

# Long Term Effectiveness of RA- 1 as a Monotherapy and in Combination with Complaint Modifying Anti-Rheumatic Medicines in the Treatment of Rheumatoid Arthritis

Background Data on long term use of Ayurveda medicines is meagre. They may prove useful if combined with ultramodern drug in certain clinical situations (integrative drug). We present the results of a long term experimental study of RA- 1(Ayurveda medicine) used in the treatment of rheumatoid arthritis (RA). The ideal was to study safety of long term use of RA- 1 for treatment of rheumatoid arthritis (RA).

**Material and Method:** On completion of a 16 week randomized controlled study, 165 subscribing levy cases were enrolled into a three time open marker phase (OLP) study. Cases were characteristic with patient active complaint and naïve for complaint modifying anti-rheumatic medicines (DMARD). 57 cases were on fixed low cure prednisone. Cases were examined every 10 – 14 weeks in a routine rheumatology practice using standard care morals. They continued RA- 1 (Arthrex™, 2 tablets doubly daily) throughout the study period and were generally advised to lead a healthy life style. Grounded on clinical judgment, rheumatologist added DMARD and/ or steroids (modified if formerly in use) to cases with shy response; chloroquine and/ or methotrexate generally used. Treatment response was assessed using American College of Rheumatology (ACR) efficacy measures and ACR 20 enhancement indicator standard update statistical software (SAS and SPSS) were used; significant at  $p < 0.05$ .

**Results:** 158, 130 and 122 cases independently completed evaluations at 1, 2 and 3 time primary end point. The ACR 20 response (range 34 – 40) remained stable over three times ( $p = 0.33$ ). Cases bettered optimum for several measures by one time ( $p < 0.05$ ) and this was sustained. The use of steroids varied from 42 to 49 cases at monthly end points (mean diurnal cure 5 mg prednisone); similarly the use of DMARD varied from 20 to 34 cases. 40 cases on RA- 1 didn't bear DMARD/ steroids for control of complaint. 77 cases reported adverse events, albeit mild and substantially gut related and not causing pull-out. Several study limitations (especially tone- selection) were reduced by the high case retention and thickness in medicine use [1].

**Conclusion:** RA- 1 is safe and effective in the long term operation of characteristic active habitual RA. DMARDs and/ or steroids can be used judiciously along with RA- 1 to treat delicate complaint/ flares. Farther studies are needed to estimate RA- 1 in early RA. This paves way for exploration and operation of integrative remedial approach in clinical drug.

**Keywords:** Rheumatoid arthritis • Treatment • Ayurveda • Herbal medicine • Integrative drug Vaccination

## Introduction

Ayurveda is an ancient medicinal system and is popularly rehearsed in India. The holistic treatment approach combines herb mineral phrasings and life changes. Ancient classic

textbooks are important references. Though in use for centuries, effectiveness in the ultramodern environment needs confirmation. Factory grounded phrasings are delicate to regularize. Several exploration publications

## D. Schiphof\*

Department of Rheumatology, Erasmus University Medical Center, Rotterdam, Netherlands

### \*Author for Correspondence:

Sd@gmail.com

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have tried to disinter scientific substantiation of efficacy of Ayurveda deduced medicines to treat arthritis. Cochrane reviews include a protocol on confirmation of Ayurvedic medicines in the treatment of RA.

We reported the efficacy and safety of RA- 1, a standardized Ayurvedic medicine, in the treatment of active characteristic RA in a 16 week randomized placebo controlled medicine trial. Cases were naïve for complaint modifying anti-rheumatic medicines (DMARD). 40 cases were permitted to continued stable fixed daily low cure ( $<7.5$  mg daily) prednisone. This demoiselle corner study drew attention towards the remedial eventuality of a standardized Ayurvedic drug. In spite of the enhancement in the American College of Rheumatology (ACR), 20 responses (primary efficacy) wasn't statistically significant and RA- 1 performed better than the placebo in every efficacy variable with significant reduction in common lump and rheumatoid factor titer. Encouraged by the results, this study was accepted as a three time open marker phase (OLP) study [2].

Though croakers in India frequently combine Ayurvedic drugs and ultramodern drugs in clinical practice, there's little scientific confirmation of this approach. It's prudent to add that to a large extent this kind of practice is secret and limited. Still, there's a growing enthusiasm for substantiation- grounded integrative drug to treat delicate diseases similar as RA.

In the current OLP, an integrative remedial strategy combining ultramodern drugs and Ayurvedic medicine (RA- 1) was used to treat cases with shy response. The patient retention rate was further than 70 on study completion.

## Materials and Method

### Study design

This was a prospective experimental study of three times following a protocol driven randomized study. The OLP was guided by the overarching conditions of a true to life clinical practice. Cases weren't insulated. Standard efficacy measures recommended by the ACR were used. Cases were examined at 12 – 16 weeks intervals for efficacy and safety. All clinical services and RA- 1 were handed free of cost to the cases. Cases were encouraged to continue RA- 1 throughout the study period. Any worsening of symptoms and flares or patient sinusitis (shy response to RA- 1) was managed by rheumatologists as per rheumatology practice morals. Rheumatologists added anesthetics NSAIDs (short term use), steroids and DMARD to a background RA- 1 drug. All treatment

opinions were made grounded on clinical judgment [3].

### Study and attendant drug

RA- 1 contained excerpts of four medicinal shops- Withania somnifera (Ashwagandha), Boswellia serrata (Salai Guggul), Zingiber officinale (Shunti or gusto) and Curcuma longa (Haldi or circumin); Ayurvedic names shown in gap. RA- 1 was formalized and manufactured using ultramodern pharmacological means. Waterless excerpts were used for all shops except for Guggul (aqua- alcoholic). The strength of factory excerpts in each capsule of RA- 1 was 90 mg Ashwagandha (root), 90 mg Shudh Salai Guggul (goo), 18 mg turmeric (rhizomes) and 24 mg gusto (rhizomes). In hindsight, we corroborate that the RA- 1 expression satisfied the CONSORT conditions (data not shown). Cases began with the optimum cure of RA- 1 (investigational medicine) which was 2 tablets (222 mg actives per tablet) doubly daily following refectations.

We followed current recommendations and our clinical practice morals while choosing ultramodern specifics and lozenge schedule [4]. It was decided a priori to add steroids and/ or DMARDs (oral chloroquine sulfate and/ or methotrexate and/ or sulfasalazine) to background RA- 1 in cases with shy response or worsening of complaint. Steroids weren't to exceed 10 mg prednisone diurnal cure unless patient developed a systemic complication. We generally began with 5 – 10 mg prednisone diurnal and phased to 2.5 – 5 mg daily formerly characteristic enhancement was sustained (6 – 8 weeks). We tried to stop steroids by a slow taper (1 – 2.5 mg every 2 weeks) if enhancement was sustained for 6 months or so. Chloroquine sulphate was used in the cure of 250 mg daily. Oral methotrexate was begun at 10 mg single cure per week and was escalated up to 20 mg per week as per standard practice. The optimum cure of sulfasalazine was 2 gm. daily in two divided boluses. Cases continued attendant medicines for coinciding conditions under supervision of their primary care croaker.

In case of flare, cases were handed characteristic relief with anesthetics (paracetamol, tramadol) and/ or NSAID (Naprosyn, diclofenac, ibuprofen, and nimesulide). The ultimate were used on pro rata base or for short ages. NSAIDs were used occasionally round the timepiece for 4 – 8 weeks awaiting response from DMARD.

Cases were advised to maintain reasonable physical exertion and fitness reduce internal stress and consume healthy balanced diet. No specific advice was handed on any kind of diet or life changes [5].

### Response to treatment

The assessment was basically clinical though we report ACR indicator enhancement. In the current analysis, a relapse was considered if cases showed 25 worsening in each of the two common counts( pain/ tender-heartedness and lump) and 3 of the 5 parameters used for ACR enhancement indicator( pain, global assessment by croaker and case, HAQ and ESR).

Comprehensive laboratory and other applicable examinations (including renal, hepatic and metabolic parameters and EKG) were carried out on registration and at every monthly evaluation end point. Still, ESR (Wintergreen), blood aggregate and discriminational cell counts, platelet count serum aminotransferases, and urine analysis tests were carried out every 8 – 12 weeks. Rheumatoid factor (RF, nephelometry), C- reactive protein (CRP, nephelometry) and Interleukin 6 assay (IL 6, cell grounded) were carried out at monthly end points [6, 7].

### Discussion

This three time open marker extension phase study demonstrated considerable effectiveness and safety of RA- 1(Artrex™) in the long term operation of cases suffering from active habitual RA. RA- 1 was used to treat RA effectively as a single agent (monotherapy) in about 40 of the cohort. The remaining cases also in addition needed steroids and or DMARD to control RA. Steroids, albeit low cure, were used more constantly. Steroids could be stopped in 10 cases on long term use. RA- 1 showed an excellent safety profile. None of the cases ever needed any specific intervention/ hospitalization or withdrew due to AE. We also demonstrated a new integrative strategy of combining ultramodern drug and Ayurvedic medicine. A strong community base, good case retention rate and thickness in medicine use were important factors that contributed towards the success of the study.

RA is a prototypic autoimmune seditious systemic arthritis with the maturity of cases showing a grim progression which is also complicated by articular scars and comorbidity (osteoporosis in particular). Cases die precociously of atherosclerotic affiliated cardiovascular events. Grounded on clinical substantiation in the current study, RA- 1 handed long term goodanti-inflammatory effect to treat RA. RA- 1 also demonstrated long term effectiveness and especially enhancement in function (HAQ) and this presumably is further of a DMARD like effect. The 'Rasayanic' parcels of RA- 1 are likely to contribute to a DMARD effect. Ramayana in Ayurveda is akin to vulnerable modulation in ultramodern wisdom

and presumably much more. As suspected over, RA- 1 is likely to reduce the need for DMARD. We encourage a farther exploration docket. RA- 1 should be estimated in the treatment of early RA and in cases showing shy response to methotrexate [8, 9].

The current study had several limitations. Being open marker, it was unbridled and riddled with several patient centric impulses. 122 (74) out of 165 cases enrolled, completed three times and this restricts the problem of tone- selection. It also energies the success of our remedial adventurism with an integrative approach. We didn't exercise a holistic approach as supported by Ayurveda. Addition of steroids and DMARD was an important confounding factor though we've precisely deconstructed the data to unravel the true effectiveness of RA- 1. We used standard ultramodern protocol and practice morals. Still, in Ayurveda, the treatment also focuses on several other targets. As an illustration there's allegedly an enhancement in digestive system, sleep pattern, internal and overall health but we didn't look into these aspects.

Eventually, we admit that we're late in the day for publishing this report. The study was completed several times agone. We wish to confirm to our compendiums that the detention wasn't due to any reason connected with the wisdom or ethics of the current study. There were several other hurdles and precedences. But we believe that the study is applicable. We hope to inspire our associates to seriously explore ancient ethnical medicinal system similar as Ayurveda for better unborn curatives. This is also our heritage.

### Conclusion

To conclude, RA- 1(Artrex™), a standardized Ayurvedic herbal expression, is an effective and safe DMARD in the long term operation of RA. This study vindicates the results of the before randomized placebo controlled study. Cases with shy response and or patient active complaint despite RA- 1 served from a judicious attendant use of steroids and DMARD. We explosively recommend clinical exploration in integrative drug and with an original focus on habitualnon-communicable conditions like RA [10].

### Conflict of Interest

None

### Acknowledgement

None

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