J.R.A.S. Vol. XX, No. 1-2, (1999) pp.46-53

CLINICAL EVALUATION OF *ASHVAGANDHA* IN THE MANAGEMENT OF *AMAVATA*

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(Received on 8.1.99)

Rheumatoid Arthritis is a auto immune disorder. The auto immune disorders are protean group aquired disease in which genetic factors appears to play a role. They have in common widespread immunologic and inflammatory alterations of connective tissue. In Ayurveda the disease Amavata bears a nearer co-relation with rheumatoid arthritis. Ashvagandha [Withania somnifera (Linn.) Dunal] which is widely used drug in Indian system of Medicine was selected to assess the therapeutic efficacy in cases of Amavata. It is Tikta, Katu and Madhura in Rasa, Ushna Virya and alleviates Vata and Kapha Dosha. Ashvagandha also possesses analgesic, anti-inflammatory and immunomodulatory properties. This paper deals with aetio-pathogenesis, clinical observations and results in 77 patients of Amavata (rheumatoid arthritis) in detail.

Introduction

Rheumatoid arthritis is a chronic multisystem disease of unknown aetiology, the characteristic feature of which is persistent inflammatory synovitis, usually involving peripheral joints in a symmetrical distribution. It is a very intriguing disease and a challange to researchers in the field of medicine. Rheumatoid arthritis is found throughout the world and incidences are more common in female than in male. 80% of all the patients develop the disease between age of 35 to 50. Although rheumatoid arthritis may begin at any age, the course of disease is quite variable. Some patients may experience only a mild oligoarticular illness of brief duration with minimal joint damage where as others will have a relentless progressive polyarthritis with marked functional impairment.

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The disease rheumatoid arthritis has been co-related by the scholars of Ayurveda with *Amavata* described by Madhava. *Amavata* is considered to be caused by *Ama* and aggravated *Vata* and *Kapha Dosha* signs and symptoms of *Amavata* are mainly related to *Ama*, *Srotorodha* and *Vata* vitiation. According to Madhava various aetiological factors i.e. incompatible diet, undesired exercise and sedantry habits induce the hypofunctioning of digestive mechanism leading to production of *Ama* whcih in turn produces a series of manifestations in body mainly in joints after absorption.

Ashvagandha [*Withania somnifera* (Linn) Dunal] which is widely used drug by Ayurvedic physicians to increase vigour and vitality and to treat various *Vatic* disorders is an experimentally proved analgesic anti-inflammatory drug. Due to property of improving vigour and vitality it has been called 'Indian ginseng'. *Ashvagandha* (*Withania somnifera*) is *Tikta*, *Katu* and *Madhura* in *Rasa*, *Ushna* in *Virya* and *Madhura* in *Vipaka*. It alleviates aggravated *Vata* and *Kapha Dosha*, stimulates gastrointestinal system (*Dipan*) and possesses *Shothahar* properties. The drug was studied to evaluate its therapeutic efficacy in cases of *Amavata* (rheumatoid arthritis) and encouraging results were obtained.

Materials and Methods

Total 77 patients were selected for study on the basis of following criteria:

Criteria for selection

1. Age between 12 to 60 years.
2. Chronicity between 6 weeks to 5 years.
3. Morning stiffness.
4. Pain on rest/motion or tenderness in atleast one joint.
5. Swelling of one joint.
6. Swelling of at least one other joint with an interval free of symptoms no longer than 3 months.
7. Symmetrical joint swelling.
8. Positive test for rheumatoid factor.
9. Subcutaneous nodules.

The cases having any 5 (definite RA) or 7 (classic RA) of the above criteria in addition to 1 were included in the study.

Criteria for exclusion

1. Age below 12 years and more than 60 years
2. Chronicity less than 6 weeks and more than 5 years.
3. Gout.
4. Osteoarthritis.
5. Tubercular arthritis
6. Gonorrhoeal arthritis/syphilitic arthritis.
7. Acute pyogenic arthritis.
8. Arthritis with malignancy.

9. Psoriatic arthritis.
10. Osteomyelitis.
11. Rheumatic fever.
12. Ankylosing spondilitis.
13. Arthritis with serious complications associated with other systemic disease.
14. Bursitis.
15. Osteoporosis.
16. Diabetic arthritis.

Criteria for diagnosis : The cases thus selected were subjected to detailed history and physical examination alongwith pathological investigations i.e. haemoglobin estimation, ESR and rheumatoid factor. They were diagnosed on the basis of clinical symptomatology of the disease and classifiction of disease was based on diagnostic criteria for rheumatoid arthritis adopted by American Rheumatism Association. Morning stiffness, pain at rest/ motion, tenderness and swelling were graded appropriately as mild (+) moderate (++) and severe (+++). Functional class of RA was classified according to functional abilities of patients.

The constitutional symptoms like anorexia, loss of appetite, constipation were also recorded. Functional abilities in terms of grip power, pressing power, writing time and walking time before and after the treatment were also recorded.

Classification of results : Score system have been evolved for gradation of severity of disease and results of treatment were assessed on the basis of improvement in gradation of severity and classified as follows:

1. Good response: 75% and above relief in presenting symptomatology of disease as per mantioned in criteria for assessment, lab. parameters tending towards normalicy.

2. Fair response: Above 50% and below 75% relief in presenting clinical symptomatology of the disease as per mentioned above. Significant improvement in lab. parameters.

3. Poor response: When there is above 25% and below 50% relief in presenting clinical symptomatology. Insignificant improvement in lab. parameters.

4. No. response: Below 25% or no relief in symptomatology.

Type of trial: Single blind.

Level of study : O.P.D., Regional Research Centre (Ay.), Jammu Tawi.

Period of Study: Six weeks.

Drug: *Ashvagandha* (*Withania somnifera*) root powder.

Doses: 3 gms. thrice daily with milk.

All the patients were advised to take easily digestible light diet.

Observation and Result

Table 1

Age and sex incidence in the patients

Sex	Age (in years)						
	Upto 20	21-30	31-40	41-50	51-60	Total	Percentage
Male	1	2	4	1	1	9	11.69
Female	4	10	23	23	8	68	88.31

Dominance of disease was observed in females. 88.31% of total cases recorded were females. Incidence of disease were maximum in 31 to 50 years of age groups i.e. 66.23% of total cases.

Table II

Occupation of the *Amavata* cases

Occupation	No. of cases	Percentage
House wives	62	80.51
Sedantry workers	8	10.58
Students	7	9.09

Maximum cases were recorded among house wives.

Table III

Marrital status of the cases

Sex	Unmarried	Married	Total
Male	2	7	9
Female	7	61	68

Table IV

Dietry habits in the *Amavata* cases

Dietry habits	No. of cases	Percentage
Vegetarian	17	22.08
Non-vegetarian	60	77.92

Maximum cases recorded were non-vegetarian

Table V

Family history of the cases under trial

History	No. of cases	Percentage
Family history	12	15.58

Table VI

Effect of treatment on subjective and objective symptoms and pathological investigation i.e. ESR

Symptoms/Path. investigation	No. of scores before treatment	No. of scores after treatment
Morning stiffness	4.75	1.42
Pain at rest	53.54	25.44
Pain on motion	71.35	35.31
Swelling	67.97	31.16
Tenderness	83.24	32.85
Restriction of motion	29.18	11.68
Functional status	1.76	0.62
Fever	0.15	0.02
Constipation	1.31	0.40
Loss of appetite	1.20	0.19
Anorexia	0.94	0.11
ESR	2.75	1.19

Table VII

Functional abilities before and after treatment.

Observation	No. of cases	Mean score before treatment mean and after treatment			
		Rt. hand	Lt. hand	Rt. hand	Lt. hand
1 Grip power in mm of Hg.	77	67.62	61.01	86.41	85.16
2. Pressing power in mm of Hg.	77	59.76	58.02	79.89	77.80
3. Writing time in seconds with writing hand in seconds	77	24.18	-	19.58	-
4. Walking time in seconds	77	45.58	-	39.28	-

Table VIII

Results of treatment with respect to chronicity of disease

Chronicity	Results			
(in year)	Good	Fair	Poor	No.
Below 1	10	13	5	-
1 to 2	7	27	11	1
2 to 3	-	1	-	1
More than 3	-	-	1	-
Total	17	41	17	2

Table IX

Effect of treatment on haemoglobin and ESR

Total no.	Hb%		ESR	
of cases	B.T.	A.T.	B.T.	A.T.
77	10.77	11.02	41.80	33.28

Out of total 77 cases 12 patients had R.A. factor positive, which remained unchanged after the treatment. Hb% slightly increased.

Discussion

77 cases of rheumatoid arthritis (*Amavata*) were studied for assessing the therapeutic efficacy of *Ashvagandha Curna*. In 80.51% (62) of cases the onset of disease was insidious tieh prodromal symptoms like general debility, easily fatigue followed by morning stiffness and joint pain. In all the patients manifestations commenced with involvement of inter-phalangeal joints followed by involvement of other joints. Positive family history was recorded in 15.58% of cases. In all the cases digestive impairment of varying degree was noted i.e. loss of appetite, anorexia and constipation.

After starting the treatment improvement in general well being was

noted within Ist two weeks of treatment along with improvement in morning stiffness and digestive impairment in patients. Pain, swelling and tenderness started improving along with improvement in functional abilities after two weeks treatment. Marginal improvement in haemoglobin percentage along with reduction in erythrocyte sedimentation rate was noted after six weeks period.

Total 22.07% patients got good response, 53.24% got moderate response, 22.07% got poor response and 2.59% of the cases got no response of therapy. It was observed that patients suffering from mild to moderately severe disease along with chronicity of disease less than 1 year and 1 to 2 years duration showed better results. The patients having treatment with corticosteriods showed no improvement.

Conclusion

According to Ayurveda the aetio-pathogenesis of disease *Amavata* (RA) is considered to be *Ama* and vitiated *Vata* and *Kapha Dosha*. *Ama* produced as an out come of *Mandagni* is carried by the vitiated *Vata* and the main seat of *Kapha Dosha* i.e. joints and produces the disease symptoms.

Hence the treatment measures of disease *Amavata* include improvement in functioning of *Agni* which is the pivot of digestion and metabolism and is responsible for energy and body resistence to diseases, and to alliviate the aggravated *Vata* and *Kapha Dosha*.

Ashvagandha [*Withania somnifera* (Linn.) Dunal] posses *Katu, Tikta* and *Madhura Rasa, Ushna, Virya* and *Madhura Vipaka*. It acts as a potent *Dipan* drug and by increasing *Agnibala* it causes *Amapachan*. Owing to its *Katu* and *Tikta Rasa* it has *Vedana Samana* (analgesic) and *Sothaharana* (Anti-inflammatory) properties. It alleviates aggravated *Vata* and *Kapha Dosha* and breaks the aetio-pathogenesis of disease process. Experimental studies of alcoholic extract on intraperitoneal administration in albino rats showed highly significant anti-pyretic as well as analgesic activity (Anonymous, 1976-77).

The research in 1970 showed that withanolides which are similar to the body's own steriod harmones are anti-inflammatory (Andrew *et al.*, 1996).

It is considered to be a tonic and *Rasayan* drug which increases vitality. Therefore there is a feeling of general well being and improvement in functional abilities of patients. Due to its high iron contents it increases the haemoglobin and reduces the erthrocyte sedimentation rate by reducing the inflammatory disease process. Thus the drug *Ashvagandha* stops the disease process due to its properties.

In another study the drug *Ashvagandha* has been found to be useful in cases of acute RA and no substantial improvement was observed in cases of chronic RA. This was observed in our clinical study also. It may be concluded from the study that *Ashvagandha* (*Withania somnifera*) is one of the useful drugs in the treatment of *Amavata* (rheumatoid arthritis).

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सारांश

अश्वगंध औषधि से आमवात की चिकित्सा का एक अध्ययन

टी. बिक्षापति तथा कृष्णा कुमारी

आयुर्वेद में वर्णित आमवात रुमेटाइड आर्थराइटिस व्याधि से मिलता जुलता है। व्याधि क्षमता कम होने से आमवात रोग की उत्पत्ति होती है। आमवात की चिकित्सा पर आयुर्वेदिक चिकित्सा का अध्ययन क्षेत्रीय आयुर्वेदिक अनुसंधान केंद्र जम्मू ने किया है। ७७ रोगियों को अश्वगंधा मूलचूर्ण ३ ग्राम, दिन में तीन बार ६ सप्ताह के लिए प्रयोग किया गया है। इस अध्ययन में अश्वगंधा से उपयुक्त परिणाम पाये गये। इस शोधपत्र में आमवात का समुदाय परिशोधना में उपलब्ध परिणामों का विवेचन भी किया गया है।