

RHEUMATOID ARTHRITIS : AN ANALYTICAL STUDY OF 25 CASES

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SUMMARY

This scientific paper is based on the analytical study of 25 cases of Rheumatoid arthritis treated at Central Research Institute for Homoeopathy, Kottayam under the project 'Psychosomatic disorders' classed under Behavioural Disorders - Neurotic, anxiety, hysterical, psychosomatic disorders. These patients were studied during the period 1992-95 in the OPD of this Institute. In majority of these patients psychological factors have been found to have a role in the initiation or precipitation of the complaints. The results obtained in this study have been analysed clinically to show the efficacy of the treatment and statistically to prove the validity of the study.

INTRODUCTION

Rheumatoid arthritis is a systematic immunological disease characterised by joint inflammation. It is one of the most common joint inflammatory disease associated with physical handicap. It is a disease of unknown aetiology, but evidence points to persistent immune over activity, auto immunity and presence of immune complexes at the articular and extra articular sites. *It was Sir William Osler, who in 1982 mentioned shock, worry and grief as the causative factor for Rheumatoid arthritis.* Recent studies show that the immune process are related to the psychological events, so there is resurgence of the interest in the psychogenic aetiology of disease. *But latest studies suggest that psychological factors play a predominant role in the sero-negative group where as the biological factors are important in sero-positive group.* It has also been noted that those who do not express emotions in situations and conflicts in which the emotions need to surface become the victims of such psychosomatic diseases. However, in other studies no co-relation has been found between the psychogenicity and onset of the disease. Similarly the presence of immunological factors are found in 60% cases only.

This uncertainty in the aetiology and the process of auto immunity makes the role of Homoeopathy more important in the treatment of Rheumatoid Arthritis, than any other mode of treatment. Again the psychosomatic

aetiology also favours the role of Homoeopathy in its treatment because Homoeopathy is unique in its psychosomatic approach to every individual case of disease. Since it is a condition that will lead to severe physical disability and since there is no curative treatment in other systems of medicine, we are at a great hope of curing such patients if they come for the treatment at an earlier stage provided they are treated systematically and patiently.

This short paper on the study of 25 cases of Rheumatoid Arthritis, though not a controlled study, reveals how effectively this condition could be treated without leading to any complications and physical disability. Though the number of cases studied was less in number, the results obtained was genuine and conclusive. Based on the results obtained in this study, further well controlled and drug related studies can be conducted in our institutions.

Aims and Objectives

The aims and objectives of this study are:

1. To find out a group of most efficacious drugs for the treatment of rheumatoid arthritis.
2. To find out the most useful potency for treating such patients.
3. To find out the most reliable indications of the drugs found most useful.

Materials and Method

The materials used for this study were 25 diagnosed cases of Rheumatoid arthritis of less than 10 years duration, treated during the period between 1992-95. The inclusion and exclusion criteria for the selection of these 25 cases were the following :

1. All cases were adult type of Rheumatoid arthritis.
2. Both sexes were included
3. Both sero-positive and sero-negative cases were included.

4. Majority of the cases included were diagnosed by the experts from other systems of medicine.
5. All the cases were under different treatment before including into this study.
6. All cases were included after a clinico-pathological re-investigation and diagnosis including immunology, serology and radiology. No invasive techniques were used.
7. Cases with severe joint deformities and complications were excluded.

The method used for this study was a clinical method and for the confirmation and scientificity the results obtained have been statistically analysed and evaluated. All cases were treated as out patients and no controls were kept for the study. All cases were treated after a detailed history taking with the help of case recording proforma and also after detailed laboratory investigations. The method of treatment was only medical and no liniments or external medications were used. Medicines were prescribed after strict individualisation and given in minimum doses as medicated pills in sugar of milk with blank tablets as placebo to all patients. Potencies ranging from 30 to 10M and 0/6 have been used in the study. Repetition and change of potency and remedy were done as and when needed according to the indications. Instructions were given to the patients to avoid coffee, tea, tobacco, cocoa, perfumes, alcoholic drinks and other medicinal agents. All patients were given permission to do their works except during acute exacerbations (at the same time avoiding strenuous physical works)

ASSESSMENT AND FOLLOW UP

All cases were followed up for more than 2 years and periodical evaluation was done once in 2 weeks. Final assessment and evaluation were done in each case on the completion of 2 years.

For an effective assessment and evaluation disease intensity scores were given to each and every patient as shown below. After the completion of 2 years the post treatment disease intensity scores were compared with the pre-treatment disease intensity scores and statistically evaluated.

Disease intensity scores used in this study

Symptoms/ Signs	Scores
1. <i>Pain</i>	
Pain only on severe exertion	1
Pain during mild exertion	2
Pain even while at rest	3
Wince with pain	4

2. <i>Joint Involvement</i>		
Small joints of the hands only		1
Small joints of the hands and feet		2
Small joints of the hands, feet and wrist		3
Small joints of the hands, feet, wrist and cervical joints		4
Majority of the joints including large joints		5
3. <i>Restriction of day to day activities</i>		
Mildly disabled (can't do strenuous work)		1
Moderately disabled (can do his routine activity like bathing, eating, dressing etc.)		2
Severely disabled (can't do even his routine activity)		3
4. <i>ESR increased</i>		
25 - 49 mm/hr.		1
50 - 74 mm/hr.		2
75 - 99 mm/hr.		3
100 and above		4
5. <i>R.A. Factor</i>		
Negative		1
Positive		2
6. <i>CRP</i>		
Negative		1
Positive		2
7. <i>Extra - articular manifestations</i>		
Absent		0
Present		1
8. <i>X-Ray findings</i>		
Joint space reduced	any one	1
Bony crosions	any two	2
Soft tissues swellings	any three	3
Osteoporosis	all	1

The minimum disease intensity score found among these patients was 7 and maximum was 25. In addition to the assessment based on disease intensity scores, improvement assessment was also done on the basis of the change in the frequency and duration of the affections.

Table 1
Total number of patients

Total(T)	Male(M)	Female(F)
25	6	19

Table 2

Age of the patients (Minimum 24-years Maximum-65 years)

	T	M	F
20 - 25	1	1	0
25 - 30	2	1	1
30 - 35	3	0	3
35 - 40	4	0	4
40 - 45	6	1	5
45 - 50	4	1	3
50 - 55	2	0	2
55 - 60	1	1	0
60 - 65	1	0	1
65 - 70	1	1	0

Table 3
Precipitating factors

	T	M	F
Infections	2	1	1
Climate	16	3	13
Over exertion	3	1	2
Psychological	13	2	11

Table 4
Pre-disposing factors

	T	M	F
Heredity	1	1	0
Immunological	12	2	10
Both	4	0	4
Others eg. occupation	8	3	5

Table 5

	T	M	F
Pain, stiffness and swelling of IP, MCP joint of hand	25	6	19
Pain stiffness and swelling of wrist	18	3	15
Pain, stiffness and swelling of feet	8	2	6
Pain, stiffness and swelling of cervical joints	6	1	5
Pain, stiffness and swelling of other joints	16	3	13

Table 6
Objective symptoms

	T	M	F
Symmetrical joints involvement	20	4	16
Tenderness	25	6	19
Swelling	25	6	19
Movements restricted-			
Mild	16	3	13
Moderate	6	2	4
Severe	3	1	2

Table 7

Extra articular findings

	T	M	F
Subcutaneous nodules	2	1	1
Arteritis	-	-	-
Neuritis	1	0	1
Eye affections	1	0	1
Lungs	-	-	-
Cardiac	-	-	-
Muscle wasting	4	1	3
Osteoporosis	-	-	-
Anaemia	4	0	4

Table 8
Laboratory findings

	T	M	F
ESR increased	24	6	18
Hb% reduced	4	0	4
Total RBC reduced	-	-	-
RA factor +ve	16	2	11
Serum Iron - not done			
Serum protein - not done			
Latex agglutinations - not done			
Synovial fluid exam - not done			
Synovial membrane exam - not done			

Table 9
Radiological findings

	T	M	F
Joint space reduction	16	4	12
Osteoporosis	-	-	-
Bony erosions	-	-	-
Soft tissue swelling	20	4	16

Table 10
Disease Intensity Scores before Treatment

Scores	Frequency
0-5	0
5-10	3
10-15	10
15-20	9
20-25	3
25-30	0

RESULTS

For an easy understanding the results obtained are shown in tabular form

Table 11
Disease Intensity Scores of 25 Patients before and after treatment

No	Before treatment	After treatment
1	16	9
2	16	11
3	17	13
4	13	5
5	11	7
6	11	6
7	20	15
8	16	11
9	21	16
10	16	6
11	7	3
12	11	6
13	13	9
14	13	9
15	16	10
16	16	11
17	16	14
18	12	7
19	8	6
20	14	11
21	17	11
22	11	7
23	20	15
24	7	5
25	13	9

Table 12
Disease intensity scores after treatment

Scores	Frequency
0 - 5	1
5 - 10	13
10 - 15	8
15 - 20	3
20 - 25	0
25 - 30	0

Table 13
Recurrence of the complaints after treatment

	T	M	F
No recurrence	1	1	0
Recurrence with decreased intensity	21	4	17
Recurrence with same intensity	3	1	2
Recurrence with increased intensity	-	-	-

Therapeutic Details

Table 14
Drugs used and found effective

Drug	Potency	T	M	F
Graphites	200	1	0	1
Lycopodium	1000,0/6	2	1	1
Medorrhinum	200, 1M, 10M	2	0	2
Pulsatilla	1000, 10M	5	1	4
Rhus tox	200, 1M, 10M	15	4	11

Table 15
Drugs used as Complementary and Cognates

Drug	Potency	To which Drug	T	M	F
Lycopodium 1000		Puls	1	0	1
Lycopodium 1000		Rhus tox	2	1	1
Sulphur 1000		Medorrhinum	1	0	1

Details about the dosage and repetition will be understood if we go through the sample cases attached to this paper.

Statistical treatment of the disease intensity scores

Since we have pre-treatment and post-treatment scores, we use the paired 't' test to find out whether this treatment is effective or not. Here first we have to make a "Null hypotheses" denoted by H_0 : this treatment is not effective. So the hypotheses (alternate) is H_1 : the treatment is effective.

If $X_1, X_2, X_3, \dots, X_n$ are the pre-treatment scores and $Y_1, Y_2, Y_3, \dots, Y_n$ are the post treatment scores then to test it we use the statistic $t = \frac{d}{s/\sqrt{n-1}} \sim t (n-1) \text{ df}$ where 't' is the 5%

tabled C.V. of Student 't' distribution, $d = \frac{\sum di^2}{n}$ (i =

1,2,3,.....n), $di = (Y_i - X_i)$, $S = SD = \sqrt{\frac{\sum di^2}{n} - d^2}$

From the data (scores) obtained first we have to calculate 't'. There are also tabled C.V. of 't' at 5% level of significance with (n-1) df as is denoted as $t_{0.05}^{(n-1)}$. This is

to be found out from the statistical tables. Then if the observed (calculated) value of 't' > $t_{\frac{(n-1)}{0.05}}$ i.e., the tabled C.V., we accept the Null hypothesis H_0 : the treatment is not effective and reject the alternative hypothesis H_1 : the treatment is effective. This is because the effectiveness is attributed to the lower values of the post treatment scores (if the effectiveness is attributed to a higher value of post treatment scores, then to accept H_0 : the treatment is not effective the observed value of 't' < $t_{\frac{(n-1)}{0.05}}$

From the scores given below S, the Standard Deviation =

$$\sqrt{\frac{\sum di^2}{n} - d^2} = \sqrt{\frac{693}{25} - 22.6576} = 5.0624$$

where n = 25 therefore $t = \frac{d}{s/\sqrt{n-1}} = \frac{-4.76}{5.0624/\sqrt{25-1}}$
= - 4.6060 i.e. t = - 4.6060

Xi	Yi	di = (Yi-Xi)	di
16	9	-7	49
16	11	-5	25
17	13	-4	16
13	5	-8	64
11	7	-4	16
11	6	-5	25
20	15	-5	25
16	11	-5	25
21	16	-5	25
16	6	-10	100
7	3	-4	16
11	6	-5	25
13	9	-4	16
13	9	-4	16
16	10	-6	36
16	11	-5	25
16	14	-2	4
12	7	-5	25
8	6	-2	4
14	11	-3	9
17	11	-6	36
11	7	-4	16
20	15	-5	25
7	5	-2	4
13	9	-4	16

Where $\sum di = -119$, $\sum di^2 = 693$

$$d = \frac{\sum di}{n} = -4.76$$

therefore $d^2 = (-4.76)^2$

Here the tabled CV or 't' at 5% level of significance is

$$t = \frac{(n-1)}{0.05} = 2.06 \text{ (Calculated from table). Since the observed}$$

value of 't' = - 4.6060 < $\frac{(n-1)}{0.05}$ i.e. 2.06 and so we reject H_0 :

the treatment is not effective in favour of H_1 : Hence the conclusion is that the treatment is effective.

DISCUSSION

The study of these 25 cases of Rheumatoid arthritis is conclusive in respect, especially that it satisfies the aims and objectives of this study. In addition to this various tables shown above give some more information about the sex incidence and age incidence. Table I shows that Rheumatoid arthritis is more in females and Table II shows that the most valuable age group is adult and middle age. Again Table III shows that about half of the patients have one or other types of psychological problem which acts as precipitating or triggering factor. More than half of the patients are found sero + ve while the rest are sero - ve and it has been found that in these sero -ve individuals different types of psychogenicity are found.

On analysis, the results especially the disease intensity scores before and after treatment, one may think that there is not much change in the intensity of the disease even after treatment because the difference between the pre and post treatment scores are not very large. But the statistical evaluation of the same has clearly shown that this treatment is really effective in improving this disease condition. The efficacy of this treatment can also be found out by analysing the recurrence of the complaints after treatment. 22 out of 25 cases have improved and from among these 21 cases the intensity and frequency has considerably reduced.

Regarding the aims and objectives, the results show that a group with a small number of drugs have been found more useful in this condition. It has also been found that 20 out of 25 cases were improved with two drugs (*Rhus tox* and *Puls.*). It is evident from the drug therapy part that *Rhus tox* is more frequently indicated than any other drug.

This may be due to the fact that it has peculiar affinity towards joints, tendons, sheaths, synovium ligaments, fibrous tissue etc. (Refer Table 14). Some of the more reliable indications for *Rhus tox* in this condition have been deduced from this study. They are:

1. < morning on rising up-first motion
2. < beginning to walk after sitting - first motion
3. < after some sort of physical movements, while at rest
4. Patients complain of pain at night after some type of physical exertion during day time
5. < cloudy weather - most of the *Rhus tox* patients under this study had this particular modality
6. < night
7. < warmth

Regarding the potency, though potencies ranging from 30-10M were tried in different cases, 200th, 1000th 10M were found more useful (esp. 1000) than 30th. In one of the cases which is a typical *Lycopodium* case did not show any improvement with 200, 1000 and 10M, but it has improved much with *Lycopodium* 0/6 (Refer the case attached). On analysing the symptomatology of these 25 patients, all were found to have multi - miasmatic basis especially Psora and Sycosis. Finally, I like to say that whatever results and conclusions drawn are generalization with this short period of study.

CONCLUSION

1. This treatment is effective in managing RA which is clearly evident from the statistical analysis and evaluation.
2. The most important drugs found useful are *Rhus tox* and *Pulsatilla*
3. Most useful potencies are 200, 1000 and 10M
4. Females especially in adult and middle age are vulnerable to this disease.
5. Psychological factors play some important role in the aetiology of this disease especially in sero-ve patients.

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4. Case Records

Case I

A 41 year male patient running a video parlour came for treatment for pain, swelling. stiffness of various joints such as that of hands, foot, ankles, knees, elbow, wrist, cervical regions etc. especially on right side associated with burning chest, sour eructations, excessive gaseous disturbance, of 4½ yrs. duration.

Symptoms evaluated are:

Desires company	Aversion milk
Sympathetic	Complaints Rt. Side
Easily weeping	< beginning to move
Anxiety about illness	< winter
Sense of heat	> continued motion
Desires warm food, drinks	> warmth
Desires sweets	
ESR - 78 mm/hr. RA factor-ve	
27.4.92	Lyco. 200/2d
7.5.92	No change Lyco. 200/2d
18.5.92	No change Lyco. 1M/1d

1.6.92	Flatulence >	SL
22.6.92	No change	Lyco. 10M/1d
12.7.92	No change	SL ESR 80 mm/hr.
2.8.92	No change	Rhus tox 200/2d
18.8.92	Pain knee slight>	Rhus tox 200/1d
6.9.92	Same	Rhus tox 1M/1d
6.10.92	Same	Lyco. 0/6 7d OD
25.10.92	>	Lyco. 0/6 7d OD
25.11.92	>	Lyco. 0/6 7d OD
30.12.92	>	Lyco. 0/6 d on alternate days
3.2.93	slight pain rt. ankle, knee	Lyco. 0/6 on alternate Days
28.3.93	>	Lyco. 0/6 6d alternate days
26.4.93	Pain rt. knee, back ache, ESR 42 mm/hr	Lyco. 0/6 6d alternate days
21.6.93	>	Lyco. 0/6 4d once/4 days
7.8.93	>	Lyco. 0/6 4d once/4 days
2.11.93	>	Lyco 0/6 once/week
	ESR - 28 mm/hr.	
18.11.93	Fever, cold, cough body pain	Rhus.tox 200/3d
16.12.93	Pain cervical spine, Left knee	Lyco. 0/6 once/week
2.2.94	>	Lyco. 0/6 6d once/week
20.2.94	Painful stool	SL
1.4.94	>	SL
22.4.94	>	SL
5.6.94	>	SL
7.8.94	>	SL
9.11.94	Pain ankle & lt. knee	Lyco. 0/6d once/week
7.1.95	>	SL

Case-II

43 year old female patient reported with pain, swelling and stiffness of small joints of hand and feet, ankle, knees, elbows, wrist etc. associated with fever and chill. Patient walks with difficulty due to pain and stiffness.

ESR 128 mm/hr., RA factor +ve

Symptoms evaluated are

Lack of vital heat < cold in general < cloudy weather < night < winter	Desires warm food, drinks, salt Aversion milk Pain extremities < morning < rising on Pain extremities < beginning to walk, Pain > massage
3.10.92	Rhus tox 200 2d
10.10.92	No change Rhus tox 200 2d
24.10.92	no change Rhus tox 1M 1d
14.11.92	Pain IP joints > other complaints same SL
6.12.92	Pain in joints > SL
6.7.93	Fever, cold, ore throat Ferr. phos 6x
24.11.93	Pain lt. knee, lt. shoulder Rhus tox 1M 1d
28.1.94	> SL
13.3.94	Pain elbow, ankle, knee < Rhus tox 10M 1d
20.3.94	Pain and stiffness same Mag. phos 6x SOS,SL
17.4.94	> ESR 72mm/hr SL
2.7.94	Pain rt. ankle, shoulder Rhus tox 10M 1d
2.11.94	Pain rt. knee,elbow, ankle < SL
16.11.94	same Lyco. 1M 1d
14.12.94	> SL
15.11.94	> SL
8.4.95	Pain < after suppressed sweat ESR 80 /mm/hr Rhus tox 10M 1d
9.5.95	> SL