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EXPERIENCE WITH R. COMPOUND IN RHEUMATOID ARTHRITIS.*

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INTRODUCTION :

Therapeutic measures for rheumatoid arthritis include drugs (aspirin, analgesics, gold, antimalarials, anti-inflammatory agents and corticosteroids), physical therapy, splintage and various orthopaedic procedures, and each of these has a specific role in limiting the disease process. Response to drugs vary considerably not only in different patients but even in the same individual on different occasions, and thus this disease orfers a great challenge to the treating physician. Search for a safe and effective drug is continuing because almost all drugs have some side-effects and complications following prolonged use. Experience with R.Compound is reported in this paper.

WHAT IS R.COMPOUND :

R.Compound is an ayurvedic drug produced by Alarsin, Bombay and supplied as dark brown tablets of dull lustre. It contains Mahayograj Guggul, Maharasanadi quath and gold. Mahayograj Guggul is prepared from 30 herbomineral drugs and has "Guggul" as its main ingredient which is known to possess anti-arthritic properties.3 Maharasandi quath is similarly prepared from 25 herbal drugs with "Rasna" as its main ingredient which is known to possess anti-inflammatory properties.3 Gold is an important constituent of R.Compound; it is present in the form of "ashes" or "bhasma" and is also known to be anti-rheumatic.4 R.Compound contains 200 mg of Mahayograj Guggul with gold and 67 mg of Maharasanadi quath.

METHOD AND MATERIAL :

Diagnosis was based on the criteria laid down by American Rheumatic Association and as suggested it was possible to group 135 cases in this series into classical (61 cases), definite (48 cases), probable (17 cases) and possible (9 cases).

INVESTIGATIONS :

Haemoglobin, R. B. C. total W. B. C., and differential counts, ESR, bleeding and clotting time, serum cholesterol, uric acid, blood sugar, Rose-Waaler test, urine and stool were routinely examined in all cases Radiological examination of the affected joints was considered as essential and important investigation. Features like synovial swelling, osteoporosis and osteoarticular damage were noted to assess the status of the disease process. Whenever possible synovial fluid was aspirated and biochemcal test including mucin test were carried out. Special investigations included arthrography and synovial biopsies. These investigations were periodically repeated during the course of the disease to assess the progress.

MATERIAL :

135 cases of rheumatoid arthritis were included in this study: 82 were female and 53 were male. Table I shows the age distribution: majority belonged to the second to fourth decade. Monoarticular arthritis was found in 49 cases whereas polyarticular arthritis was present in 86 cases. Arthrography was performed in 27 cases but was repeated only in 5 cases at varying intervals of therapy. Similarly synovial biopsies were carried out in 63 cases and repeated in 5 cases in the form of synovectomy. Clinically two groups were formed. (a) Arthritis without deformities (94 cases) in which joint pain, stiffness, swelling and even constitutional symptoms were the presenting symptoms. Joint swelling was caused by effusion and synovial thickness. Movements were restricted due to muscle spasm, effusion, thickened synovium and osteoarticular damage. Monoarticular lesions presented diagnostic problems and a synovial biopsy was essential to establish the diagnosis (b) Arthritis with deformities (18 cases), occurring in chronic and neglected cases in which almost all joints were affected; varying in severity from flexion contracture to fibrous ankylosis.

METHOD OF STUDY :

While various investigations, were completed no specific drug therapy was given, and those already under therapy were weaned off before starting therapy with R.Compound. In the second (occasionally third) week, R.Compound was started in the recommended dose of 2 tablets thrice a day after meals and was continued for variable period of 8 weeks to 2 years or more. In another group placebo was given in similar doses for 2 weeks and if unsatisfactory response was obtained, R.Compound therapy was started and continued. For acute symptoms, supportive therapy and supplementary agents were used whenever indicated. Surgery in the form of synovectomy, arthoplasty or arthrodesis was considered when the synovial swelling did not subside, pain persisted and deformities interfered with functional recovery.

ASSESSMENT :

Criteria as used in the diagnosis of rheumatoid arthritis were also used to assess the therapeutic response; stiffness, pain, joint swelling, range of movement, extent of deformity and functional disabilities were evaluated periodically while stiffness and pain were purely subjective symptoms, swelling of the joint especially of hands, knee etc., were measured using gold-smith's rings and circumferential measurements. For each of these symptoms therapeutic response was recorded as completely or partially relieved or no change to the drug therapy. Range of movement of the various joints was recorded by the physiotherapist before and during the therapy. Settling of temperature, ESR and WBC counts to within normal values was also considered as criteria of improvement and satisfactory response to therapy. Patients were advised to report for check-up atleast once in 2 months. 5 patients on R. Compound and 8 from the placebo group did not return for follow-up and thus 112 patients were followed for sufficient period to assess the results of therapy.

RESULTS :

Moderate degree of anemia was often found in chronic polyarticular rheumatoid arthritis. Mild degree of leucocytosis with shift to the left and lymphositosis was also found in similar cases. Erythrocyte sedimentation rate was usually elevated and had a direct relation to the activity of disease; it was over 100/mm in the first hour in 17 cases. Rose-Waaler test found of value in almost one-fourth of the cases. Radiological examination of the various joints (Table II) showed findings which ranged from normal appearance to definite osteo-articular damage (Table III). Synovial fluid was examined in 26 cases and a poor mucin test was detected in about half of them.

Arthrography of major joints revealed synovial thickening, filling defects, associated meniscus and osteo-articular damage, and an attempt was made to corelate the changes in synovial thickening as seen before and after therapy. There is some evidence to believe that regression in the synovial mass does occur with arrest of the disease activity and this aspect of the study is further continued. In resistant cases or those requiring surgery, histological changes in the synovium were compared with those found in earlier biopsy but no definite corelation could be established because repeat biopsies could not be performed in cases which showed improvement.

Temperature usually subsided within 7 to 10 days though in few patients it took 15 to 20 days, whereas in one patient it took almost one month of treatment. On few occasions the temperature re-appeared on stoppage of R.Compound and thus the drug had to be continued for prolonged periods. ESR usually returned to normal values within 15 to 20 days though it required about 45 days in a severely advanced and active case. WBC count similarly, returned to normal values within 21 days. Majority of our patients remarked about the subjective feeling of well-being and improvement in general health after prolonged therapy with R.Compound.

Therapeutic response to R. Compound in rheumatoid arthritis without deformities was assessed in 94 cases: stiffness- 34 cases (36%) responded remarkably with complete recovery and 51 cases (54%) obtained only partial recovery while in 9 cases (10%) there was no change at all. pain - 23 cases (24%) were completely or almost completely relieved of pain, while 44 cases (47%) obtained only partial relief and in 27 cases (29%) pain was not relieved at all. Swelling- 15 cases (16%) showed complete or almost complete remission of the joint swelling, 30 cases (32%) showed only partial reduction of swelling, while in 49 cases (52%) no change occurred. Considering complete and partial recovery together, satisfactory response for stiffness was obtained in 90%, pain in 71 % and swelling in 48% cases; and collectively for various symptoms complete recovery was obtained in 25.3%, partial recovery in 44.4% and no change in 30%.

Therapeutic response in rheumatoid arthritis with deformities was assessed in 18 cases: Stiffness- only partial recovery was obtained in 6 cases (33%); the remaining did not show any improvement.

Pain - only partial relief was obtained in 5 cases (21%).

Swelling - only partial reduction occured in 11 cases (61 %).

Deformity - only partial reduction in the severity of deformity occured in 4 cases (22%). In this group over-all improvement was obtained in only 34% of cases.

Of particular importance was the group of 10 patients of Polyarticular rheumatoid arthritis treated earlier with steroids which required withdrawal of the drug. There were 7 female and 3 male patients in this group; youngest was 14 years of age while the oldest was 50 years. Steroids had been given to these patients for varying periods of 5 months to 10 years. 4 of these were bed ridden and completely dependent for activities of daily living. In order to wean them, steroid dose was gradually reduced. Splintage, physical therapy and whenever necessary salicylates or other anti-rheumatic drugs were used to control the acute symptoms. It required 3 to 6 weeks to completely wean these patients. R.Compound was started in the later stages of weaning, and was continued un-interruptedly while other supplementary drugs, if used, were withdrawn. All the 10 patients were successfully weaned off steroids and have been maintained on R.Compound since then. It was encouraging to note the control of pain, vulnerability to physical therapy, control of constitutional symptoms, improvement in general health, response to supportive measures and overall change of outlook when the patients started to walk within 2 to 3 months period. Surgical treatment, whenever indicated, was well tolerated and none of these patients required any further therapy with steroids.

Table I

AGE DISTRIBUTION

1 to 10 years	6 cases
11 to 20 years	37 cases
21 to 30 years	49 cases
31 to 40 years	28 cases
41 to 50 years	13 cases
Over 50 years	2 cases
Total	135 cases

Table II

INCIDENCE OF JOINT INVOLVEMENT

Hip	31
Knee	92
Ankle & foot	55
Shoulder	21
Elbow	47
Wrist & Hand	56
Spine	29

Table III

RADIOLOGICAL OBSERVATIONS

Normal Appearance	17 cases
Soft Tissue Swelling	24 cases
Osteoporosis	10 cases
Swelling & Osteoporosis	43 cases
Osteo-articular changes	41 cases

DISCUSSION :

Gum Guggul has since long been used in ayurvedic System of medicine and preparations like Yograj Guggul and Mahayograj Guggul are in common use for muscular rheumatism. They are said to be more effective when administered along with "Rasna". Their anti-arthritic and anti-inflammatory activity has been shown to reside in the oleo-resin portion of the crude drug, and the active principle contained in it appears to be highly potent.3 In an experimental study' using formalin induced arthritis and croton oil granuloma pouch models, Karandikar et al showed that Mahayograj Guggul, Maharasana and Sammirpannag Ras possess anti-inflammatory effect; they also studied the adrenocortical activity and concluded that their effect does not mediate through the pitutory adrenal axis but through some other unknown mechanism.

R.Compound containing the essential Mahayograj Guggul, Maharasandi quath and gold possesses anti-rheumatic and anti-inflammato7 actions. [3, 5, 6,] Various clinical trials [7,8,9, 10, 11, 12,13,14,] ". have shown the usefulness of R.Compound in chronic arthritis especially rheumatoid arthritis. Sardesai and Deshpande (1968) in a study of 32 cases of rheumatoid arthritis reported satisfactory results for pain in 85% and joint movement in 80% whereas Gupta et al (1968) concluded that cases having little deformity and pain responded more favourably to R.Compound while it had no effect on deformities, though swelling, pain and movement increased in 3 out of 8 cases. Sancheti (1968), on the other hand, in a study of 14 Cases reported improvement in inflammation, pain and movement even in advanced cases of rheumatoid arthritis. In the present study cases of rheumatoid arthritis without deformities showed satisfactory response for stiffness in 90%, pain in 71 %, and swelling in 48% cases; complete recovery from various symptoms occured in 25.3% partial recovery in 44.4% while no change occured in 30.3%. On the other hand, cases with deformities showed only partial recovery in 34% cases. Opinion is already hardening against long term therapy with corticosteroids2 and in this study 1 patients treated with steroids were successfully weaned off and put on R.Compound with satisfactory results.

In acute cases supplementary drugs and splintage may be indicated to overcome the crisis. Constitutional symptoms respond satisfactorily; subjective symptoms of stiffness and pain are relieved in majority of the patients while swelling responds rather slowly and hence the need for prolonged therapy.

Experience with 135 cases of rheumatoid arthritis with the use of R.Compound is described in this paper. R.Compound is a safe and useful drug and is highly recommended in chronic cases of rheumatoid arthritis unassociated with deformities. It may, however, be also used in patients with deformities, in conjunction with other orthopaedic procedures. It is of particular significance in steroid treated patients who need to be weaned off.

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Experience and observations in this study suggest that R. Compound is a safe, non-toxic, anti-rheumatic drug with a simple dose regime; it may be increased to 12 tablets a day in resistant case and because of a wide margin of safety can be continued for prolonged periods.

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