

## Arsenic Disulphide (*Rasa Manikya*) in the treatment of Rheumatoid Arthritis (*Amavata*)

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*A clinical trial was carried out on 20 number of seropositive Rheumatoid arthritis (Amavata) of Kaphaja type. The trial drug was Rasamanikya and Godanti as a single dose of 250 mg each every 12 hour interval for a period of 30 days. The study discloses an effect of complete remisston—5%, maximum improvement 65% and minimum improvement 30%. The above results includes clinical remission including seronegativity of R.A. Factor and declining in the E.S.R. patients preference over recovery and healthyness with the trial drug for 30 days duration were satisfying.*

### Introduction

In the last few decades a group of conditions primarily involving the musculo-skeletal structures has been a subject

of intense study. Among the connective tissue disorders rheumatoid arthritis is a chronic non-suppurative polyarthritis affecting mainly the peripheral small joints running in a course of exacerbation and remission accompanied by swelling of synovial membrances, erosion of cartilages and bones and wasting of associated muscles along with general systemic disturbances. It is prevalent among 3% of adult population, not directly fatal but victims with severe affliction tend to die 10 or more years prematurely. The disease still possess an incuable status and permanent remission is yet to be declared.

In the field of management the prognosis of the disease has been changed to a great extent as the exacerbation can be suppressed quickly, the period of remission can be enhanced, deformities can be prevented and disability can be compensated by better orthopedic appliances

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but there is still search for a better drug to induce satisfactory benefit.

The clinical features of rheumatoid arthritis has got superisingly maximum resemblance with the disease "*Amavata*" described in compediams of Ayurvedic system of medicine.

#### Material and Methods

Twenty numbers seropositive rheumatoid arthritis cases (*Amavata* of *Kaphaja* type) having more than six weeks, duration of chronicity were tried with an indigenous compound. The selection criteria was positive R.A. factor (Latex slide test) with clinical sign and symptoms refering to A.R.A. Joint Count. E.S.R. was estimated to asses the prognosis. Either Sex of various age group were the Subjects.

#### Exclusion Criteria

*Tridosaja Amavata* and *Pittanubandhee*

*Efficacy Study* :

*Sandhi ruja* (Pain)

*Sparsa Sahatwa* (Tenderness—R.A.I)

Compliance.

*Sandhi Sotha* (Swelling by measurement.

Morning stiffness—(Length of time).

R.A. factor—(Titration Value) (Latex slide.)

E.S.R.—West green method.

#### Assessment of Result

The sign and symptoms observed during pre and post trial were separated, compared and carefully adjudicated. In view of percentage of relief it was declared in the language as follows :—

##### (a) *Complete remisson*

=No sign of swelling, pain and stiffness.

=E.S.R—below 15 m.m.

=R.A. Factor—below 80.

##### (b) *Maximum Improvement*

=Pain and stiffness improved 75% and above.

=Minor swelling.

=Elevated E.S.R. from 15 to 50 mm.

=R.A. Factor—81 to 320.

##### (c) *Minor Improvement*

=Pain and stiffness releived about 50 to 75%.

=Dimunition of swelling.

=Elevated E.S.R.—above 50 mm.

=R.A. Factor—321 to 640.

##### (d) *No Improvement*

=No relief of pain, stiffness and swelling.

=Unchanged E.S.R.

=R.A. Factor—Unchanged and above 640.

**Drug/Dose/Duration**

*Rasamanikya* 250 mg with *Godanti* 250 mg as a single dose with honey every 12 hour interval for thirty days.

**Observation and Result**

No patient was noticed with acute toxicity or intolerance. The objective progression and subjective relief were more satisfying besides the highly positive patients preference/compliance and a very faster healthyness. Previous treatment with other anti-inflammatory and, immuno-suppressive drugs could not render same feeling as that of Arsenic disulphide Compound.

**Table—1**  
Showing the R.A. Factor

Range of R.A. Factor per dilution	B.T., No. of Patient	A.T. No. of Patient
Below— 40	0	9
81 —160	4	6
161 —240	0	0
241 —320	6	3
321 —400	3	0
401 —480	0	0
481 —560	0	0
560 & above	7	2
Mean ± S.D.	566 ± 430.68	184 ± 179.06
% of relief	"t" Value	"p" Value
32.51 >	3.88 <	0.001

The statistical analysis shows that the drug is significantly effective to reduce the R.A. Factor with P. Value less than 0.001 (Table I).  $t_{19, 0.1\%} = 3.88$  (Hypothetical t value),  $t/t$  in the above is calculated t-value > greater than sign is used because it is verified that  $t/t > 3.88$ .

**Table—II**  
Showing the E.S.R.

Range of E.S.R.	B.T.	A.T.
0— 10	0	0
11— 30	0	7
31— 50	1	9
51— 70	4	4
71— 90	5	0
91—110	4	0
111—130	6	0
Mean ± S.D.	95.7 ± 26.57	37.25 ± 16.81
% of relief	t-value	P-value
40.18 >	3.88 <	0.001

Within the E.S.R range of 70 we have observed that B.T. 5 Patients were there but after the treatment, 20 patients and percentage of relief was 40.18 and the test of significance shows the T.D. is highly significant to reduce E.S.R (Table II)

$t_{19, 0.1\%} = 3.88$  (Hypothetical t-value)  $t/t =$  Calculated t-value > sign is used because it is varified that  $t/t > 3.88$ .

**Discussion**

Rheumatoid arthritis could be traced as *Amavata* following ancient scripts. The word *Amrvata* is a combination of two words-*Ama* and *Vata*. *Ama* is a pathological factor which is described to be formed from undigested food material consequent upon hypofunctioning of *Agni* (metabolism) and impaired digestion. *Vata* is the functional element which acts as the vector.

**Table—III**  
**Showing the Different Measures for the Sign and Symptoms**

Measures	Morning stiffness	Pain or Tenderness	Compliance	Swelling
Mean Score $\pm$ SD (B.T.)	1.6 $\pm$ 0.49 <sup>e</sup>	1.75 $\pm$ 0.77	0 $\pm$ 0	Swelling was present
Mean Score $\pm$ SD (A.T.)	0.6 $\pm$ 0.66	0.4 $\pm$ 0.49	1 $\pm$ 0	In 20 patients, but
% of relief (Improvement)	37.5	22.86	100	after taking test
t-value	>3.88	>3.88	>3.88	drug, improvement
P-Value	<0.001	>0.001	>0.001	observed in case of 60%
Remark	Highly Significant.	Highly Significant.	Highly Significant.	of patients Highly Significant.

t 19, 0.1% = 3.88 (Hypothetical value)

/t/ -The t used in the table is the calculated t-value.

">"greater than Sign used, because it is verified that in almost all the above sign and symptoms, the calculated /t/ is greater than the hypothetical t at 0.1% level of significance.

## ARSENIC DISULPHIDE (*Rasa Manekya*)...

*Agni* is the occult pathology can be simulated with immune responses. It is presumed, the disease R.A. is a collagen disorder and an immunological derangement. In the human body immune responses are via humoral antibodies made by plasma cells derived from B-lymphocytes and cellular responses by T-lymphocytes. In autoimmune disease tissue damage may be caused by either humoral antibody, immune complexes or cell mediated immunity. Among the immuno-globulins Ig M is referred to as R.A. Factor.

*Ama Pachana* is the mechanism to be carried out at the level of digestion as well as metabolism. The drugs mostly *Tikta* and *Katu* in taste having *Akasa Vayu* and *Agni Mahabhutas* in predominance—with *Laghu* and *Ruksha* by nature are said to be antagonistic to *Amavata*, for the reason that *Ama* is *Guru*, *Snigdha*, *Pichhila* and *Sthira* i.e. *Prithvi* and *Apya Mahabhutas* are in abundance.

The drug under trial inherits both *Ushna Virya*, *Ruksha* and *Tiksna Guna* which is the basic and classical treatment for *Amavata*. This is inferred to have correcting the *Agni* or acts as immuno suppressive. The E.S.R is markedly decreased along with remission of clinico-objectives parameter.

The drug has probably interfered with the state of *Kapha dosa* in the body and as such counter acted the formation of "*Ama*" by increasing *Agni*.

Further the features of *Sandhisotha* and *Ruja* could be remarkably brought under control which is due to *Ruksha* and *Ushna virya* attributed with the drug. The properties of *Tiksna* inherited with the drug was an advantage since this property renders *Chhedan* and capable to enter in to the minute channels. The obstructive phenomena caused by *Ama* might have been corrected in this way. The effect of seronegativity is however not well understood except it counter acts the formation of *Ama* by increasing *Agni* which is established by clinical remission.

Keeping the above under reflection on the ground of improvement as well as statistical adjudication the result could be revealed as—

Complete remission	— 1 Case (5%)
Maximum Improvement	— 13 Cases (65%)
Minimum Improvement	— 6 Cases (30%)
No Improvement	— Nil (0%)

It thus concluded that Arsenic disulphide (*Rasamanikya*), is unfailing, effective against seropositive Rheumatoid Arthritis—*Amavata (Kaphanubandhi)*.

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### हिन्दी सारांश

रस माणिक्य से आमवात की चिकित्सा

नारायणचन्द्र दास एवं ब्रजकिशोर दास

गोपबन्धु आयुर्वेद महाविद्यालय, पुरी के स्नातकोत्तर काय चिकित्सा विभाग में आमवात के 20 सीरो पाजिटिव रुग्णों पर रसमाणिक्य के साथ गोदन्ती भस्म का परीक्षण किया गया । चिकित्सा द्वारा 5 प्रतिशत रुग्णों में पूर्ण

प्रशम, 65 प्रतिशत रुग्णों में अत्यधिक प्रशम तथा 30 प्रतिशत रुग्णों में अल्प प्रशम हुआ । लाक्षणिक प्रशम के साथ ही ई. एस. आर. में कमी तथा सीरो पाजिटिव रुग्णों में इसके स्तर की कमी पाई गई ।