cases the rubrics WRIST- STIFFNESS, FINGERS – STIFFNESS were used. In 28 (87.5%) cases the rubrics SHOULDERS AND ARMS- RHEUMATISM;S, FINGERS- SWELLING were used. In 25(78.12%) cases the rubric APPETITE AND THIRST – APPETITE; Diminished or lost was used. In 20(62.5%) cases the rubrics AGGRAVATION- COLD And SLEEP AND DREAMS – SLEEP Disturbed or lost were used. In 13 (40.62%) cases the rubric AGGRAVATION- WEATHER- damp was used. In 11(34.37%) cases AMELIRATION- WARMTH was used. In 10 (31.25%) cases the rubric AGGRAVATION – RISING is used. In 3(9.37%) cases the rubric AMELIRATION – PRESSURE was used.

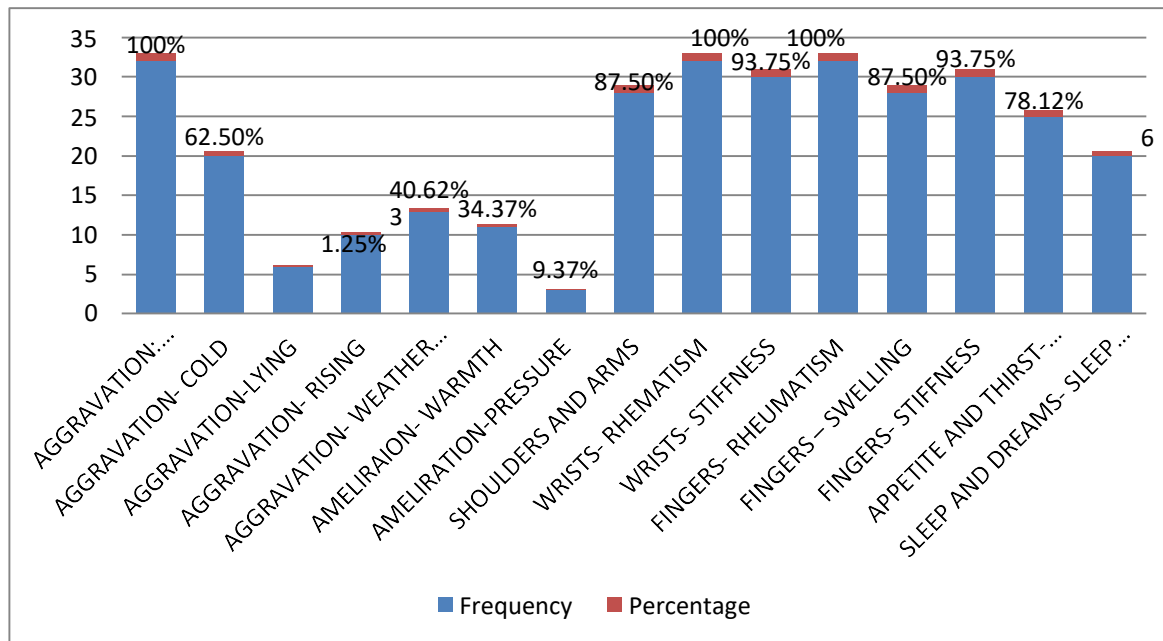


Figure 6.: Distribution of RA cases according to frequently used rubrics

STATISTICAL ANALYSIS

Table 9: DAS 28 Before, During And After Treatment

SERIAL NO.	BEFORE	DURING	AFTER
1.	7.50	3.78	2.83
2.	7.18	6.33	3.24
3.	9.96	4.43	2.83
4.	6.37	4.19	2.06
5.	7.48	5.34	1.75
6.	6.51	4.42	1.75
7.	7.33	6.95	7.24
8.	6.71	5.25	3.30
9.	6.91	4.80	2.75
10.	6.84	5.31	1.89
11.	6.50	4.92	2.54
12.	7.51	3.78	2.83
13.	6.51	5.42	1.75

14.	6.71	4.31	2.54
15.	7.48	5.31	2.51
16.	6.84	5.42	2.83
17.	6.76	6.48	7.03
18.	7.53	4.42	3.30
19.	6.95	3.30	1.89
20.	6.51	4.80	1.75
21.	6.48	7.03	3.30
22.	6.50	4.43	1.75
23.	6.84	4.92	2.54
24.	6.71	4.31	3.30
25.	7.12	4.80	3.30
26.	6.78	6.82	6.98
27.	7.53	7.12	6.76
28.	7.54	5.21	2.83
29.	7.93	3.78	2.52
30.	6.50	4.92	2.54
31.	6.89	6.08	6.41
32.	6.41	5.94	5.94

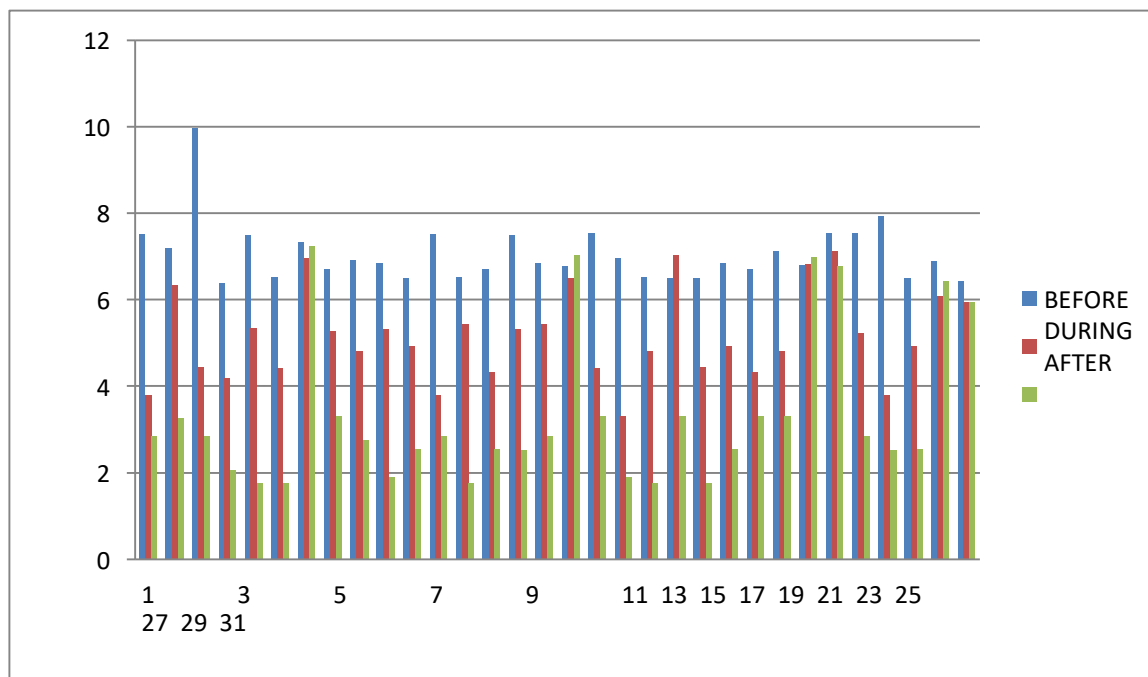


Figure no. 7: DAS28 Values Before , During And After Treatment

One Way ANOVA With Post- hoc Analysis

Your input data on $k=3$ independent treatments:

Treatment →	A	B	C
	7.5	3.78	2.83
	7.18	6.33	3.24
	9.96	4.43	2.83
	6.37	4.19	2.6
	7.48	5.34	1.75
	6.51	4.42	1.75
	7.33	6.95	7.24
	6.71	5.25	3.3
	6.91	4.8	2.75
	6.84	5.31	1.89
	6.5	4.92	2.54
	7.51	3.78	2.83
	6.51	5.42	1.75
	6.71	4.31	2.54
	7.48	5.31	2.51
	6.84	5.42	2.83
	6.76	6.48	7.03
	7.53	4.42	3.3
	6.95	3.3	1.89
	6.51	4.8	1.75
	6.48	7.03	3.3
	6.5	4.43	1.75
	6.48	4.92	2.54
	6.71	4.31	3.3
	7.12	4.8	3.3
	6.78	6.82	6.98
	7.53	7.12	6.76
	7.54	5.21	2.83
	7.93	3.78	2.52
	6.5	4.92	2.54
	6.89	6.08	6.41
	6.91	5.31	1.89

Descriptive statistics of your $k=3$ independent treatments:

Treatment →	A	B	C	Pooled Total
Observations N	32	32	32	96
sum $\sum x_i$	224.9600	164.3200	107.3200	496.6000
mean \bar{x}	7.0300	5.1350	3.3537	5.1729
sum of squares $\sum x_i^2$	1,596.2348	876.1320	452.8564	2,925.2232
sample variance s^2	0.4763	1.0435	2.9978	3.7511
sample std. dev. s	0.6902	1.0215	1.7314	1.9368
std. dev. of mean $SE_{\bar{x}}$	0.1220	0.1806	0.3061	0.1977

One-way ANOVA of your $k=3$ independent treatments:

Source	sum of squares SS	degrees of freedom ν	mean square MS	F statistic	p-value
treatment	216.3060	2	108.1530	71.8205	1.1102e-16
error	140.0468	93	1.5059		
total	356.3528	95			

Bonferroni and Holm results: all pairs simultaneously compared

treatments pair	Bonferroni and Holm T -statistic	Bonferroni p-value	Bonferroni inference	Holm p-value	Holm inference
A vs B	6.1770	5.1139e-08	** p<0.01	3.4093e-08	** p<0.01
A vs C	11.9831	0.0000e+00	** p<0.01	0.0000e+00	** p<0.01
B vs C	5.8062	2.6475e-07	** p<0.01	8.8251e-08	** p<0.01

In this second Bonferroni and Holm table below, we consider a subset of contrasts (pairs) for simultaneous comparison, of only pairs relative to treatment A. Such a situation may be relevant when treatment A is the control, and the experimenter is interested only in differences of treatments relative to control, thus $q=2$. The Bonferroni and Holm p-values of the observed T -statistic $T_{i,j}$ for $q=2$ relevant pairs of treatments, along with color coded Bonferroni inference (red for insignificant, green for significant) based on the p-value.

Bonferroni and Holm results: only pairs relative to A simultaneously compared

treatments pair	Bonferroni and Holm T -statistic	Bonferroni p-value	Bonferroni inference	Holm p-value	Holm inference
A vs B	6.1770	3.4093e-08	** p<0.01	1.7046e-08	** p<0.01
A vs C	11.9831	0.0000e+00	** p<0.01	0.0000e+00	** p<0.01

STATISTICAL ANALYSIS IS DONE IN SPSS SOFTWARE PROGRAMME VERSION. 23

QUESTIONED TO BE ANSWERED

1. RESEARCH HYPOTHESIS(ALTERNATE):

Homoeopathic remedies selected on the basis of "Repertory of the symptoms of Rheumatism, sciatica etc.," by Alfred Pulford MD are effective in treatment of Rheumatoid Arthritis.

2. NULL HYPOTHESIS:

Homoeopathic remedies selected on the basis of "Repertory of the symptoms of Rheumatism, sciatica etc.," by Alfred Pulford MD are not effective in treatment of Rheumatoid Arthritis.

3. STASTICAL RESULT:

Analysis done by ANOVA of repeated measures showed highly significant p values in all the 3 parameters i.e. DAS28 before, during and after the treatment. The Bonferoni and Holm p- valves of the observed T- statistic shows a significant difference based on the p- valves. So the null hypothesis is rejected and research hypothesis is accepted.

INTERFERENCE:

This study proves that the Homoeopathic remedies selected based on “Repertory of the symptoms of Rheumatism, sciatica etc.,” by Alfred Pulford MD are effective and significant in treatment of Rheumatoid Arthritis. And were concluded with the help of statically calculation of DAS28 Values before, during and after the treatment.

DISCUSSION

Homeopathy is a unique system of medicine based on individualization and symptoms similiarity of the patients. Nearly 15% of people with Rheumatoid arthritis use Homoeopathy as complementary alternative medicine, with prime objective to reduce pain. This study was done to find out the efficacy of homoeopathic remedies based on the “ Repertory Of The Symptom Of Rheumatism, Sciatica Etc, By Alfred PulfordMd In The Treatment ofRheumatiod Arthritis”. using DAS28.

The study was conducted on patient reported to the OPD, IPD, peripheral centres of Father Muller Homoeopathic Medical College, Deralakatte, Mangaluru. All the cases were selected according to inclusion and exclusion criteria.

The sample consist of 32 cases of Rheumatoid Arthritis has been selected by purposive sampling technique The data has presented in standardized case record. All cases was repertorized by using repertory of the symptom of rheumatism, sciatica etc by Alfred Pulford MD. Selection of remedy will be done with due reference to MateriaMedica. Each case will be accessed before, during and after the treatment of Rheumatoid Arthritis using:- “DISEASE ACTIVITY SCORE28(DAS28)”⁴⁹

This study proves that the Homoeopathic remedies selected on the basis of "Repertory of the symptoms of Rheumatism, sciatica etc.," by Alfred Pulford MD are effective and significant in treatment of Rheumatoid Arthritis

OUT COME OF THE STUDY AGE INCIDENT

In this study, total 16 patients were found in the age group between 40- 50 (25%) and 50 – 60 (25%) 8 in each group are most commonly effected, followed by the 14 patients in the age group of 30 – 40(22%) and 60- 7- (22%) and 2 patients in the age of 18 – 30 (6%). The maximum incidence based on the age group shows the peak in between 40- 60 years of age.

GENDER OUTCOME

Among the 32 cases of RA , the prevalence is more in females than compared to males.(27 females and 5 males).

BASED ON REMEDY PRESCRIBED

Among 32 cases of RA, Rhustox is prescribed in 16 cases(50%), pulsatilla in 6 cases(19%), Natrummur in 4 cases(13%), Nuxvom in 2 cases(6%), calc carb, Ignatia, Lycopodium and Lachesis for 1(3%) case each.

BASED ON THE RESULT

Among the 32 patients of RA , it has been seen that after 6 months of homoeopathic treatment 26(81%) out of 32 shows improvement and 6 (19%) no improvement.

BASED ON FREQUENTLY USED RUBRICS

In 32 (100%) cases the rubrics AGGRAVATION- MORNING (See A.M), WRISTS- RHEUMATISM AND FINGERS- RHEUMATISM and FINGERS- RHEUMATISM were used. In 30 (93.75%) cases the rubrics WRIST- STIFFNESS, FINGERS – STIFFNESS were used. In 28 (87.5%) cases the rubrics SHOULDERS AND ARMS- RHEUMATISM;S, FINGERS- SWELLING were used. In 25(78.12%) cases the rubric APPETITE AND THIRST – APPETITE; Diminished or lost was used. In 20(62.5%) cases the rubrics AGGRAVATION- COLD And SLEEP AND DREAMS – SLEEP Disturbed or lost were used. In 13 (40.62%) cases the rubric AGGRAVATION- WEATHER- damp was used. In 11(34.37%) cases AMELIRATION- WARMTH was used.

In 10 (31.25%) cases the rubric AGGRAVATION – RISING is used. In 3(9.37%) cases the rubric AMELIORATION – PRESSURE was used.

LIMITATIONS

- The sample size is small (N= 32), thus increasing the chances of sampling error as well.
- No control group was included along with the study group to compare the scale results
- The assessment scales may not be full proof. Human errors are possible

RECOMMENDATIONS

- A bigger sample size with a longer study period could have yielded better results
- A study with control group will be an ideal study to prove the effectiveness of homoeopathic medicines above all the system of medicines which would also negate the placebo effect fact as well.
- This book is found very useful, so it should be used in practice.

CONCLUSION

This study confirmed the fact that Homoeopathic remedies selected on the basis of “Repertory of the symptoms of Rheumatism, sciatica etc.,” by Alfred Pulford MD are effective in treatment of Rheumatoid Arthritis.

The sample consist of 32 cases of Rheumatoid Arthritis has been selected by purposive sampling technique The data has presented in standardized case record. All cases was repertorized by using repertory of the symptom of rheumatism, sciatica etc by Alfred Pulford MD. Selection of remedy will be done with due reference to MateriaMedica. Each case will be accessed before, during and after the treatment of Rheumatoid Arthritis using:- “DISEASE ACTIVITY SCORE²⁸(DAS²⁸)”⁴⁹

In this study, total 16 patients were found in the age group between 40- 50 (25%) and 50 – 60 (25%) 8 in each group are most commonly effected, followed by the 14 patients in the age group of 30 – 40(22%) and 60- 7- (22%) and 2 patients in the age of 18 – 30 (6%). The maximum incidence based on the age group shows the peak

in between 40- 60 years of age.

Among the 32 patients of RA , it has been seen that after 6 months of homoeopathic treatment 26(81%) out of 32 shows improvement and 6 (19%) no improvement. The study show that there is 81% improvement after 6months of treatment.

Analysis done by ANOVA of repeated measures showed highly significant p values in all the 3 parameters i.e. DAS28 before, during and after the treatment. The Bonferoni and Holm p- valves of the observed T- statistic shows a significant difference based on the p- valves.

The “REPERTORY OF THE SYMPTOMS OF RHEUMATISM, SCIATICA ETC,

by Alfred Pulford MD which is a regional repertory mainly focus on the information relevant to particular system or a region is helpful in condition like rheumatism and sciatica and can be used in regular basis. SUMMARY

Rheumatoid Arthritis (RA) is most common inflammatory joint disease and cause premature mortality, disability and compromised Quality of life¹.Rheumatoid arthritis is widely prevalence throughout the world, the overall prevalence is 0.8% and most commonly in women, which is 2 to 3 times more in women than compared to men, in India the prevalence has estimated to be 0.7%².

Nearly 15% of people with Rheumatoid arthritis use Homoeopathy as complementary alternative medicine with prime objective to reduce pain.¹So The “REPERTORY OF THE SYMPTOMS OF RHEUMATISM, SCIATICA ETC, by Alfred Pulford MD which is a regional repertory mainly focus on the information relevant to particular system or a region. And the repertory is not highlighted in the field of homoeopathy and not used in daily clinical practice. So this study is taken to find out the usefulness of homoeopathic remedies using this REPERTORY in the treatment of Rheumatoid Arthritis.

The study has been carried out to find out the eeffectiveness of the remedies selected based on the “REPERTORY OF THE SYMPTOMS OF RHEUMATISM, SCIATICA ETC, by Alfred Pulford MD in the treatment of RA. Using:-“DISEASE ACTIVITY SCORE28(DAS28)”¹⁰

The study was conducted on patient reported to the OPD, IPD, peripheral centres of Father Muller Homoeopathic Medical College, Deralakatte, Mangaluru. All the cases were selected according to inclusion and exclusion

criteria

The sample consist of 32 cases of Rheumatoid Arthritis has been selected by purposive sampling technique The data has presented in standardized case record. All cases was repertorized by using repertory of the symptom of rheumatism, sciatica etc by Alfred Pulford MD. Selection of remedy will be done with due reference to MateriaMedica. Each case will be accessed before, during and after the treatment of Rheumatoid Arthritis using:- “ DISEASE ACTIVITY SCORE28(DAS28)”⁴⁹

Among the 32 cases of RA , the prevalence is more in females than compared to males.(27 females and 5 males).

Among 32 cases of the study, total 16 patients were found in the age group between 40- 50 (25%) and 50 – 60 (25%) 8 in each group are most commonly effected, followed by

the 14 patients in the age group of 30 – 40(22%) and 60- 7- (22%) and 2 patients in the age of 18 – 30 (6%). The maximum incidence based on the age group shows the peak in between 40- 60 years of age.

Among 32 cases of RA, Rhustox is prescribed in 16 cases(50%), pulsatilla in 6 cases(19%), Natrummur in 4 cases(13%), Nuxvom in 2 cases(6%), calc carb, Ignatia, Lycopodium and Lachesis for 1(3%) case each.

Analysis done by ANOVA of repeated measures showed highly significant p values in all the 3 parameters i.e. DAS28 before, during and after the treatment. The Bonferoni and Holm p- valves of the observed T- statistic shows a significant difference based on the p- valves.

The study showed that the remedies selected using the “REPERTORY OF THE SYMPTOMS OF RHEUMATISM, SCIATICA ETC, by Alfred Pulford MD is useful in the treatment of RA using DAS28.

REFERENCES

1. Weatherall D.J, Ledingham J.G.G, Warrell D.A. Oxford Text Book of Medicine, 3rd edition, Vol.3, University Press INC, New York.
2. UtsingerD. Peter, Zraifler J. Naithan, Ehrlich. E. George.
 - i. Rheumatoid Arthritis, J.B. Lippincott Company, Philadelphia (Pg. 11, 12, 869-871, 873).
3. Tortora J. Gerald and Sandra Reynolds Grabowski. Principles of Anatomy and Physiology, 11th edition, John Wiley and Sons INC, New York.

4. Kissane M. John, Anderson's Pathology. 10th edition, Vol.2, The
i. C.V. Mosby Company, St. Louis, Missouri (Pg. 2630)
5. Cecil. Text Book of Medicine, Vol.2, 22nd Edition, Harcourt Asia (P) Ltd, (Pg. 1998-2004).
6. Shah Siddharth, A.P.I. Text Book of Medicine. 7th Edition, The Association of Physicians of India
(Pg. 1160-1164).
7. Edward R.W Christopher, Bouchire A.D. Jan, Haslett Christopher, Chilvers Edwin, Davidson's
Principles and Practice of Medicine, 17th edition, BPC Paulton Books Limited, Britain. (Pg. 888-897)
8. Immune disorders, Autoimmunity, Professional Care Guide, Spring House Corporation, Pennsylvania
(Pg. 65-73)
9. Harrison's, Principles of Internal Medicine, 15th edition, Vol.2, McGraw – Hill Medical Publishing
Division, New York, (Pg 1928- 1937).
10. Bone. C. Roger, Current Practice of Medicine, Vol.2, Church Livingstone INC, New York (Pg. VI.
2.1-2.8)
11. Das Krishna K.V, Text Book of Medicine, 3rd edition, 1996, Jaypee Brothers Medical Publishers (P)
Ltd, New Delhi.
12. Roit M. Ivan, Encyclopedia of Immunology, Vol.3, Academic Press INC, San Diego (Pg. 1336-1339)
13. Coulter R. Catherine, Portraits of Homoeopathic Medicines, North Atlantic Books, Homoeopathic
Educational Services, Wehawken Book Company.
14. Roberts A. Herbert, The Principles and Art of Cure by Homoeopathy, B. Jain Publishers, Reprint
edition 1999.
15. Dhawale M.L. Symposium Volume on Hahnemannian Totality. Part- II, Area-C, Institute of Clinical
Research, Bombay (Pg. C.25,26,27).
16. Banerjee Subrata Kumar, Miasmatic Diagnosis, Practical tips with clinical comparison. 1st edition,
1992, B. Jain Publishers (P) Ltd, New Delhi.
17. Phyllis Speight. A comparison of the chronic miasms. Jain Publishers and Co., New Delhi (Pg.74-79).

18. Sarkar B.K. Hahnemann's Organon of Medicine, Birla Publications (P) Ltd, New Delhi (Pg. 103).
19. Robert's A. Herbert. The Rheumatic Remedies, Reprint edition 1985, B.Jain Publishers (P) Ltd, New Delhi.
20. Baehr Bernhard. The Science of Therapeutic according to the Principles of Homoeopathy, Vol.2, Reprint edition, 1987, B.Jain Publishers (P) Ltd, New Delhi.
21. Ruddock Harris, Ruddock's Homoeopathic Vade Mecum, 1st edition, 1982, Jain Publishers Co. New Delhi (Pg. 240,241)
22. Hughes Richard. The Principles and Practice of Homoeopathy. Reprint edition 2001, B.Jain Publishers (P) Ltd, New Delhi (Pg.298)
23. Herring C. The guiding symptoms of our MateriaMedica, Reprint edition, 1997, B. Jain Publishers (P) Ltd.
24. Mondal T.C, Concise Text Book of Twelve Tissue Remedies, New Central Book Agency (P) Ltd, 2006, 1st published.
25. Allen T.F. Hand Book of MateriaMedica and Homoeopathic Therapeutics, Reprint edition, B.Jain Publishers (P) Ltd, New Delhi, 1994.
26. Burt, William H. Characteristic MateriaMedica, B. Jain Publishers
i. (P) Ltd, New Delhi.
27. Jain J.P. Highlights of Homoeopathic MateriaMedica, B.Jain Publishers (P) Ltd, New Delhi, Pg. 61,68
28. Cowperthwaite A.C. A Text Book of MateriaMedica and Therapeutics, 13th edition, B. Jain Publishers (P) Ltd, New Delhi (Pg.881).
29. Lilienthal Samuel. Homoeopathic Therapeutics. Reprint edition 1996, B. Jain Publishers (P) Ltd, New Delhi (Pg. 916-929).
30. Farrington E.A. Clinical MateriaMedica. 4th edition, Indian Books and Periodicals Publishers, New Delhi (Pg. 249).
31. Farrington E.A. ComparativeMateriaMedica, Reprint edition 2001.
a. Indian Books and Periodicals Publishers, New Delhi (Pg. 240).
32. Shinghal J.N. Quick Bedside Prescriber. B. Jain Publishers (P) Ltd, New Delhi (Pg. 411, 416).

33. Mathur K.N. Homoeopathy Systematic MateriaMedica. B. Jain Publishers (P) Ltd, New Delhi (Pg. 631).
34. Dewey W.A. Practical Homoeopathic Therapeutics. B. Jain Publishers (P) Ltd, New Delhi (Pg. 321).
35. Lippe, Key notes and Red line symptoms of the MateriaMedica, Reprint edition 1999, B. Jain Publishers (P) Ltd, New Delhi (Pg. 240, 362).
36. Clarke J.H. A Clinical Repertory to the Dictionary of MateriaMedica. Reprint Edition 1995, B. Jain Publishers (P) Ltd, New Delhi.
37. Kent J.T. Repertory of the Homoeopathic MateriaMedica with Word Index, Reprint edition 2002, Indian and Periodicals Publishers (P) Ltd, New Delhi.
38. Boericke William, Pocket Manual of Homoeopathic MateriaMedica and Repertory. B. Jain Publishers (P) Ltd, New Delhi, 2002.
39. Gunavante, S.M. "National Journal of Homoeopathy". Vol.6, Number 1-6, 1997, Jan – December.
40. Kundu k TK. Shaikh AF, Jacob SM. To evaluate the role of homoeopathic medicines as add –on therapy in patients with rheumatoid arthritis on NSAIDs: A retrospective study. Indian Journal of Research in Homoeopathy. 2014 Jan 1; 8(1):2.
41. Rheumatoid_arthritis_module_i-1.pdf. accessed on march 4, 2018
42. Wolfe F, Cush JJ, O'Dell JR, kavanaugh A, Kremer JM, Lane NE, Moreland LW, Paulus HE, Pincus t, Russell AS, Wilkie KR. consensus recommendations for the assessment and treatment of Rheumatoid Arthritis, The Journal of Rheumatology. 2001 jun 1; 28(6):1423-30.
43. <http://www.fortishealthcare.com/india/disease/rheumatoid-arthritis-26>. accessed on february 13, 2018
44. Davidson S. Davidson's principles and practice of medicine: 20th edition. Philadelphia Churchill Livingstone, Elsevier Ltd; in August 2006. 1101.
45. Harrison TR. Harrison's principle of internal medicine. 17th edition. Published in New Delhi (in India); 2083, 2085, 2087, 2086.

46. Dr Rajesh Shah's advice of Rheumatoid Arthritis. [www.askdrshah.com/rheumatoid- arthritis.aspx](http://www.askdrshah.com/rheumatoid-arthritis.aspx).
accessed on February 13, 2018
47. Tehlirian CV, Bathon JM, .RheumtoidArthritis.A.Clinical manifestations. In: Klippel JH, Stone JH, Crofford LJ, and White PH, Editors. Primer on the rheumatic disease.13th edition. New York Springer.2008. 114-121.
48. 2010 Rheumatoid Arthritis classification available on
https://www.rheumatology.org/ACR/practice/clinical/classification/ra/ra_2010.asp.
accessed on march4,2018
49. [http://www.phusewiki.org/wiki/index.php?title=3DDisease_Activity_score_\(DAS2_8\)&hl=en-IN](http://www.phusewiki.org/wiki/index.php?title=3DDisease_Activity_score_(DAS2_8)&hl=en-IN).
Accessed on march1, 2018
50. Hahnemann Samuel. Organon of medicine. 5th and 6th Edition B Jain publishers
(P) Ltd; New Delhi: 2015.
51. M.D Pulford A, Repertory of the symptoms of Rheumatism, Sciatica, etc. reprint edition:. B Jain publishers (P) Ltd, New Delhi India,1996.
52. Gibson R.G, Gibson SL, Macneill AD, Buchanan WW. HOMOEOPATHIC THERAPY IN RHEUMATOID ARTHRITIS: EVALUATION BY DOUBLE-BLIND CLINICAL THERAPEUTIC TRIAL. British Journal of
clinical Pharmacology 1980 May 1; 9(5), 453.