**DISSERTATION ON**

# "A STUDY ON THE EFFECT OF PITAVASTATIN IN PATIENTS WITH ACTIVE RHEUMATOID ARTHRITIS TREATED AT A RURAL TERTIARY CARE HOSPITAL"

**Dissertation submitted to**

**THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY**

**In partial fulfilment of the regulations**

**For the award of the degree of**

**M.D. PHARMACOLOGY - BRANCH VI**

**CHENNAI MEDICAL COLLEGE HOSPITAL AND RESEARCH CENTRE,**
**IRUNGALUR, TRICHY – 621 105**

**THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY,**
**CHENNAI – 600032**

**APRIL 2017**

# CERTIFICATE

This is to certify that the dissertation entitled **"A STUDY ON THE EFFECT OF PITAVASTATIN IN PATIENTS WITH ACTIVE RHEUMATOID ARTHRITIS TREATED AT A RURAL TERTIARY CARE HOSPITAL"** by **Dr. T.SUDHANANTHINI**, Postgraduate in Pharmacology (2014 – 2017), is a bonafide research work carried out under our direct supervision and guidance and is submitted to The Tamilnadu Dr. M.G.R. Medical University, Chennai for M.D. Degree Examination in Pharmacology, Branch IV, to be held in **April 2017**. The period of study was from 2014 -2017.

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# DECLARATION

I, **Dr.T.SUDHANANTHINI** solemnly declare that the dissertation title **"A STUDY ON THE EFFECT OF PITAVASTATIN IN PATIENTS WITH ACTIVE RHEUMATOID ARTHRITIS TREATED AT A RURAL TERTIARY CARE HOSPITAL"** was done by me at Chennai Medical College Hospital and Research Centre, Irungalur ,Trichy, under the supervision and guidance of my Professor and Head of the Department, **Dr.S.Manickavasagam .M.D.,**

This dissertation is submitted to The Tamil Nadu Dr. M.G.R Medical University, towards the partial fulfilment of requirement for the award of M.D. Degree (Branch –VI) in Pharmacology.

Place: Irungalur

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**Remark of the Guide:**

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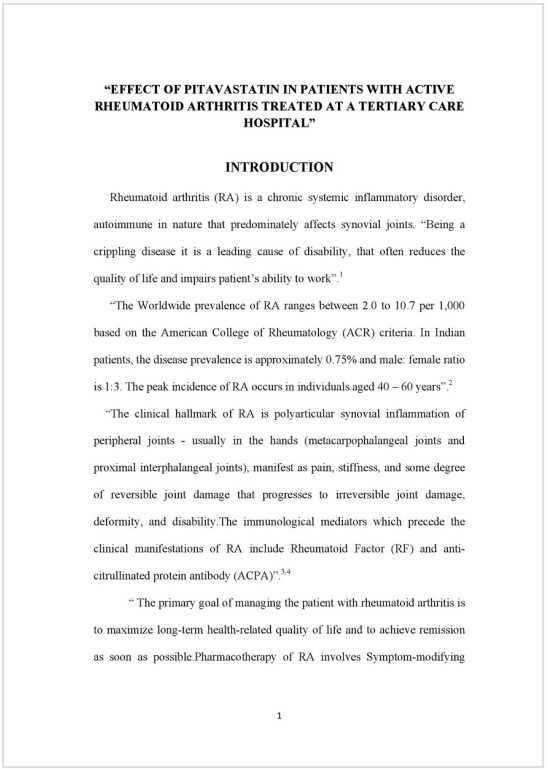

**“EFFECT OF PITAVASTATIN IN PATIENTS WITH ACTIVE RHEUMATOID ARTHRITIS TREATED AT A TERTIARY CARE HOSPITAL”**

**INTRODUCTION**

Rheumatoid arthritis (RA) is a chronic systemic inflammatory disorder, autoimmune in nature that predominately affects synovial joints. “Being a crippling disease it is a leading cause of disability, that often reduces the quality of life and impairs patient’s ability to work”.[1]

“The Worldwide prevalence of RA ranges between 2.0 to 10.7 per 1,000 based on the American College of Rheumatology (ACR) criteria. In Indian patients, the disease prevalence is approximately 0.75% and male: female ratio is 1:3. The peak incidence of RA occurs in individuals aged 40 – 60 years”.[2]

“The clinical hallmark of RA is polyarticular synovial inflammation of peripheral joints - usually in the hands (metacarpophalangeal joints and proximal interphalangeal joints), manifest as pain, stiffness, and some degree of reversible joint damage that progresses to irreversible joint damage, deformity, and disability.The immunological mediators which precede the clinical manifestations of RA include Rheumatoid Factor (RF) and anti-citrullinated protein antibody (ACPA)”.[3,4]

“ The primary goal of managing the patient with rheumatoid arthritis is to maximize long-term health-related quality of life and to achieve remission as soon as possible.Pharmacotherapy of RA involves Symptom-modifying

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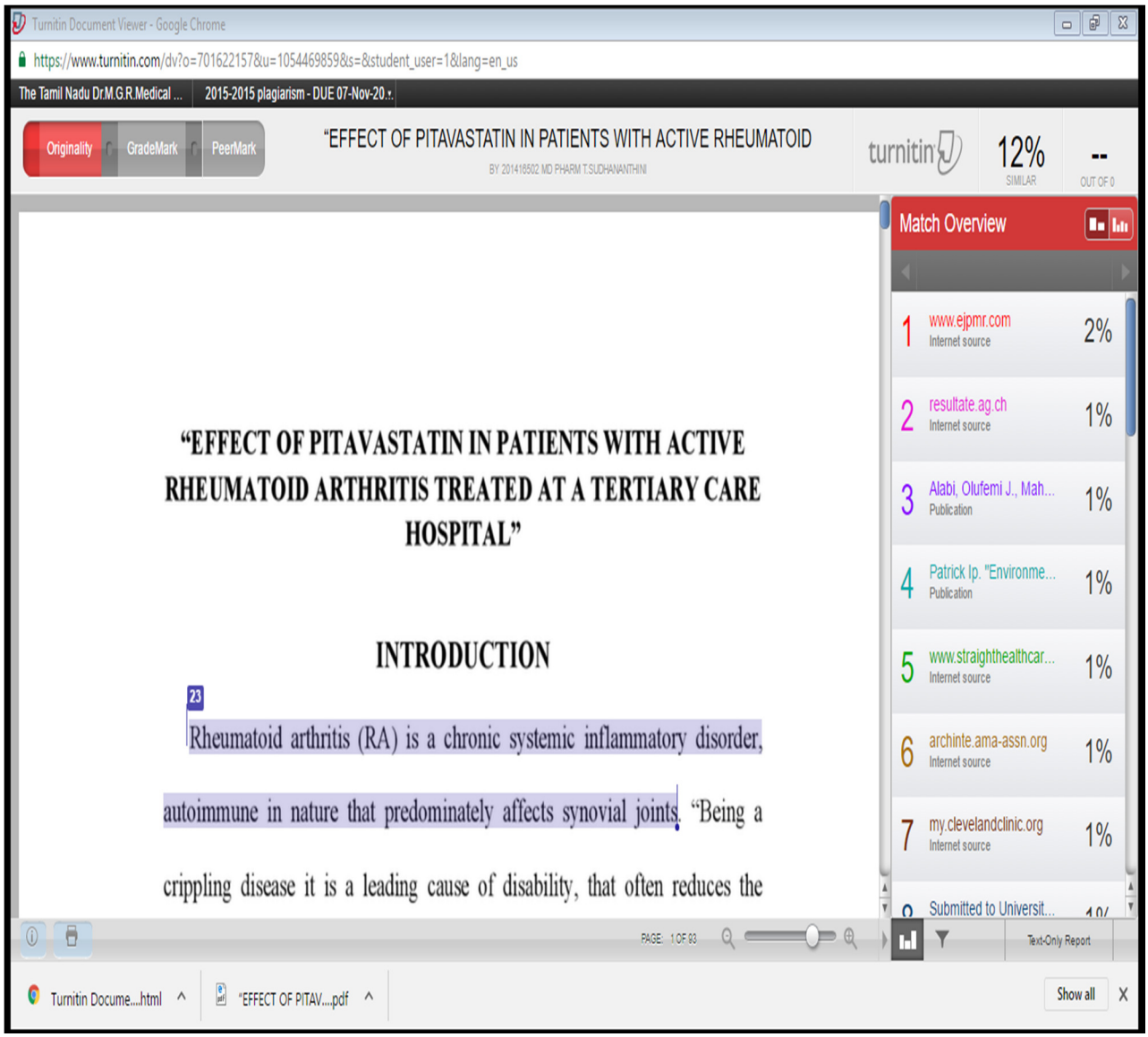
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# CONTENTS

## ABBREVIATIONS

| | | |
|---|---|---|
| RA | - | Rhematoid Arthritis |
| DAS | - | Disease Activity Score |
| RF | - | Rheumatoid Factor |
| Anti-CCP | - | Antibodies to Cyclic Citrulinated Peptide |
| ESR | - | Erythrocyte Sedimentation Rate |
| CRP | - | C Reactive Protein the |
| ACR | - | American College of Rheumatology |
| EULAR | - | European League Against Rheumatism |
| ICAM | – | Intra Cellular Adhesion Molecule |
| TNF-$\alpha$ | - | Tumour Necrosis Factor-Alpha |
| IL | - | Interleukin |
| MMP | - | Matrix Metallo Proteinase |
| Cat K | - | Cathepsin K |
| RANKL | - | Receptor activator of NF-$\kappa$B ligand |
| DMARD | - | Disease Modifying Anti Rheumatoid Drugs |
| MTX | - | Methotrexate |

# INTRODUCTION

Rheumatoid arthritis (RA) is a chronic systemic inflammatory disorder, autoimmune in nature that predominately affects synovial joints. Being a crippling disease it is a leading cause of disability, that often reduces the quality of life and impairs patient's ability to work.[1]

The Worldwide prevalence of RA ranges between 2.0 to 10.7 per 1,000 based on the American College of Rheumatology (ACR) criteria. In Indian patients, the disease prevalence is approximately 0.75% and male: female ratio is 1:3. The peak incidence of RA occurs in individuals aged 40 – 60 years.[2]

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The primary goal of managing the patient with rheumatoid arthritis is to maximize long-term health-related quality of life and to achieve remission as soon as possible.Pharmacotherapy of RA involves Symptom-modifying antirheumatic drugs (SMARDs) like NSAIDs (Non Steroidal Anti Inflammatory Drugs),Disease modifying antirheumaticdrugs (DMARDs) - small molecule non biological agents, biological agents and Glucocorticoids.[5]

RA, if not treated properly may leads to permanent damage to the joints and is the number one cause of early retirement, disability payments, and loss of employment.It is a serious condition characterized by destructive polyarthritis and damages major organs including the skin, eye, heart, lungs, renal, nervous and gastrointestinal systems.The cardiac complications are directly proportional to the severity of the disease which include atherosclerosis, arterial stiffness, risk for myocardial infarction, myocarditis with presence of rheumatoid nodules and myocardial fibrosis.[6]

The pleiotropic effects of statins like anti-inflammatory,immune modulating and anabolic effects,strongly support a potential role of these drugs in the prevention and/or treatment of cardiovascular risk factors and joint damage associated with RA.[7]

Pitavastatin, the seventh statin reduces elevated levels of total cholesterol, low-density lipoprotein cholesterol, apolipoprotein B, and triglycerides and increases high-density lipoprotein cholesterol levels.[8] It appears to exert a number of beneficial effects on patients at risk of cardiovascular events by reducing the size and composition of atherosclerotic plaques, improvements in cardiovascular function, and improvements in markers of inflammation, oxidative stress, and renal function[9,10].

Pitavastatin has anabolic effect on bone and prevents osteoporosis induced by RA.Substantial cardiovascular protection offered by it can reduce cardiovascular morbidity and mortality associated with RA.[9,10]

Many pivotal studies like TARA trial, JUPITER trial and PATROL trial have demonstrated that Statins have a beneficial role in the management of RA[7].Only limited number of studies available on the effect of Pitavastatin in RA.Hence this study is structured to evaluate the efficacy and safety of Pitavastatin in patients with active Rheumatoid arthritis.

# AIM AND OBJECTIVES

The present study was structured for evaluating the effect of pitavastatin in patients with active rheumatoid arthritis treated at a tertiary care hospital

The secondary objectives of the study was to evaluate the reduction in

(i) Disease activity score

(ii) Inflammatory markers like Rheumatoid Factor and Antibodies to cyclic citrulinated peptide

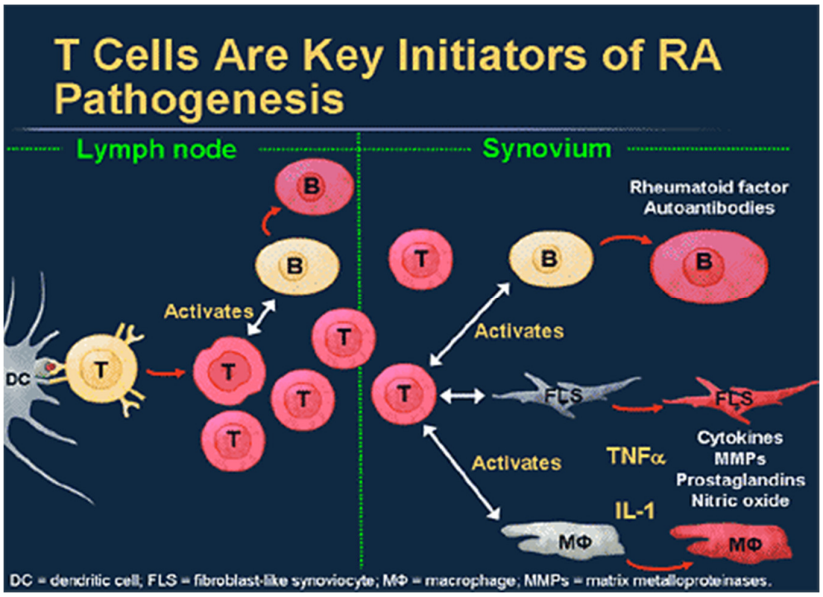
(iii) Acute phase reactants &

(iv) Improvement in lipid profile.

# REVIEW OF LITERATURE

## Rheumatoid Arthritis - An overview

Rheumatoid arthritis (RA) is an autoimmune disorder with strong genetic and environmental etiology leading to severe disability and premature mortality.[4] The pathogenesis of RA comprises of both cellular and molecular mechanisms. Predominant cell types involved in synovial inflammation include activated T cells, B cells monocyte/macrophages and neutrophils. The mediators involved include 1. Receptor activator of NF-$\kappa$B ligand (RANKL) and its receptor RANK. 2. Proinflammatory cytokines (e.g., tumour necrosis factor-$\alpha$ (TNF-$\alpha$).3. Interleukins 1 (IL-1), IL-6, IL-17, and IL-18). 4. Matrix degrading enzymes (e.g., matrix metalloproteinases (MMPs) 4. CathepsinK (Cat K). Inflammation can induce bone damage and these two processes are linked via common mediators.[11]



Antigens are typically presented to T cells by B cells via HLA-DR4. The presence of autoantibodies, such as rheumatoid factor (RF) and anti–citrullinated protein antibody (ACPA) (tested as anti–cyclic citrullinated peptide [anti CCP]), can precede the clinical manifestation of RA by many years. HLA DR3 and DRH genes are associated with a greater frequency of extra-articular diseases. Hematological abnormalities like anemia (normocytic, normochromic), thrombocytopenia, eosinophilia and raised Erythrocyte Sedimentation Rate (ESR) and raised C- Reactive Protein (CRP) are also present in RA patients. [11]

A joint working group of the American College of Rheumatology (ACR) and the European League Against Rheumatism (EULAR) in 2010 , developed a new approach for classification of RA.In the new criteria, classification as"definite RA" is based on the confirmed presence of synovitis in at least 1 joint.[4,5,12]The achievement of a total score of at least 6 (of a possible 10) from the individual scores in four domains .The highest score achieved in a given domain is used for this calculation.

The domains and their values are:

**1. Number and site of involved joints :-**

a) 2 to 10 large joints (from among shoulders, elbows, hips, knees, and ankles) = 1 point.

b). 1 to 3 small joints (from among the metacarpophalangeal joints, proximal interphalangeal joints, second through fifth metatarsophalangeal joints, thumb interphalangeal joints, and wrists) = 2 points.

c). 4 to 10 small joints = 3 points.

d). Greater than 10 joints (including at least 1 small joint) = 5 points.

Early bone loss is well evident from decrease in bone mineral density (BMD) in the metacarpal bones and forearm measured by dual X-ray absorptiometry (DXA) and digital X-ray radiometry (DXR) and radiological alterations in patients with early and established RA.[13]

**2. Serological abnormality (rheumatoid factor or anti-citrullinated peptide/protein antibody) :-**

a). Low positive (above the upper limit of normal [ULN]) = 2 points.

b). High positive (greater than three times the ULN) = 3 points.

**3. Elevated acute phase response :-**

Erythrocyte sedimentation rate [ESR] or C-reactive protein [CRP]) above the ULN = 1 point.

**4. Symptom duration:-**

Atleast six weeks=1point.[5,14]

The synovitis of multiple joints in RA causes widespread pain, and the succeeding destruction of the joints will lead to severe disability affecting of motor functions particularly the fine movements of the hand.[12]It can also affects other organs like lungs, pleura, pericardium, sclera and subcutaneous tissue.[3]

## SIGNS AND SYMPTOMS

The signs and symptoms include pain, swelling, tenderness and warmth around the joint, stiffness following a period of rest mostly in the morning, poor grip strength, tiredness leading to psychological disturbances like irritability and depression**,**flu-like symptoms**,** loss of weight and the presence of rheumatoid nodules – fleshy lumps typically seen on hands, feet and elbows. Flare-ups can occur often particularly in the winter , following any systemic illnesses for a few days to a couple of months.[4]

## EFFECT OF RA ON BONE AND JOINT

The rheumatoid pannus (neovascularisation) dynamically invades and destroys the underlying cartilage and also the subchondral bone. Angiogenesis is a key event for the expansion of the synovial lining of joints in RA; vascular endothelial growth factor (VEGF) appears to have a essential role. The serum VEGF level is an index of the activity of the disease and a prognostic factor regarding joint destruction. The serum angiopoietin-1 (Ang-

1) level is used as a marker of sustained arthritis. The serum angiopoietin-2 (Ang-2) level may reflect a state of marked angiogenesis. [1]

Macrophage-like synoviocytes leads to overproduction of proinflammatory cytokines, Fibroblast-like synoviocytes and causes osteoclast activation a vital process leading to bone erosion. Specific inhibition of osteoclast activation can reduce joint destruction without affecting joint inflammation.Osteoporosis ensues due to reduced mobility, inflammation, and also due to the drugs (steroids).

RA can directly or indirectly affect most organ systems in the body and leads to premature death. RA needs an apt management not only to reduce the impact on joints, but also to focus on the whole body, to reduce morbidity.[1,4]Extra-articular manifestations of RA ensue in about 40% of patients, occur at any age or at any stage after the onset of the disease, involving the oral, cutaneous, ocular, cardiac, pulmonary, renal, nervous, haematopoietic and gastrointestinal systems.[15]

**MANAGEMENT**

The primary goal of managing rheumatoid arthritis is to prolong the long-term health-related quality of life which can be achieved by reduction of the inflammatory process.[16] The non-pharmacotherapy in RA include aerobic activities, dynamic muscular reinforcement, and therapeutic patient education.[17]

**Symptomatic management**

Pharmacotherapy include Symptom-modifying anti-rheumatic drugs (SMARDs): analgesics (opioid and nonopioid analgesics) to reduce pain, and nonsteroidal anti-inflammatory drugs (NSAIDs) (including "traditional" or nonselective NSAIDs, cyclooxygenase-2 [COX-2] inhibitors to lessen pain and stiffness. Both groups of drugs are widely used to control symptoms of RA. Though there are justifications for using NSAIDs for control of RA symptoms are strong[18] they have lost their historical role as a first-line management because of concerns about their limited effectiveness, inability to modify the long-term course of the disease, and toxic gastrointestinal and cardiac effects.[19]

**Disease modifying anti rheumatic drugs (DMARDs)**

DMARDs are a heterogeneous collection of agents grouped together by use and convention. They arrest or slow down the disease progress by modifying the disease process. Effect may take two weeks to six months to become clinically evident. Generally they have been the mainstay of treatment for rheumatoid arthritis.[6,20]

These agents are widely classified in to non-biological agents and biological agents. Non biologicals include Methotrexate (MTX), Azathioprine, Sulphasalazine (SSZ), Chloroquine,Hydroxychoroquinine (HCQ),Cyclophosphamide, Cyclosporine, Leflunomide and Mycophenolate

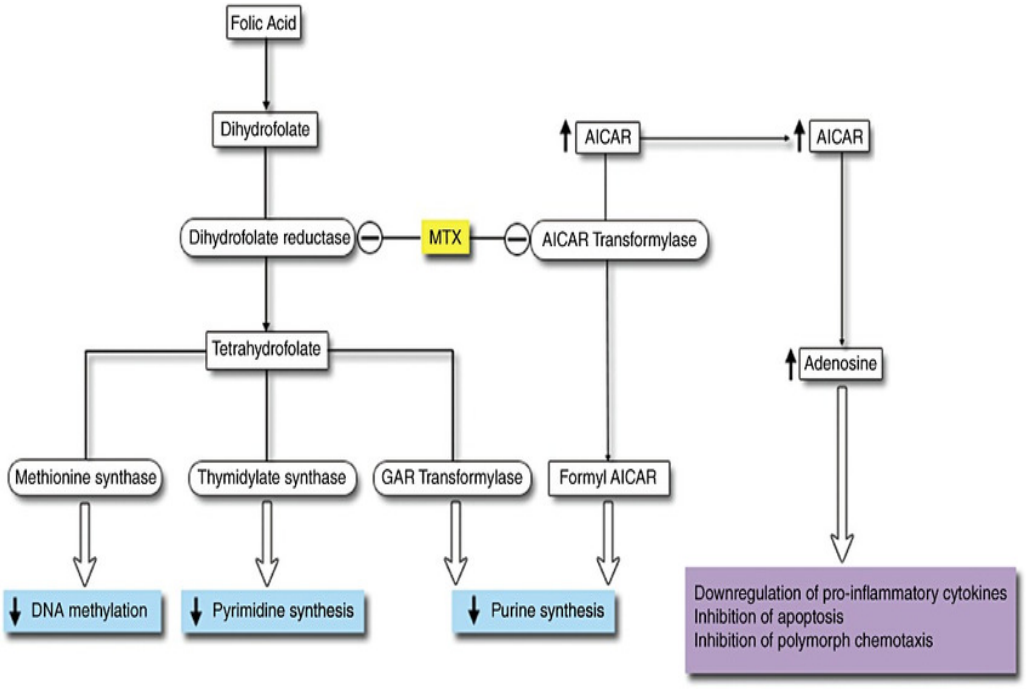
mofetil.These are small molecule drugs.Biologics are large molecule drugs mostly proteins, that are produced by recombinant DNA technology.Abatacept,a T cell modulating biologic ,Rituximab – a B cell cytotoxic agent,Tocilizumab an anti-IL-6 antibody,IL-1 antagonists (Anakinra,Riloacept,Canakinumab) and TNF α inhibitors like Adalimumab, Certolizumab, Etanercept,Golimumab and Infliximab are the currently available biologics. [6,20]

**METHOTREXATE**

It is an antimetabolite ,effective in doses lower than those used in cancer chemotherapy.The first line of treatment in RA involves MTX monotherapy, aimed at reduction of the C-reactive protein (CRP) level and radiographic progression in RA significantly.The protective effect of MTX is more in subjects seropositive for anticyclic citrullinated peptide (anti-CCP) antibodies.In patients with active RA the dose of MTX has to be raised or switched over to combination therapy.[21]

**Mechanism of action**:

MTX inhibits amino-imidazole carbamoxide (AICAR) transformylase and thyimidylate synthetase.AICAR inhibits AMP deaminase ,leading to the accumulation of adenosine,which is an inhibitor of inflammation.




It inhibits proliferation, promotes apoptosis of immune inflammatory cells and inhibits the release of proinflammatory cytokines.Almost 70% of the drug is absorbed orally and metabolized in liver by hydroxylation,gets excreted in urine.30% of the drug is excreted unchanged in urine. The dose used in RA is less compared to that used in cancer chemotherapy. To start with the dosage in RA is 7.5 mg once weekly.Upto 30 – 35 mg can be given per week depends on the response and tolerability of the patient.

Frequent adverse effects involve nausea, mouth ulcers,stomatitis and GI ulceration. It has the potency to exert toxicity on bonemarrow leading to Leukopenia, and anemia. Progressive dose related hepatotoxicity in the form of elevated liver enzymes can occur.The incidence of GI and liver function test abnormalities can be prevented by giving folic acid 5mg orally, one day

after the MTX dose.HCQ can reduce the clearance or increases the tubular reabsorption of MTX. Aspirin and Sulphonamides decrease its renal tubular secretion and potentiates its toxicity.Salicylates,Dicumerol and Sulphonamides displace MTX from its protein binding sites. It is contraindicated in pregnancy.[20]

**Combination therapy in active RA**

Glucocorticoids may be used as adjuvants to MTX in combination therapy. Although the pain-relieving effect of the steroidal agents are prompt and obvious, they may cause many sideeffects like osteoporosis, uncicatrized wounds, upper gastrointestinal bleeding and may aggravate existing conditions, such as hypertension, diabetes, etc. Thus, steroidal agents are currently used only in certain limited condition.

Pharmacotherapy for active RA at present includes one or a combination of the following four classes of drugs: Nonsteroidal anti-inflammatory drugs, analgesics, corticosteroids (prednisolone and methylprednisolone), and disease modifying antirheumatic drugs (DMARDs). Modern RA management stresses the importance of early diagnosis and aggressive treatment with DMARDs, particularly methotrexate, hydroxychloroquine, and sulfasalazine. In spite of the availability of so many conventional DMARDs, favorable outcomes are frequently not achieved with combination DMARDs resulting in

persistent active disease. Of late, however, newer biologic therapies are the order of the day for successful management of active RA. Leflunomide, etanercept, and adalimumab are the popular biologics which are frequently used either alone or in combination with methotrexate. A number of trials have shown that these newer drugs to be more effective than traditional agents because of their ability to alter joint remodeling as well as attenuate disease symptoms.[20,21]

**Biological agents in active RA**

Despite promising and successful outcome with newer biologic agents, their adverse effect profile limited their usage particularly in young patients.They may activate latent TB, cause bone marrow suppression,fungal infections,lymphomas,drug induced lupus etc.Their benefit largely remains confined to the small subset of patients and in a resource poor country like India, only few can afford the high cost of the therapy. Thus, it is apparent that further therapeutic advances are required for better treatment of RA for those patients who do not respond to conventional DMARDs combination therapy and particularly for those who cannot afford the costly new biologic treatments. Therefore, there is still a need in the market for a medicament or method that can efficiently improve the anti-inflammation activity. Recently statin group of drugs is emerging as adjuvants with DMARDs. A study demonstrates a significant negative association between persistence with statin therapy and RA

onset, particularly in adult patients who began treatment at a relatively young age and with high efficacy statins.[22,23,24]

Statins have a reasonable bioactivity profile that makes them possible adjunct therapeutic agents in addition to standard antirheumatic treatment to target both vascular risk reduction and synovial inflammation.[22] This has the potential to reduce the need for the relatively toxic long-term treatments currently used for RA, such as several disease-modifying anti rheumatic drugs (DMARDs).[25]

## PLEIOTROPHIC EFFECTS OF STATINS

Statins display immune modulatory effects by mainly triggering the major histocompatibility complex (MHC), the co-stimulatory molecules in inflammation, the leukocyte migration, and the cytokine network. Statins interfere with the interaction between MHC (class I/class II) and CD8/CD4 required to achieve efficient T-cell activation.[26]

Statins selectively block the lymphocyte function-associated antigen-1 (LFA-1),[26,27] a α/β heterodimeric receptor belonging to the β2 integrin subfamily that plays a central role in lymphocyte homing and leukocyte trafficking.The interaction between activated LFA-1 and the intracellular adhesion molecule-1 (ICAM-1) providing signals for both leukocyte migration and co-stimulation is also blocked by statin. Other adhesion molecules inhibited by statins include ICAM-1, CD11b, CD18,

and CD49. Statins suppress the cytokine-induced maturation of dendritic cells resulting in the failure to express the costimulatory molecules and to induce T-cell response.[9,28] Numerous studies suggest inhibitory effects of statins on proinflammatory cytokine production, such as IFN-γ, tumour necrosis factor-α, interleukin (IL)-1β, and IL-6 in several cells. Another mechanism of immunomodulation is the regulation of isoprenylated proteins such as Rho and Rac and their function. [29]

Trial of Atorvastatin in Rheumatoid Arthritis (TARA), showed reduction in DAS28, C-reactive protein and erythrocyte sedimentation rate.[7]Some studies highlighted the effect of rosuvastatin on RA patient showing an improvement in CRP not in rheumatoid disease activity.[30,31]
A placebo control study with rosuvastatin along with methotrexate declared a reduced clinical disease activity index (CDAI) significantly . This may suggest that rosuvastatin can be beneficial and may be used as adjuvant therapy to other medications for treatment of RA.[32]

Another clinical study with 16 highly active RA patients who were on methotrexate, with either atorvastatin 40 mg or rosuvastatin 10 mg as adjuvant therapy show an improvement in clinical parameters like morning stiffness, swollen joint count, visual analogue scale and DAS28 score.ESR also show improvement. Both the drugs improve the clinical activity and 10 mg rosuvastatin is equivalent to 40 mg atorvastatin in the management of RA when used as an adjuvant therapy.[33]

**ROSUVASTATIN**

Rosuvastatin is a hydrophilic statin with extensive first-pass metabolism.The absorption of rosuvastatin is not affected by food and maximum plasma concentration is reached in 3 to 5 h. It is 88% protein bound, mainly to albumin. Rosuvastatin is metabolized mainly by CYP2C9 isoenzyme,excreted in feces and the elimination half-life is approximately 19 hours.The usual dose is 5- 10 mg once daily. [34] CYP2C9 inhibitors like warfarin interferes with the metabolism of rosuvastatin. Cyclosporine, Gemfibrozil and antiretroviral agents have pharmacokinetic interactions. No interaction with grapejuice, fibrates and ezetimibe.[34]

Important side effects include myopathy and rhabdomyolysis. Contraindicated in hepatic failure since it may cause a rise in hepatic transaminases.Also contraindicated in pregnancy and lactation.It should be used cautiously in patients with Diabetes, since it increases the $HbA_1C$ levels.[34]

The effects of rosuvastatin on LDL cholesterol are dose-related. Higher doses are more efficacious in improving the lipid profile of patients with hypercholesterolemia.As an adjunct to DMARDs, rosuvastatin can effectively brings out remission in active RA patients.[34]

## PITAVASTATIN

Pitavastatin has an unique structure that contributes to a number of pharmacological benefits, including increased systemic bioavailability, a high level of oral absorption and potent effects on LDL-C and HDL-C. Being a lipophilic statin it can easily penetrate hepatic and extra hepatic tissues like bone and exert anti-inflammatory effects.[31,32 ,33] Pitavastatin forms a structural analogue of HMG-CoA intermediate and reversibly compete with the inhibitors of HMG Co-A.The bioavailability of pitavastatin is 80% .Food take does not alter its bioavailability.Half-life of the drug is eleven hours.

Pitavastatin is rapidly glucuronized by UGT1A3 and UGT2B7 and then converted to its major inactive metabolite, Pitavastatin lactone . It is metabolized to some extent by CYP2C9 and CYP3A4 in hepatic microsomes.[35]

## USES

Pitavastatin reduce oxidation of LDL-C and protect the endothelium from oxidative stress.In patients with stable CAD, postprandial endothelium-dependent vasodilation is ameliorated by inhibiting oxidative stress. It is also effective in the treatment of patients with metabolic syndrome or Type2 Diabetes, because of its beneficial effects on the atherogenic lipid triad, neutral effects on glycemic control

and reduced potential for drug Interactions.Pitavastatin is found to have anti epileptogenic effect in Pentylenetetrazol induced seizure in mice.[36]

**DOSE, ADMINISTRATION and DURATION:**

Available in tablet form in 1,2 and 4 mg dosage forms.Once daily dosage is enough. Generally other statins are usually administered during night time due to peak enzyme activity but pitavastatin can be taken at any time during the day. Almost 80% of the administered dose is absorbed.

**SIDE EFFECTS, EFFICACY AND SAFETY:**

Common statin-related side effects (headaches, stomach upset, abnormal liver function tests and muscle cramps are similar to other statins.Increased levels of serum uric acid have been reported with pitavastatin. No data available regarding occurrence of myopathy and rhabdomyolysis with Pitavastatin. Gemfibrozil reduces clearance of Pitavastatin and raises blood concentrations of the drug.

Pitavastatin is generally well tolerated in hyperlipidemic patients with or without type 2 diabetes, with the most common treatment-related adverse events being musculoskeletal or gastrointestinal in nature. Increases in plasma creatine kinase levels were seen in <5% of pitavastatin recipients and the incidence of myopathy or rhabdomyolysis are extremely low.[37,38,39]

Pitavastatin should be carefully administered in patients with liver diseases since plasma concentration of the drug increases in hepatic failure. Pitavastatin is contraindicated in pregnancy and lactation.[33]

**Drug interactions**

Pitavastatin like Rosuvastatin appears to be a substrate of CYP2C9, and not CYP3A4 (which is a common source of interactions in other statins). As a result, pitavastatin is less likely to interact with drugs that are metabolized via CYP3A4, which might be important for patients with active RA with co-morbid conditions.pitavastatin is contraindicated only in patients treated with cyclosporine or lopinavir/ritonavir combination therapy. Administration should be temporarily suspended in patients receiving erythromycin or fusidic acid, however, and the dosage should be limited to 2 mg in people treated with rifampicin. As for other statins, pitavastatin should be used with caution in people treated with fibrates or niacin.[35]

## CLINICAL OUTCOME OF PITAVASTATIN IN RHEUMATOID ARTHRITIS

Loss of bone mass is frequently seen in patients with RA and the main causes of osteoporosis are steroid therapy, postmenopausal changes in hormone balance (postmenopausal osteoporosis), and disuse bone atrophy associated with periarticular impairment. Bone and cartilage

damage in RA results from an imbalance between synthesis and degradation due to cellular and cytokine-mediated inflammation. Increased bone resorption in RA is linked to the facilitation of osteoclast differentiation and activation by inflammatory cytokines of TNF-α and IL-1.Osteoprotegerin (OPG), a soluble decoy receptor with homology to the members of the TNF receptor family, binds to the receptor activator of NF-_B ligand (RANKL) and blocks interactions with the receptor activator of NF-B.An imbalance in this system may play a part in the skeletal complications of RA. Statins have recently been reported to stimulate bone formation in vivo by stimulating osteoblastogenesis, and by inhibiting osteoclastogenesis in human bone marrow cell culture and also by inhibiting bone loss induced by steroids in animal studies.They also increase new bone formation from osteoblasts and accelerate the promoter activity of bone morphogenic protein-2 (BMP-2), a member of the BMP family.[40,41]

A study comparing cost effectiveness of Pitavastatin versus Atorvastatin showed Pitavastatin is cost effective in managing hypercholesterolemia. Compared to other statins Pitavastatin is less likely to cause myopathy and maintains a good glycemic control in diabetic patients.It effectively increases HDL-C levels also.[30]

This review of literature clearly depicted that depicted that pleiotropic effect of Pitavastatin and its beneficial role in cardiovascular disorders, malignancies, autoimmune disorders,Alzheimers disease etc. Pitavatatin as an adjuvant with DMARDs in active RA, may mitigates inflammation,prevents osteoporosis and risk for CVD and thereby reduces morbidity along with early mortality.

# MATERIALS AND METHODS

## Ethics Approval

The study was conducted after obtaining institutional ethical clearance certificate from Institutional Ethical Committee (IEC), Research Cell of Chennai Medical College Hospital and Research Centre (Affiliated to The Tamilnadu Dr. M.G.R. Medical University), Irungalur, Tiruchirapalli. The approval letter was enclosed as Appendix A.

## Study Design

A prospective, open labelled, parallel arm, randomized, single centre study performed in a tertiary care teaching hospital(Chennai Medical College Hospital & Research Centre (SRM Groups), Irungalur, Tiruchirapalli) conducted at outpatient clinics. Total duration of the study period was 24 weeks. All patients were having active RA and on oral first line DMARD,Methotrexate at the time of recruitment.

**Chemicals:** Methotrexate, Pitavastatin, Rosuvastatin

## Informed Consent

Written informed consent was obtained from each subject who were willing to participate in the study, after being explained personally about the purpose, potential risks regarding the study.

**Inclusion criteria:-**

Active Rheumatoid arthritis patients of both sex, in the age group of 20 – 60 years according to American College of Rheumatology (ACR) criteria and on a dose of Methotrexate7.5mg weekly for the last three months will be selected for this study.

**Active RA at the time of screening:-**Patients with More than or equal to 6 swollen joints / 6 tender joints(from 68 joint count), CRP more than or equal to 1.5mgs/dl, ESR more than or equal to 28mm in the 1$^{st}$hour, Morning stiffness more than or equal to 45 minutes)

**Exclusion criteria**

Patients on hypolipidemic drugs, steroids therapy, Vitamin D3 therapy, Patient with severe Rheumatoid arthritis as per ACR Criteria-Stage IV, Diabetic patients, Pregnancy and lactation, Liver failure, Renal failure, Patients with myopathies and pancytopenia.

**Sample Size**

Total 90 active Rheumatoid arthritis patients who fulfilled the inclusion and exclusion criteria attending the medicine outpatient department at Chennai Medical College Hospital and Research Centre, Irungalur, Tiruchirapalli were selected after obtaining written informed consent.Selected study subjects were

randomized by simple randomization technique and divided in to 3 groups of 30 each. The detailed study description was depicted in table 1.

Subjects in each group were treated as follows and continued without any changes in the treatment for the entire course of the study.

**Table 1: Description of study groups (n=90)**

| Group | No. of subjects | Subject descriptions |
|---|---|---|
| **I** | **30** | Patients with Rheumatoid arthritis with active disease on Tab. Methotrexate 12.5 mg weekly. |
| **II** | **30** | Patients with Rheumatoid arthritis with active disease on Methotrexate7.5 mg weekly + Tab.Rosuvastatin 10 mg once Daily. |
| **III** | **30** | Patients with Rheumatoid arthritis with active disease on Methotrexate 7.5mg weekly + Tab.Pitavastatin 1mg once daily |

All the subjects were provided with a general questionnaire which includes thorough past and present medical history and detailed medication information. None of the subjects included in this study are allowed to change their medication regimens during the entire study period in order to avoid the experimentation bias.Blood samples were collected from the subjects on $0^{th}$ day at the end of $4^{th}$, $8^{th}$ and $12^{th}$ weeks of the study period.

**Demographic and Clinical Data**

Baseline demographic data including age, sex were determined, medications prescribed for diabetes treatment were documented using a structured questionnaire during the subject's visit and validated from medical records. Clinical characteristics including body weight, height, body mass index, systolic and diastolic blood pressure of all subjects were measured**.**

**Anthropometric measurements**

- All the measurements were recorded by a single observer
- A digital scale was used for measuring the weight, which was adjusted to the nearest 0.1 kg.
- A wall - mounted stadiometer was used for measuring the height and was adjusted to the Nearest 0.1cm.BMI was calculated as BMI = Weight (kg) / Height $(m)^2$

**Blood pressure determination**

Blood pressure is measured by means of a sphygmomanometer

**Blood pressure levels**

| Criteria(s) | Blood pressure levels | |
|---|---|---|
| | **Systolic (mmHg)** | **Diastolic (mmHg)** |
| Normal | Less than 120 | Less than 80 |
| At risk (pre hypertension) | 120-139 | 80-89 |
| High | 140 and above | 90 and above |

**Disease Activity Score (DAS)**

DAS is calculated according to the standard formula based on tender joint count (TJC),swollen joint count (SJC),ESR and assessment of general health (GH) based on the scores between 0- 100 from the patient. The joints involved include shoulders,metacarpophalangeal joints,proximal interphalangeal joints,elbows,wrists and knees of both sides contributing to a score of 28.Estimation done at every visit.

DAS- 28= $0.56\sqrt{TJC28} + 0.28\sqrt{SJC28} + 0.70\ log\ ESR + (\ 0.014\ \times GH)$

**Blood sample collection:**

About 4 ml of blood was collected during each visit by vene puncture under aseptic precautions in a sterile dry clean container.EDTA was the anticoagulant added.Serum was used for analysis.

**Immunological Parameters.**

The immunological parameters were estimated by Enzyme Linked Immuno Sorbent Assay (ELISA)

**Rheumatoid Factor (RF) test**

Detects IgM antibodies to IgG antigen. The purified antigen is bound to a solid phase microassay well. Patient serum samples are diluted and added to each well. If antibody is present in the patient's serum, antigen-antibody

complexes are formed. The absorbance of the solution, measured at 450 nm, is directly related to the concentration of IgM antibody .Values more than 7.7 IU are considered to be positive,with the presence of detectable antibodies.

**Anti-CCP**

Intended for the quantitative determination of IgG class antibodies directedagainst cyclic citrullinated peptides, present in human serum or plasma. Procedure same as estimation of RF. The lowest concentration of Anti-CCP detected is 1.12 U /ml with 98% confidence value.

- Complete hemogram was done by Auto Analyzer method. ESR was measured by Westergren method as the method of choice. The Westergren method uses EDTA as an anticoagulant. The reference range is for men < 15 mm/hr - 20 mm/hr and for women < 20 mm/hr - 30 mm/hr.CRP measured by Latex Agglutination test. The reference range is normal upto10mg/L and High-sensitivity if < 3 mg/L.

**Biochemical evaluation**

Blood samples were collected from the subjects to measure the biochemical parameters in all the three test groups on $0^{th}$ day at the end of $4^{th}$, $8^{th}$ and $12^{th}$ weeks of the study period.

The following biochemical parameters were determined

1. Blood Glucose
2. Blood Urea
3. Serum Creatinine
4. SGOT,SGPT
5. ALP
6. Lipid Profile
    i. Total cholesterol
    ii. Triglycerides
    iii. High density lipoprotein (HDL)
    iv. Low density lipoprotein (LDL)

**Blood glucose estimation**

Blood glucose estimation was done by glucose oxidase-peroxidase method . Random blood glucose was measured.Reference value is 140 to 160 mgs /dl .Blood urea was estimated by urease GLDH method . Reference value is 10 to 50 mg / dl.

- Estimation of serum creatinine was done by Modified JAFFE'S method. When sodium hydroxide is added to creatine containing sample,reddish orange colour has been formed.Results are analysed by calorimetry.The reference value is 0.5 to 1.5 mg / dl.

❖ Estimation of liver enzymes ,Serum Glutamic Oxaloacetic Transaminase, (SGOT), Serum Glutamic Pyruvic Transaminase(SGPT), and serum Alkaline Phosphatase (ALP) were done by International Federation of Clinical Chemistry and Laboratory medicine (IFCC) method.

**Lipid Profile**

Blood should be collected after a 12-hour fast (no food or drink, except water).

**Total Cholesterol (TC)**

The TC was estimated by CHOD method. The normal range of the total cholesterol is 75-169 mg/dL for those age 20 and younger and100-199 mg/dL for those over age 21.

**High Density Lipoprotein (HDL)**

HDL levels were calculated by spectrophotometric method .The value of HDL is better if it is greater than 40 mg/dL. A high HDL level is related to lower risk of heart and blood vessel disease.

**Low Density Lipoprotein (LDL)**

LDL fractions were precipitated using PEG 6000 and determined spectrometrically.The ranges of LDL in blood are

- Less than 70 mg/dL for those with heart or blood vessel disease and for other patients at very high risk of heart disease (those with metabolic syndrome)
- Less than 100 mg/dL for high risk patients (multiple risk factors for coronary vascular diseases)

- Less than 130 mg/dL for individuals who are at low risk for coronary artery disease

**Triglycerides (TG)**

Triglycerides are quantitatively determined spectrometrically by enzymatic measurement of glycerol and total triglycerides in serum at 540 nm.A normal fasting level is 150 milligrams per deciliter (mg/dL).Borderline high level is 150 to 199 mg/dL.A high level is 200 to 499 mg/dL.

The estimation of VLDL cholesterol was done by Friedwald calculation method.

$$\text{VLDL} = \frac{\text{Triglycerides}}{5}$$

## STATISTICAL ANALYSIS

All the data was initially entered to Microsoft Excel 2010 and later these spreadsheets were used for analysis. Statistical analysis was done using SPSS version 20.0.

- Descriptive statistics were calculated as frequency, percentage, mean and standard deviation. Descriptive data were represented using various tables, graphs, diagrams etc.
- For all the statistical tests of significance, p value of $<0.05$ was considered to reject the null hypothesis.
- After the normality tests showed normal distribution of continuous variables, ANOVA test for repeated measures using a General linear model was done to test the difference in means at various time intervals between the three groups of study subjects followed by Bonferroni post-Hoc test for inter-group comparisons. Profile plots and estimated marginal means were studied for each variable.
- For categorical nominal variables, Chi-square test was done to test the association between the variables.

# RESULTS

Ninety active Rheumatoid arthritis patients who were included at the start of the study were followed till the end of the study. No lost to follow up or adverse drug reactions were reported.

**Table 1 Age distribution of the study population (n=90)**

About 41% of the study subjects were in the age group of 41 to 50 years while 35% were aged 51-60 years.

| **Age group** | **Frequency** | **Percentage** |
|---|---|---|
| 31-40 years | 19 | 21.1 |
| 41-50 years | 37 | 41.1 |
| 51-60 years | 32 | 35.6 |
| 61-70 years | 2 | 2.2 |
| Total | 90 | 100.0 |

Mean age (± S.D): 48.32 (7.49) years, minimum: 34 years, maximum: 70 years.

**Fig.1: Bar chart showing age distribution of the study population**

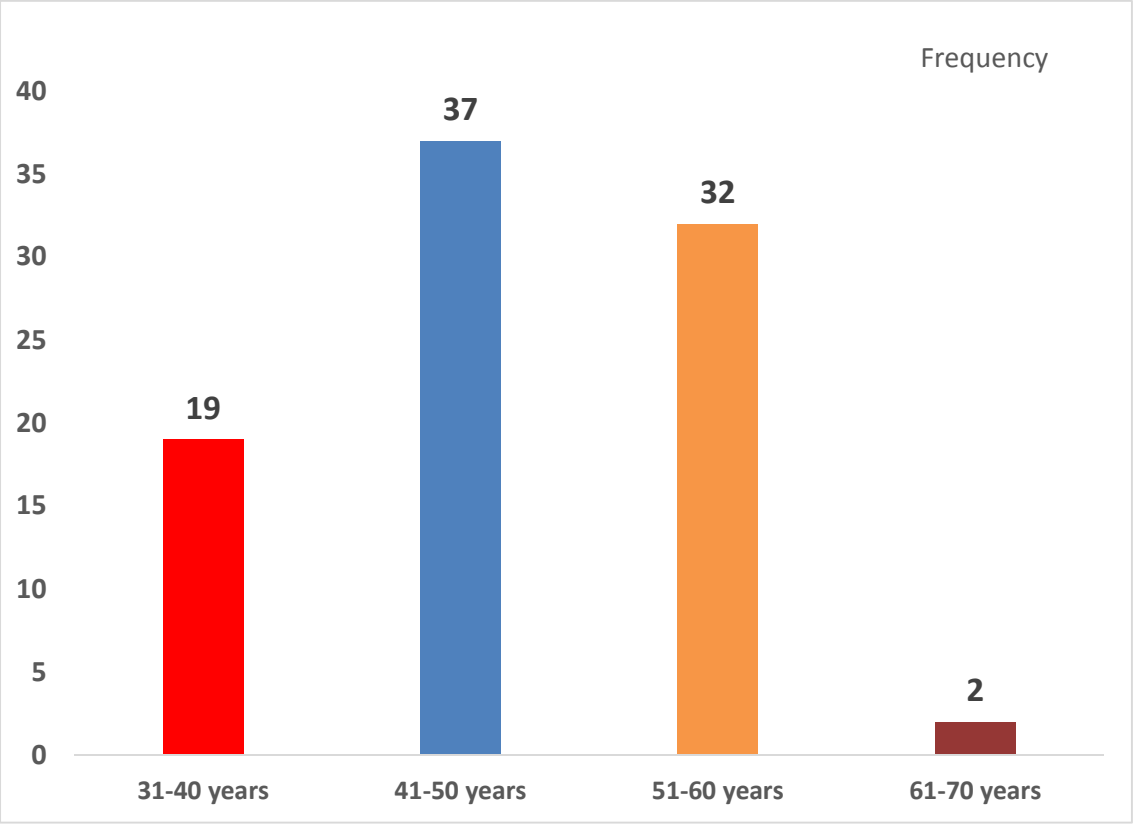


**Table 2 Gender distribution of the study population (n=150)**

Though the number of females were more in each group,Males and females were equally distributed across all 3 groups as the difference was not statistically significant.

| Gender | Group 1 N (%) | Group 2 N (%) | Group 3 N (%) | Total N (%) |
|---|---|---|---|---|
| Female | 19 (32.2) | 20 (33.9) | 20 (33.9) | 59 (100) |
| Male | 11 (35.5) | 10 (32.3) | 10 (32.3) | 31 (100) |
| Total | 30 (33.3) | 30 (33.3) | 30 (33.3) | 90 (100) |

Chi square p value: 0.952

**Fig.2: Clustered Bar chart showing gender distribution of the study population**

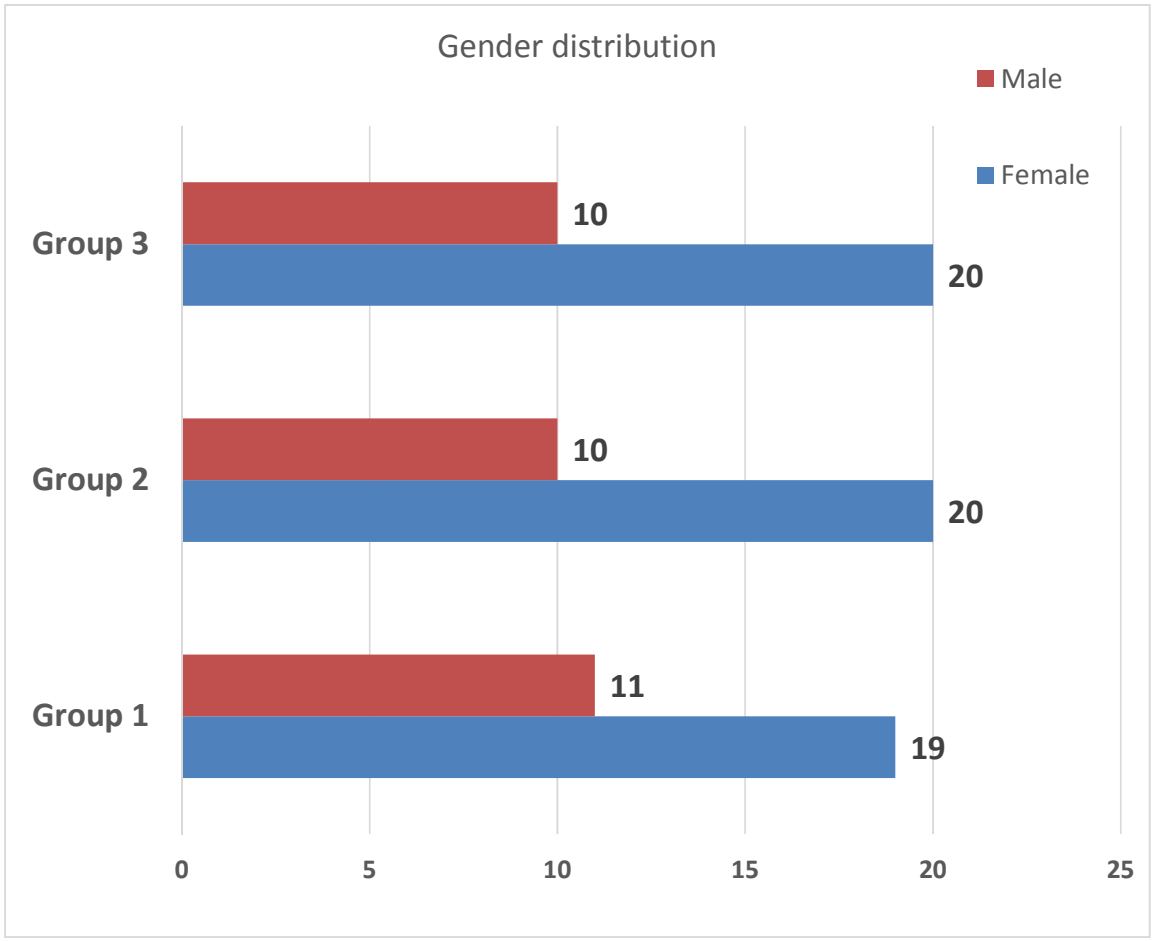


**Table 3 Descriptive statistics of various parameters in the study population (n=90)**

| Statistic | Mean (± Std. Deviation) | Minimum | Maximum |
|---|---|---|---|
| Weight (Kg) | 69.11 ± 13.43 | 47 | 97 |
| Height (in cm) | 163.0 ± 11.14 | 142 | 184 |
| BMI ($Kg/m^2$) | 25.73 ± 3.80 | 15.60 | 36.16 |

**Table 4 Distribution of BMI across the 3 groups (n=90)**

The differences in the distribution of overweight and obese individuals across the groups were not statistically significant.

| **BMI group** | **Group** | | | **Total** |
|---|---|---|---|---|
| | **1** | **2** | **3** | |
| Underweight (<18.5) | 0 | 2 | 0 | 2 |
| | 0.0% | 100.0% | 0.0% | 100.0% |
| Normal (18.5-22.9) | 5 | 7 | 6 | 18 |
| | 27.8% | 38.9% | 33.3% | 100.0% |
| Overweight (23 - 24.9) | 8 | 7 | 5 | 20 |
| | 40.0% | 35.0% | 25.0% | 100.0% |
| Obesity (≥ 25) | 17 | 14 | 19 | 50 |
| | 34.0% | 28.0% | 38.0% | 100.0% |
| Total | 30 | 30 | 30 | 90 |
| | 33.3% | 33.3% | 33.3% | 100.0% |

Chi square p value: 0.447

**Fig.3: Stacked Bar chart showing Distribution of BMI across the 3 groups**

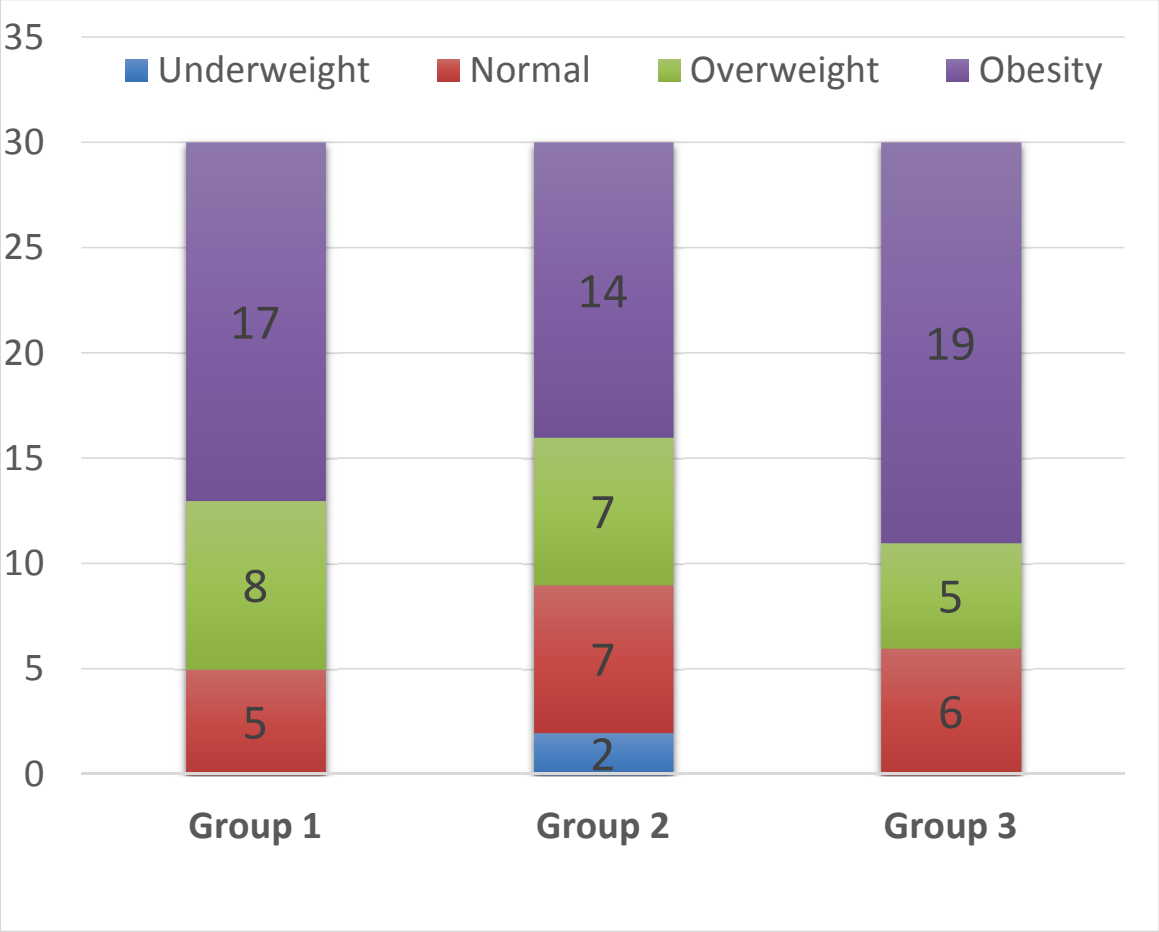


**Table 5 Distribution of Disease activity score across the 3 groups at various time periods (n=90)**

A mean reduction in DAS was seen from the baseline at 4th ,8th and 12th weeks of the study in all the groups and a significant reduction is seen in group 3,having baseline value of 6.54 to 3.03 at the end of the study**.**

| **Disease activity score** | **Group** | | |
|---|---|---|---|
| | **1** | **2** | **3** |
| | Mean ± Std. Deviation | Mean ± Std. Deviation | Mean ± Std. Deviation |
| Baseline | 6.86 ± 0.76 | 6.49 ± 0.85 | 6.54 ± 0.67 |
| 4 weeks | 6.34 ± 0.73 | 5.96 ± 0.73 | 5.39 ± 0.54 |
| 8 weeks | 5.96 ± 0.75 | 5.56 ± 0.72 | 4.14 ± 0.54 |
| 12 weeks | 5.60 ± 0.91 | 5.11 ± 0.74 | 3.03 ± 0.50 |

ANOVA for repeated measures using a General linear model was done to test the difference in mean Disease activity scores at various time intervals between the three groups followed by Bonferroni post-Hoc test for inter-group comparisons.

**ANOVA test**

| | |
|---|---|
| p value | <0.001 |
| F statistic | 36.63 |
| Degree of freedom | 2 |
| Partial Eta square | 0.457 |

**Estimated marginal means of DAS**

| Group | Mean ± Std. Error | 95% Confidence Interval | |
|---|---|---|---|
| | | Lower Bound | Upper Bound |
| 1 | 6.188 ± 0.120 | 5.949 | 6.426 |
| 2 | 5.783 ± 0.120 | 5.544 | 6.022 |
| 3 | 4.776 ± 0.120 | 4.537 | 5.015 |

**Bonferroni Post-Hoc test**

Bonferroni test showed that the difference in reduction in mean DAS scores between Group 1 Vs Group 3 and Group 2 Vs Group 3 was statistically significant (p value: <0.001). This implies group 3 can effectively decrease DAS.

| Dependent Variable (DAS score) | Mean Difference ($1^{st}$ - $2^{nd}$) | p value | 95% Confidence Interval | |
|---|---|---|---|---|
| | | | Lower | Upper |
| Group 1 Vs Group 2 | 0.404 | 0.058 | -0.009 | 0.819 |
| Group 1 Vs Group 3 | 1.411 | <0.001 | 0.996 | 1.82 |
| Group 2 Vs Group 3 | 1.006 | <0.001 | 0.5922 | 1.421 |

**Fig.4: Profile plot showing distribution of Disease activity score across the 3 groups at various time periods**

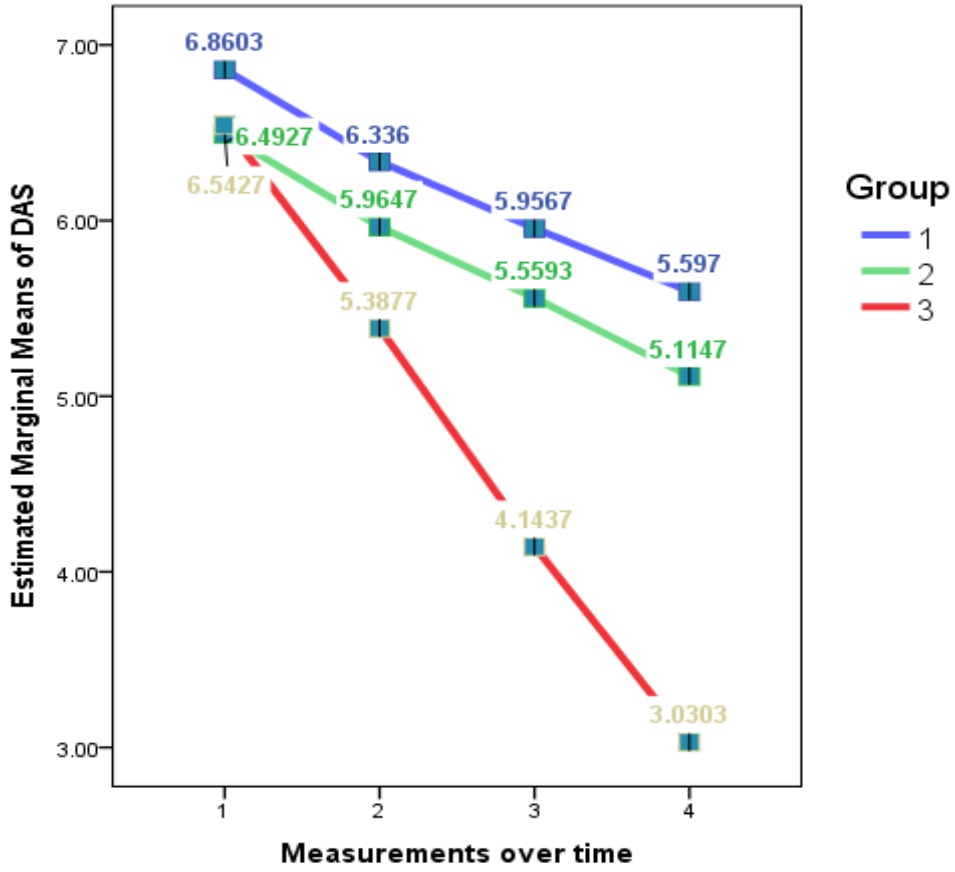


**Table 6 Distribution of serum Rheumatoid Factor levels across the 3 groups at various time periods (n=90)**

A mean reduction in Rheumatoid factor was seen from the baseline to 12th week of the study in all the groups and a significant reduction is seen in group 3,having baseline value of 88.5 to 42.3 at the end of the study**.**

| **Serum RF levels** | **Group** | | |
|---|---|---|---|
| | **1** | **2** | **3** |
| | Mean ± Std Deviation | Mean ± Std Deviation | Mean ± Std Deviation |
| Baseline | 94.3 ± 97.3 | 93.5 ± 98.3 | 88.5 ± 73.8 |
| 12 weeks | 52.8 ± 43.6 | 52.5 ± 71.7 | 42.3 ± 35.5 |
| Mean RF reduction | 30.29 ± 25.15 | 40.45 ± 41.21 | 77.50 ± 82.70 |

ANOVA test was done to test the difference in mean Rheumatoid factor reduction after 12 weeks of therapy between the three groups followed by Bonferroni post-Hoc test for inter-group comparisons.

**ANOVA test**

ANOVA test showed that there was a statistically significant difference in reduction of the mean Rheumatoid factor levels between the three groups.

| | |
|---|---|
| p value | 0.003 |
| F statistic | 6.062 |
| Degree of freedom | 2 |

**Bonferroni Post-Hoc test**

Bonferroni test showed that the difference in reduction in mean RF levels between Group 1 Vs Group 3 and Group 2 Vs Group 3 was statistically significant (p value: <0.05). This data shows group 3 effectively decrease RF compared to other groups.

| **Dependent Variable (RF reduction after 12 weeks)** | Mean Difference (1st - 2nd) | p value | 95% Confidence Interval | |
|---|---|---|---|---|
| | | | Lower | Upper |
| Group 1 Vs Group 2 | -10.1610 | 1.000 | -45.008 | 24.686 |
| Group 1 Vs Group 3 | -47.2166 | 0.004 | -82.064 | -12.368 |
| Group 2 Vs Group 3 | -37.0556 | 0.033 | -71.903 | -2.207 |

**Fig.5: Profile plot showing distribution of RF levels across the 3 groups at various time periods**

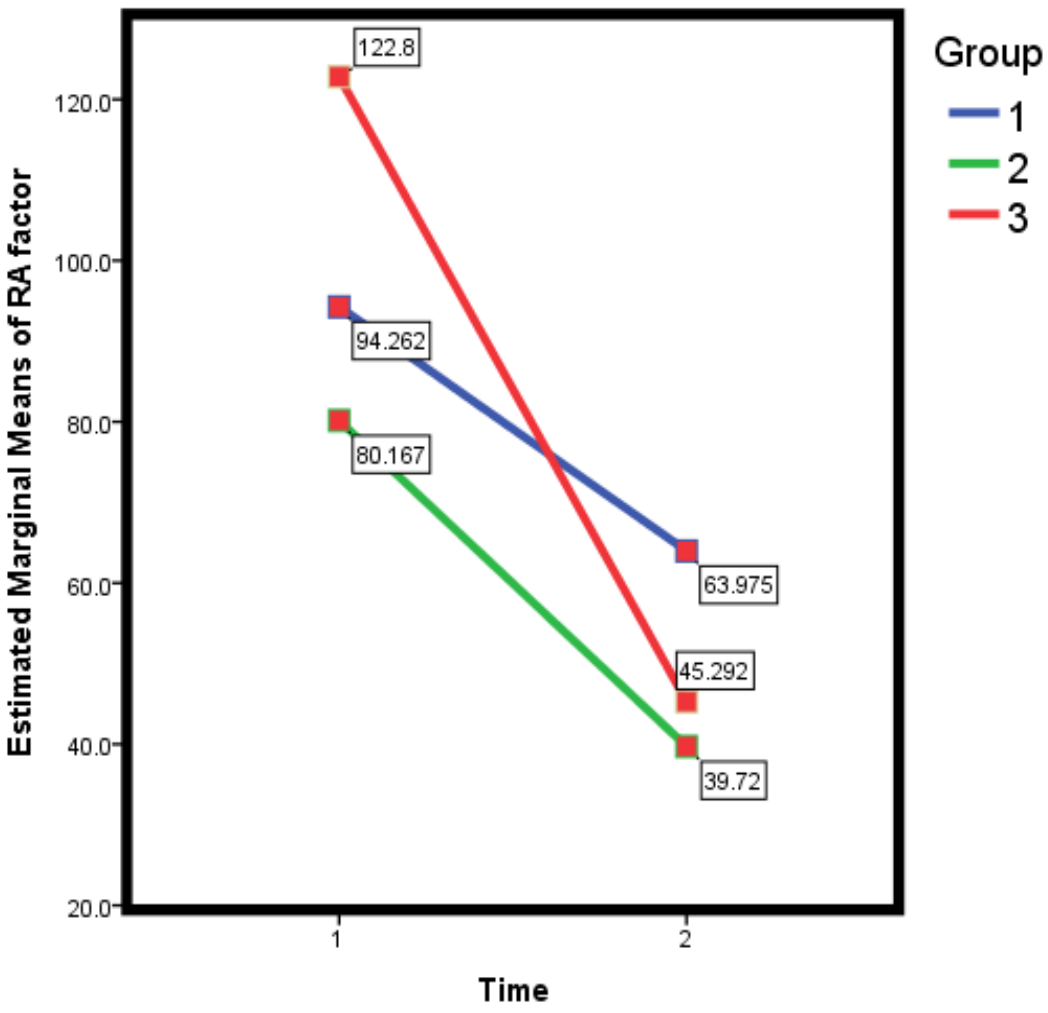


**Table 7 Distribution of serum anti-CCP levels across the 3 groups at various time periods (n=90)**

A mean reduction in anti-CCP level was seen from the baseline to 12th week of the study in all the groups and a significant reduction is seen in group 3,having baseline value of 38.06 to 18.33 at the end of the study**.**

| **Serum anti-CCP levels** | **Group** | | |
|---|---|---|---|
| | **1** | **2** | **3** |
| | Mean ± Std Deviation | Mean ± Std Deviation | Mean ± Std Deviation |
| Baseline | 41.61 ± 44.35 | 48.84 ± 43.57 | 38.06 ± 34.41 |
| 12 weeks | 21.79 ± 17.29 | 29.82 ± 34.16 | 18.33 ± 14.89 |
| Mean anti-CCP reduction | 11.15 ± 12.80 | 18.36 ± 13.47 | 32.40 ± 25.88 |

ANOVA test was done to test the difference in mean anti-CCP reduction after 12 weeks of therapy between the three groups followed by Bonferroni post-Hoc test for inter-group comparisons.

**ANOVA test**

ANOVA test showed that there was a statistically significant difference in reduction of the mean anti-CCP levels between the three groups.

| | |
|---|---|
| p value | <0.001 |
| F statistic | 10.356 |
| Degree of freedom | 2 |

**Bonferroni Post-Hoc test**

Bonferroni test showed that the difference in reduction in mean anti-CCP levels between Group 1 Vs Group 3 and Group 2 Vs Group 3 was statistically significant (p value: <0.05).Group 3 is superior in reducing the anti- CCP values.

| **Dependent Variable (Anti-CCPreduction after 12 weeks)** | Mean Difference (1st - 2nd) | p value | 95% Confidence Interval | |
|---|---|---|---|---|
| | | | Lower | Upper |
| Group 1 Vs Group 2 | -7.211 | 0.398 | -18.804 | 4.382 |
| Group 1 Vs Group 3 | -21.250 | <0.001 | -32.843 | -9.657 |
| Group 2 Vs Group 3 | - 14.039 | 0.012 | -25.632 | -2.446 |

**Fig.6: Profile plot showing distribution of serum anti-CCP levels across the 3 groups at various time periods**

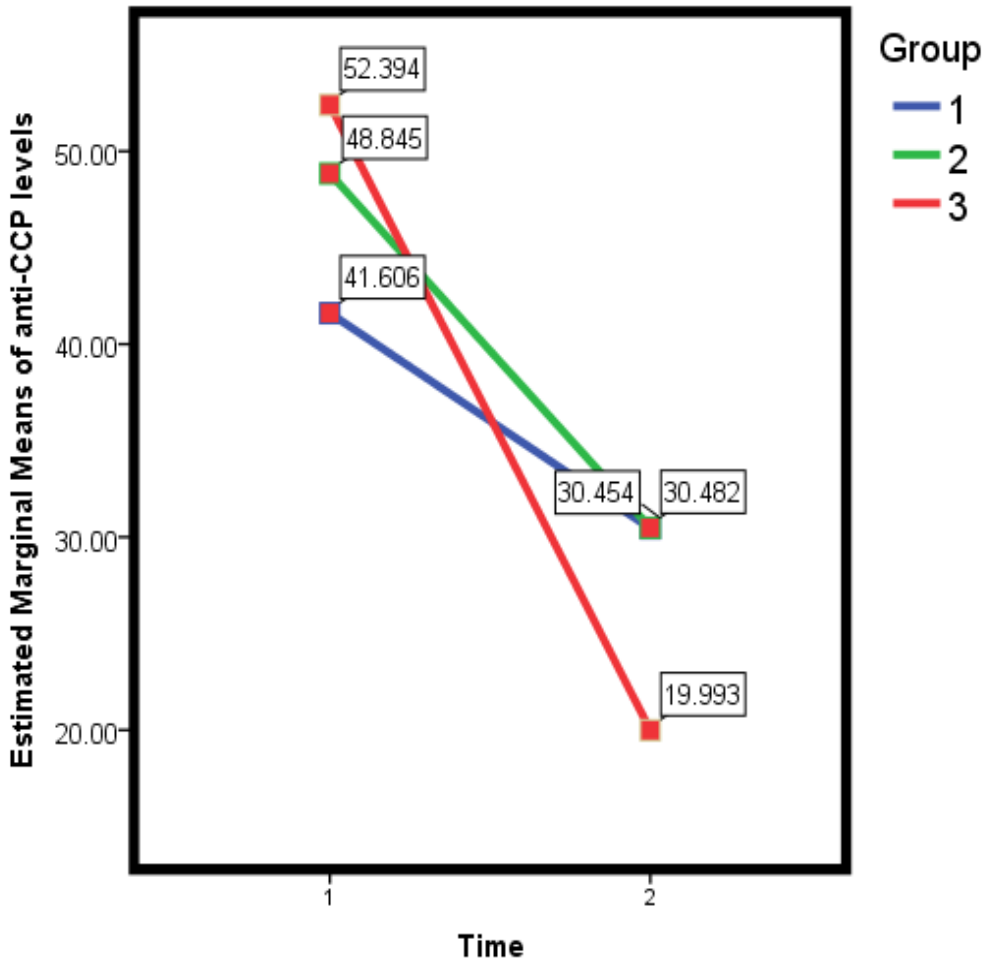


**Table 8 Distribution of mean hemoglobin levels across the 3 groups at various time periods (n=90)**

A reduction in mean hemoglobin levels was found in all the groups but not statistically significant.

| **Hemoglobin levels** | **Group** | | |
|---|---|---|---|
| | **1** | **2** | **3** |
| | Mean ± Std Deviation | Mean ± Std Deviation | Mean ± Std Deviation |
| Baseline | 12.8 ± 15.4 | 12.8 ± 14.6 | 10.4 ± 1.2 |
| 4 weeks | 12.7 ± 16.1 | 10.0 ± 1.0 | 10.1 ± 1.1 |
| 8 weeks | 12.6 ± 16.5 | 9.7 ± 0.9 | 9.9 ± 1.1 |
| 12 weeks | 12.4 ± 15.8 | 9.6 ± 0.9 | 9.7 ± 1.0 |

ANOVA for repeated measures using a General linear model was done to test the difference in mean hemoglobin levels at various time intervals between the three groups followed by Bonferroni post-Hoc test for inter-group comparisons.

**ANOVA test**

Since the ANOVA test for repeated measures was not statistically significant, post-hoc test was not done. Hence, the difference in mean hemoglobin levels at various time intervals between the three groups was not statistically significant. (p value: > 0.1).

| | |
|---|---|
| p value | 0.535 |
| F statistic | 0.631 |
| Degree of freedom | 2 |
| Partial Eta square | 0.014 |

**Estimated marginal means of Hemoglobin levels**

| Group | Mean ± Std. Error | 95% Confidence Interval | |
|---|---|---|---|
| | | Lower Bound | Upper Bound |
| 1 | 12.620 ± 1.730 | 9.182 | 16.058 |
| 2 | 10.528 ± 1.730 | 7.090 | 13.967 |
| 3 | 10.032 ± 1.730 | 6.593 | 13.470 |

**Table 9 Distribution of total WBC count across the 3 groups at various time periods (n=90)**

A reduction in mean WBC count was found among groups 1 & 3 but not statistically significant.

| Total WBC count | Group | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| | Mean ± Std Deviation | Mean ± Std Deviation | Mean ± Std Deviation |
| Baseline | 9778 ± 1152 | 10103 ± 1082 | 10063 ± 1477 |
| 4 weeks | 9280 ± 1155 | 10800 ± 5700 | 9667 ± 1535 |
| 8 weeks | 8918 ± 1851 | 9627 ± 1195 | 9560 ± 1314 |
| 12 weeks | 8970 ± 1165 | 12137 ± 14920 | 9070 ± 1875 |

ANOVA for repeated measures using a General linear model was done to test the difference in mean total WBC count at various time intervals between the three groups followed by Bonferroni post-Hoc test for inter-group comparisons.

**ANOVA test**

As the ANOVA for repeated measures was not statistically significant, post-hoc test was not done. Hence, the difference in mean total WBC count at various time intervals between the three groups was not statistically significant. (p value: > 0.01).

| | |
|---|---|
| p value | 0.093 |
| F statistic | 2.43 |
| Degree of freedom | 2 |
| Partial Eta square | 0.053 |

**Estimated marginal means of Total WBC count**

| Group | Mean ± Std. Error | 95% Confidence Interval | |
|---|---|---|---|
| | | Lower Bound | Upper Bound |
| 1 | 9236.58 ± 477.085 | 8288.325 | 10184.842 |
| 2 | 10666.66 ± 477.085 | 9718.408 | 11614.925 |
| 3 | 9590.00 ± 477.085 | 8641.741 | 10538.259 |

**Table 10 Distribution of platelet count across the 3 groups at various time periods (n=90)**

The mean platelet levels were not found to be significant among the groups.

| **Platelet count (in lakhs)** | **Group** | | |
|---|---|---|---|
| | **1** | **2** | **3** |
| | Mean ± Std Deviation | Mean ± Std Deviation | Mean ± Std Deviation |
| Baseline | 1.8 ± 0.2 | 2.5 ± 3.7 | 1.9 ± 0.2 |
| 4 weeks | 1.8 ± 0.2 | 1.8 ± 0.2 | 8.5 ± 36.5 |
| 8 weeks | 1.7 ± 0.2 | 5.2 ± 18.9 | 8.4 ± 36.4 |
| 12 weeks | 1.7 ± 0.2 | 5.1 ± 19.0 | 1.7 ± 0.2 |

ANOVA for repeated measures using a General linear model was done to test the difference in mean platelet count at various time intervals between the three groups followed by Bonferroni post-Hoc test for inter-group comparisons.

**ANOVA test**

As the ANOVA for repeated measures was not statistically significant, post-hoc test was not done. Hence, the difference in mean platelet count at various time intervals between the three groups was not statistically significant.(p value: > 0.1).

| | |
|---|---|
| p value | 0.549 |
| F statistic | 0.603 |
| Degree of freedom | 2 |
| Partial Eta square | 0.014 |

**Estimated marginal means of platelet count**

| Group | Mean ± Std. Error | 95% Confidence Interval | |
|---|---|---|---|
| | | Lower Bound | Upper Bound |
| 1 | 1.761 ± 2.169 | -2.550 | 6.071 |
| 2 | 3.650 ± 2.169 | -0.661 | 7.961 |
| 3 | 5.120 ± 2.169 | 0.809 | 9.431 |

**Table 11 Distribution of erythrocyte sedimentation rate (ESR) across the 3 groups at various time periods (n=90)**

A mean reduction in ESR was seen from the baseline at $4^{th}$ ,$8^{th}$ and $12^{th}$ weeks of the study in all the groups and a significant reduction is seen in group 3,having baseline value of 49.7 to 17.1 at the end of the study**.**

| ESR (in mm) | Group | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| | Mean ± Std Deviation | Mean ± Std Deviation | Mean ± Std Deviation |
| Baseline | 49.0 ± 19.7 | 52.1 ± 21.3 | 49.7 ± 11.7 |
| 4 weeks | 39.0 ± 18.0 | 44.8 ± 19.0 | 37.7 ± 10.7 |
| 8 weeks | 34.2 ± 16.2 | 39.7 ± 17.8 | 27.6 ± 8.4 |
| 12 weeks | 29.7 ± 14.4 | 34.1 ± 18.4 | 17.1 ± 3.5 |
| Mean ESR reduction | 19.3 ± 16.0 | 18.0 ± 13.9 | 32.6 ± 10.3 |

ANOVA test was done to test the difference in mean ESR reduction after 12 weeks of therapy between the three groups followed by Bonferroni post-Hoc test for inter-group comparisons.

**ANOVA test**

ANOVA test showed that there was a statistically significant difference in reduction of the mean ESR levels between the three groups.

| | |
|---|---|
| p value | <0.001 |
| F statistic | 10.482 |
| Degree of freedom | 2 |

**Bonferroni Post-Hoc test**

Bonferroni test showed that the difference in reduction in mean ESR levels between Group 1 Vs Group 3 and Group 2 Vs Group 3 was statistically significant (p value: <0.05).Compared to other groups Pitavastatin, methotrexate group reduces ESR values significantly.

| **Dependent Variable (ESR reduction after 12 weeks)** | Mean Difference (1st - 2nd) | p value | 95% Confidence Interval | |
|---|---|---|---|---|
| | | | Lower | Upper |
| Group 1 Vs Group 2 | 1.367 | 1.000 | -7.23 | 9.97 |
| Group 1 Vs Group 3 | -13.233 | 0.001 | -21.83 | -4.63 |
| Group 2 Vs Group 3 | -14.600 | <0.001 | -23.20 | -6.00 |

**Table 12 Distribution of C-reactive protein levels (CRP) across the 3 groups at various time periods (n=90)**

A mean reduction in CRP was seen from the baseline at $4^{th}$ ,$8^{th}$ and $12^{th}$ weeks of the study in all the groups and a significant reduction is seen in group 3,having baseline value of 29.9 to 8.7 at the end of the study**.**

| **CRP levels** | **Group** | | |
|---|---|---|---|
| | **1** | **2** | **3** |
| | Mean ± Std Deviation | Mean ± Std Deviation | Mean ± Std Deviation |
| Baseline | 26.4 ± 8.6 | 32.8 ± 18.1 | 29.9 ± 7.6 |
| 4 weeks | 20.9 ± 8.3 | 27.3 ± 19.4 | 22.1 ± 7.0 |
| 8 weeks | 17.4 ± 7.3 | 21.4 ± 20.3 | 14.9 ± 5.8 |
| 12 weeks | 14.4 ± 6.6 | 16.7 ± 22.5 | 8.7 ± 5.0 |
| Mean CRP reduction | 12.1 ± 5.7 | 16.1 ± 9.0 | 21.2 ± 6.8 |

ANOVA test was done to test the difference in mean CRP reduction after 12 weeks of therapy between the three groups followed by Bonferroni post-Hoc test for inter-group comparisons.

**ANOVA test**

ANOVA test showed that there was a statistically significant difference in reduction of the mean CRP levels between the three groups.

| | |
|---|---|
| p value | <0.001 |
| F statistic | 11.756 |
| Degree of freedom | 2 |

**Bonferroni Post-Hoc test**

Bonferroni test showed that the difference in reduction in mean CRP levels between Group 1 Vs Group 3 and Group 2 Vs Group 3 was statistically significant (p value: <0.05). Pitavastatin ,Methotrexate combination effectively reduces CRP levels.

| **Dependent Variable (CRP reduction after 12 weeks)** | Mean Difference (1st - 2nd) | p value | 95% Confidence Interval | |
|---|---|---|---|---|
| | | | Lower | Upper |
| Group 1 Vs Group 2 | -4.067 | 0.100 | -8.66 | 0.52 |
| Group 1 Vs Group 3 | -9.100 | 0.001 | -13.69 | -4.51 |
| Group 2 Vs Group 3 | -5.033 | 0.027 | -9.62 | -0.44 |

**Table 13 Distribution of blood glucose levels across the 3 groups at various time periods (n=90)**

| Blood glucose levels (mgs%) | Group | | |
|---|---|---|---|
| | **1** | **2** | **3** |
| | Mean ± Std Deviation | Mean ± Std Deviation | Mean ± Std Deviation |
| Baseline | 115 ± 25 | 106 ± 25 | 112 ± 20 |
| 4 weeks | 112 ± 23 | 108 ± 27 | 111 ± 13 |
| 8 weeks | 116 ± 23 | 110 ± 28 | 109 ± 12 |
| 12 weeks | 113 ± 23 | 112 ± 28 | 108 ± 10 |

ANOVA for repeated measures using a General linear model was done to test the difference in mean blood glucose levels at various time intervals between the three groups followed by Bonferroni post-Hoc test for inter-group comparisons.

**ANOVA test**

As the ANOVA for repeated measures was not statistically significant, post-hoc test was not done. Hence, the difference in mean blood glucose levels at various time intervals between the three groups was not statistically significant. (p value: > 0.1).

| | |
|---|---|
| p value | 0.659 |
| F statistic | 0.419 |
| Degree of freedom | 2 |
| Partial Eta square | 0.010 |

**Estimated marginal means of blood glucose levels**

| Group | Mean ± Std. Error | 95% Confidence Interval | |
|---|---|---|---|
| | | Lower Bound | Upper Bound |
| 1 | 113.917 ± 3.907 | 106.151 | 121.683 |
| 2 | 109.142 ± 3.907 | 101.376 | 116.908 |
| 3 | 110.083 ± 3.907 | 102.317 | 117.849 |

**Table 14 Distribution of blood urea levels across the 3 groups at various time periods (n=90)**

| Blood urea levels (mgs%) | Group | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| | Mean ± Std Deviation | Mean ± Std Deviation | Mean ± Std Deviation |
| Baseline | 29.2 ± 3.2 | 28.2 ± 5.8 | 28.8 ± 2.5 |
| 4 weeks | 28.8 ± 2.7 | 28.6 ± 5.8 | 29.4 ± 2.5 |
| 8 weeks | 29.3 ± 3.5 | 28.4 ± 5.6 | 29.3 ± 2.3 |
| 12 weeks | 29.6 ± 2.7 | 28.6 ± 5.8 | 29.1 ± 2.0 |

ANOVA for repeated measures using a General linear model was done to test the difference in mean blood urea levels at various time intervals between the three groups followed by Bonferroni post-Hoc test for inter-group comparisons.

**ANOVA test**

ANOVA for repeated measures was not statistically significant.So,post-hoc test was not done. Hence, the difference in mean blood urea levels at various time intervals between the three groups was not statistically significant.(p value: > 0.1).

| | |
|---|---|
| p value | 0.666 |
| F statistic | 0.409 |
| Degree of freedom | 2 |
| Partial Eta square | 0.009 |

**Estimated marginal means of blood urea levels**

| Group | Mean ± Std. Error | 95% Confidence Interval | |
|---|---|---|---|
| | | Lower Bound | Upper Bound |
| 1 | 29.233 ± 0.681 | 27.880 | 30.586 |
| 2 | 28.445 ± 0.681 | 27.092 | 29.798 |
| 3 | 29.158 ± 0.681 | 27.805 | 30.511 |

**Table 15 Distribution of serum creatinine levels across the 3 groups at various time periods (n=90)**

| Serum creatinine levels (mgs%) | Group | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| | Mean ± Std Deviation | Mean ± Std Deviation | Mean ± Std Deviation |
| Baseline | 0.940 ± 0.128 | 1.817 ± 4.946 | 0.873 ± 0.083 |
| 4 weeks | 0.897 ± 0.093 | 1.880 ± 5.123 | 0.907 ± 0.087 |
| 8 weeks | 0.937 ± 0.107 | 2.117 ± 5.163 | 0.890 ± 0.088 |
| 12 weeks | 0.913 ± 0.107 | 2.137 ± 5.158 | 0.903 ± 0.081 |

ANOVA for repeated measures using a General linear model was done to test the difference in mean serum creatinine levels at various time intervals between the three groups followed by Bonferroni post-Hoc test for inter-group comparisons.

**ANOVA test**

Since the ANOVA for repeated measures was not statistically significant, post-hoc test was not done. Hence, the difference in mean serum creatinine levels at various time intervals between the three groups was not statistically significant. (p value: > 0.1).

| | |
|---|---|
| p value | 0.257 |
| F statistic | 1.382 |
| Degree of freedom | 2 |
| Partial Eta square | 0.031 |

**Estimated marginal means of serum creatinine levels**

| Group | Mean ± Std. Error | 95% Confidence Interval | |
|---|---|---|---|
| | | Lower Bound | Upper Bound |
| 1 | 0.922 ± 0.531 | -0.133 | 1.976 |
| 2 | 1.987 ± 0.531 | 0.933 | 3.042 |
| 3 | 0.893 ± 0.531 | -0.161 | 1.948 |

**Table 16 Distribution of serum SGOT levels across the 3 groups at various time periods (n=90)**

A mean increment in serum SGOT was seen from the baseline at $4^{th}$ ,$8^{th}$ and $12^{th}$ weeks of the study in all the groups and a significant increase is seen in group 3,having baseline value of 29.300 to 29.600 at the end of the study**.**

| **Serum SGOT levels** | **Group** | | |
|---|---|---|---|
| | **1** | **2** | **3** |
| | Mean ± Std Deviation | Mean ± Std Deviation | Mean ± Std Deviation |
| Baseline | 28.000 ± 1.576 | 28.700 ± 2.087 | 29.300 ± 2.003 |
| 4 weeks | 28.533 ± 1.383 | 28.967 ± 1.586 | 29.467 ± 1.776 |
| 8 weeks | 28.733 ± 1.574 | 29.067 ± 1.680 | 29.433 ± 1.675 |
| 12 weeks | 28.167 ± 1.392 | 29.467 ± 1.525 | 29.600 ± 1.567 |

ANOVA for repeated measures using a General linear model was done to test the difference in mean serum SGOT levels at various time intervals between the three groups followed by Bonferroni post-Hoc test for inter-group comparisons.

**ANOVA test**

ANOVA test showed that there was a statistically significant difference in mean serum SGOT levels between the three groups.

| | |
|---|---|
| p value | 0.012 |
| F statistic | 4.685 |
| Degree of freedom | 2 |
| Partial Eta square | 0.097 |

**Estimated marginal means of serum SGOT levels**

| Group | Mean ± Std. Error | 95% Confidence Interval | |
|---|---|---|---|
| | | Lower Bound | Upper Bound |
| 1 | 28.358 ± 0.255 | 27.851 | 28.866 |
| 2 | 29.050 ± 0.255 | 28.543 | 29.557 |
| 3 | 29.450 ± 0.255 | 28.943 | 29.957 |

**Bonferroni Post-Hoc test**

Bonferroni test showed that the difference in serum SGOT levels between Group 1 Vs Group 3 was statistically significant (p value: < 0.05) and group 3 increases SGOT levels.

| Dependent Variable (serum SGOT levels) | Mean Difference ($1^{st}$ - $2^{nd}$) | p value | 95% Confidence Interval | |
|---|---|---|---|---|
| | | | Lower | Upper |
| Group 1 Vs Group 2 | -0.69 | 0.176 | -1.57 | 0. 19 |
| Group 1 Vs Group 3 | -1.09 | 0.010 | -1.97 | -0.21 |
| Group 2 Vs Group 3 | -0.40 | 0.812 | -1.28 | 0.48 |

**Fig.7: Profile plot showing distribution of SGOT levels across the 3 groups at various time periods**

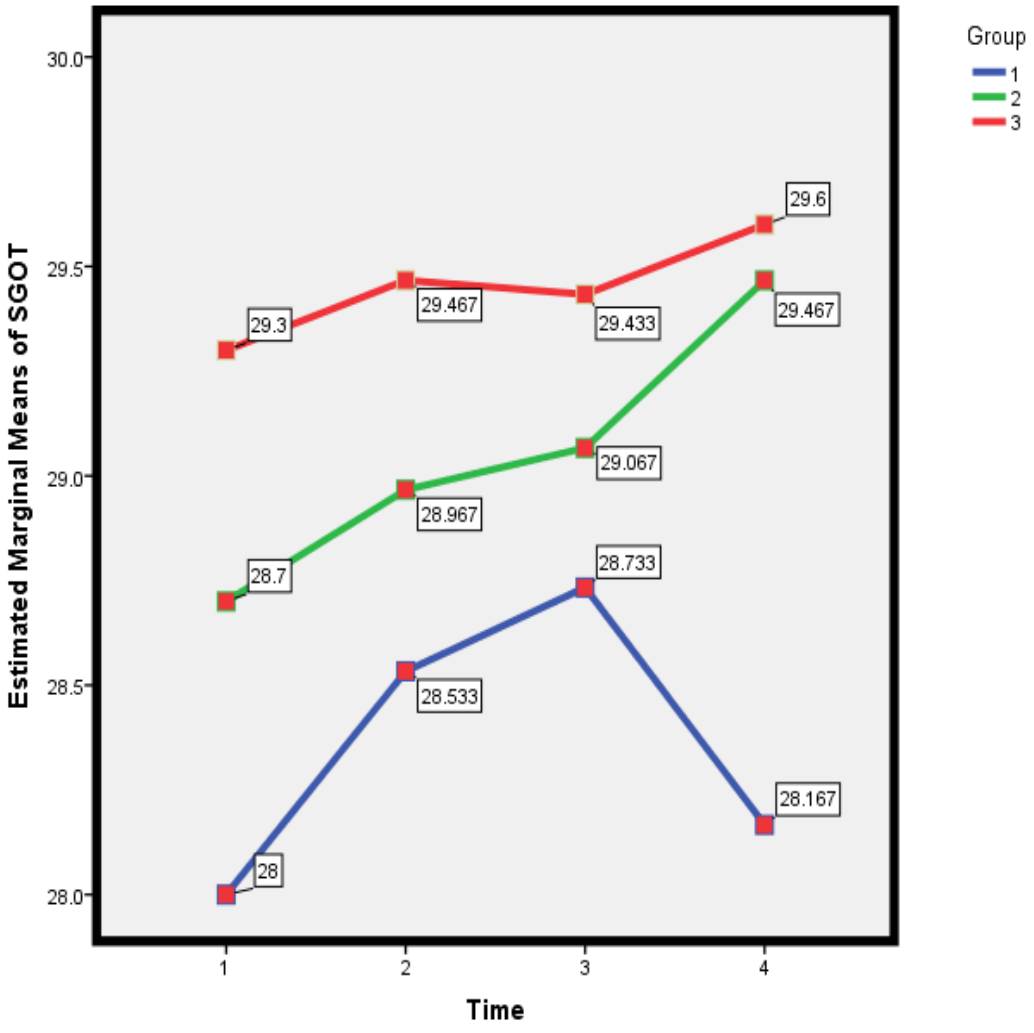


**Table 17 Distribution of serum SGPT levels across the 3 groups at various time periods (n=90)**

A slight increment in mean serum SGPT was seen from the baseline at $4^{th}$ ,$8^{th}$ and $12^{th}$ weeks of the study in all the groups and a significant increase is seen in group 3,having baseline value of 32.30 to 32.83 at the end of the study**.**

| Serum SGPT levels | Group | | |
|---|---|---|---|
| | 1 | 2 | 3 |
| | Mean ± Std Deviation | Mean ± Std Deviation | Mean ± Std Deviation |
| Baseline | 31.10 ± 1.99 | 31.63 ± 2.24 | 32.30 ± 2.00 |
| 4 weeks | 30.90 ± 2.16 | 31.67 ± 2.35 | 32.50 ± 1.55 |
| 8 weeks | 30.70 ± 1.99 | 32.03 ± 2.44 | 32.60 ± 1.52 |
| 12 weeks | 31.20 ± 1.73 | 32.17 ± 2.49 | 32.83 ± 1.29 |

ANOVA for repeated measures using a General linear model was done to test the difference in mean serum SGPT levels at various time intervals between the three groups followed by Bonferroni post-Hoc test for inter-group comparisons.

**ANOVA test**

ANOVA test showed that there was a statistically significant difference in mean serum SGPT levels between the three groups.

| | |
|---|---|
| p value | 0.002 |
| F statistic | 6.598 |
| Degree of freedom | 2 |
| Partial Eta square | 0.132 |

**Estimated marginal means of serum SGPT levels**

| Group | Mean ± Std. Error | 95% Confidence Interval | |
|---|---|---|---|
| | | Lower Bound | Upper Bound |
| 1 | 30.975 ± 0.309 | 30.360 | 31.590 |
| 2 | 31.875 ± 0.309 | 31.260 | 32.490 |
| 3 | 32.558 ± 0.309 | 31.944 | 33.173 |

**Bonferroni Post-Hoc test**

Bonferroni test showed that the difference in serum SGPT levels between Group 1 Vs Group 3 was statistically significant (p value: <0.05). Hence SGPT value elevation was found in group 3 treated individuals.

| **Dependent Variable (serum SGPT levels)** | **Mean Difference ($1^{st}$ - $2^{nd}$)** | **p value** | **95% Confidence Interval** | |
|---|---|---|---|---|
| | | | **Lower** | **Upper** |
| Group 1 Vs Group 2 | -0.90 | 0.128 | -1.97 | 0. 17 |
| Group 1 Vs Group 3 | -1.58 | 0.001 | -2.65 | -0.52 |
| Group 2 Vs Group 3 | -0.68 | 0.365 | -1.75 | 0.38 |

**Fig.8: Profile plot showing distribution of SGPT levels across the 3 groups at various time periods**

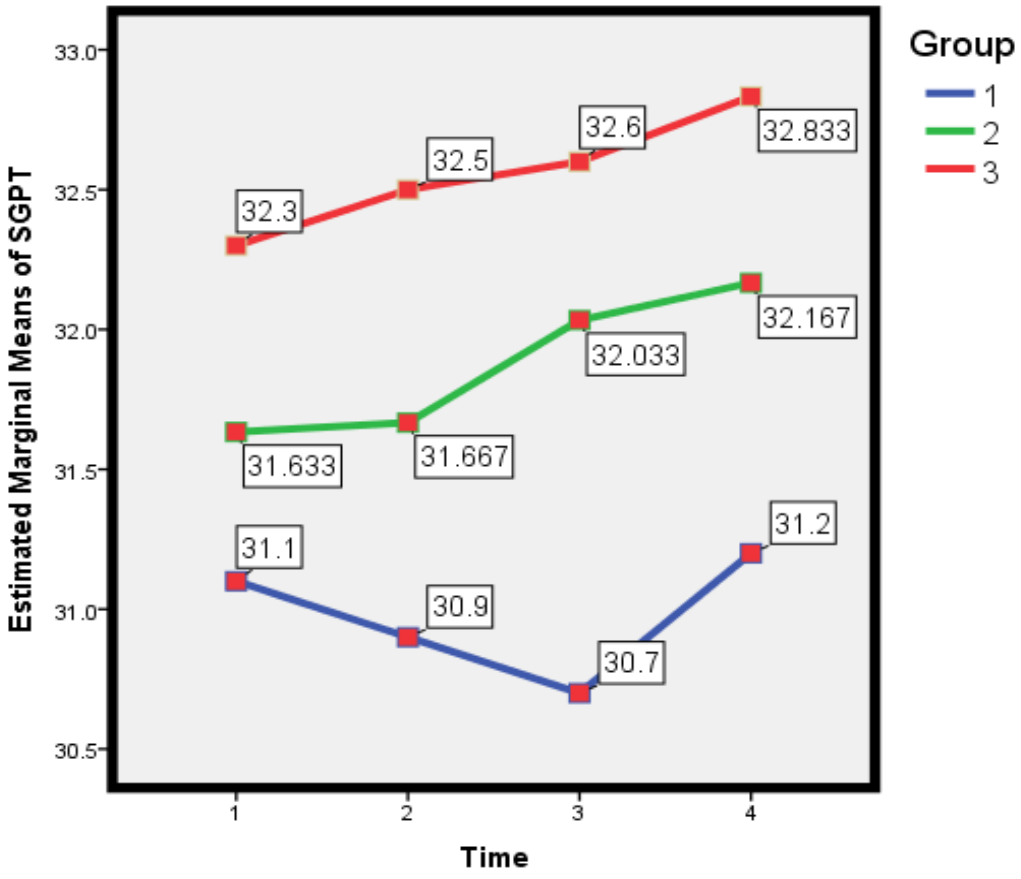


**Table 18 Distribution of serum Alkaline phosphatase (ALP) levels across the 3 groups at various time periods (n=90)**

An insignificant rise in serum ALP was seen from the baseline and at 12th weeks of the study group 3 and an insignificant reduction was seen in groups 2 & 3 as per table:18**.**

| **Serum ALP levels** | **Group** | | |
|---|---|---|---|
| | **1** | **2** | **3** |
| | Mean ± Std Deviation | Mean ± Std Deviation | Mean ± Std Deviation |
| Baseline | 10.40 ± 0.93 | 20.73 ± 36.79 | 10.93 ± 1.14 |
| 4 weeks | 10.10 ± 0.96 | 20.40 ± 36.88 | 10.70 ± 1.06 |
| 8 weeks | 10.20 ± 1.00 | 20.35 ± 36.55 | 10.33 ± 1.06 |
| 12 weeks | 10.47 ± 0.78 | 20.33 ± 36.49 | 10.53 ± 1.04 |

ANOVA for repeated measures using a General linear model was done to test the difference in mean serum ALP levels at various time intervals between the three groups followed by Bonferroni post-Hoc test for inter-group comparisons.

**ANOVA test**

As the ANOVA for repeated measures was not statistically significant, post-hoc test was not done. Hence, the difference in mean serum ALP levels at various time intervals between the three groups was not statistically significant(p value: > 0.1).

| | |
|---|---|
| p value | 0.114 |
| F statistic | 2.229 |
| Degree of freedom | 2 |
| Partial Eta square | 0.049 |

**Estimated marginal means of serum ALP levels**

| Group | Mean ± Std. Error | 95% Confidence Interval | |
|---|---|---|---|
| | | Lower Bound | Upper Bound |
| 1 | 10.292 ± 3.867 | 2.606 | 17.977 |
| 2 | 20.454 ± 3.867 | 12.769 | 28.140 |
| 3 | 10.625 ± 3.867 | 2.940 | 18.310 |

**Table 19 Distribution of serum triglyceride (TGL) levels across the 3 groups at various time periods (n=90)**

A mean reduction in serum TGL was seen from the baseline at $4^{th}$ ,$8^{th}$ and $12^{th}$ weeks of the study in all the groups and a significant increase is seen in group 3,having baseline value of 182.9 to 175.5 at the end of the study**.**

| **Serum TGL levels (mgs %)** | **Group** | | |
|---|---|---|---|
| | **1** | **2** | **3** |
| | Mean ± Std Deviation | Mean ± Std Deviation | Mean ± Std Deviation |
| Baseline | 170.3 ± 23.0 | 189.0 ± 33.2 | 182.9 ± 24.0 |
| 4 weeks | 169.3 ± 22.3 | 188.5 ± 33.7 | 180.4 ± 23.9 |
| 8 weeks | 168.9 ± 22.9 | 187.7 ± 34.5 | 178.0 ± 23.2 |
| 12 weeks | 168.3 ± 22.0 | 186.6 ± 35.5 | 175.5 ± 23.4 |
| Mean TG reduction | 2.0 ± 7.7 | 2.4 ± 5.7 | 7.3 ± 3.1 |

ANOVA test was done to test the difference in mean triglyceride reduction after 12 weeks of therapy between the three groups followed by Bonferroni post-Hoc test for inter-group comparisons.

**ANOVA test**

ANOVA test showed that there was a statistically significant difference in reduction of the mean TG levels between the three groups.

| | |
|---|---|
| p value | 0.001 |
| F statistic | 7.954 |
| Degree of freedom | 2 |

**Bonferroni Post-Hoc test**

Bonferroni test showed that the difference in reduction in mean TG levels between Group 1 Vs Group 3 and Group 2 Vs Group 3 was statistically significant (p value: <0.05). This data implies the superiority of group 3 in reducing triglyceride levels.

| **Dependent Variable (TG reduction after 12 weeks)** | Mean Difference (1st - 2nd) | p value | 95% Confidence Interval | |
|---|---|---|---|---|
| | | | Lower | Upper |
| Group 1 Vs Group 2 | -0.380 | 1.000 | -4.03 | 3.27 |
| Group 1 Vs Group 3 | -5.347 | 0.002 | -9.00 | -1.69 |
| Group 2 Vs Group 3 | -5.033 | 0.004 | -8.62 | -1.31 |

**Fig.9: Profile plot showing distribution of TGL levels across the 3 groups at various time periods**

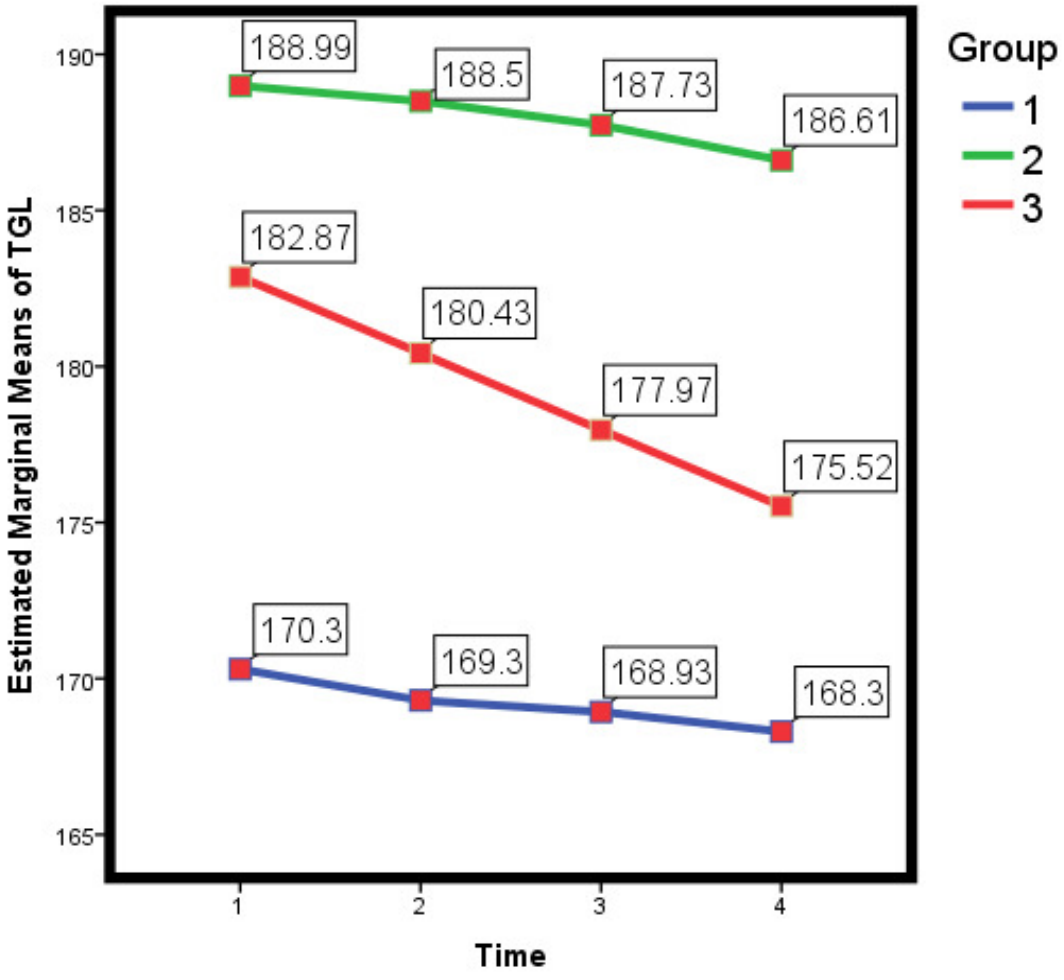


**Table 20 Distribution of serum LDL levels across the 3 groups at various time periods (n=90)**

A mean reduction in serum HDL was seen from the baseline at 4th ,8th and 12th weeks of the study in all the groups and a significant increase is seen in group 3,having baseline value of 132.3 to 123.2 at the end of the study**.**

| **Serum LDL levels (mgs%)** | **Group** | | |
|---|---|---|---|
| | **1** | **2** | **3** |
| | Mean ± Std Deviation | Mean ± Std Deviation | Mean ± Std Deviation |
| Baseline | 124.5 ± 21.8 | 119.7 ± 36.3 | 132.3 ± 19.2 |
| 4 weeks | 123.8 ± 22.0 | 118.1 ± 36.0 | 129.6 ± 18.4 |
| 8 weeks | 123.8 ± 21.7 | 115.7 ± 35.0 | 126.6 ± 18.0 |
| 12 weeks | 124.5 ± 21.9 | 113.0 ± 34.5 | 123.2 ± 17.1 |
| Mean LDL reduction | 0.00 ± 1.76 | 6.76 ± 3.56 | 9.13 ± 3.76 |

ANOVA test was done to test the difference in mean LDL reduction after 12 weeks of therapy between the three groups followed by Bonferroni post-Hoc test for inter-group comparisons.

**ANOVA test**

ANOVA test showed that there was a statistically significant difference in reduction of the mean LDL levels between the three groups.

| | |
|---|---|
| p value | <0.001 |
| F statistic | 67.582 |
| Degree of freedom | 2 |

**Bonferroni Post-Hoc test**

Bonferroni test showed that the difference in reduction in mean LDL levels between Group 1 Vs Group 3, Group 1 Vs Group 2 and Group 2 Vs Group 3 was statistically significant (p value: <0.05).Group 3 can significantly reduce serum LDL levels compared to other groups.

| **Dependent Variable (LDL reduction after 12 weeks)** | Mean Difference (1st - 2nd) | p value | 95% Confidence Interval | |
|---|---|---|---|---|
| | | | Lower | Upper |
| Group 1 Vs Group 2 | -6.756 | <0.001 | -8.75 | -4.77 |
| Group 1 Vs Group 3 | -9.130 | <0.001 | -11.12 | -7.14 |
| Group 2 Vs Group 3 | -2.374 | 0.014 | -4.36 | -0.38 |

**Fig.10: Profile plot showing distribution of LDL levels across the 3 groups at various time periods**

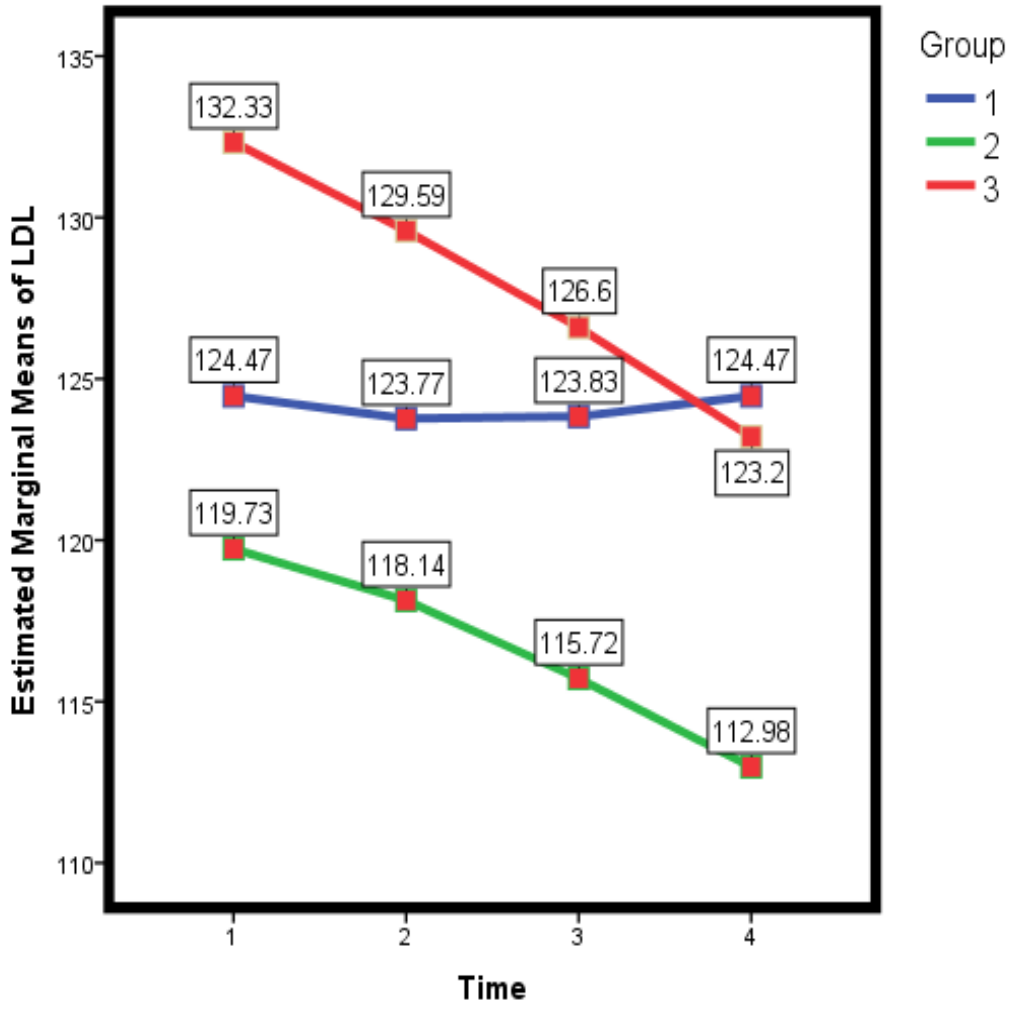


**Table 21 Distribution of serum HDL levels across the 3 groups at various time periods (n=90)**

A mean increment in serum HDL was seen from the baseline at 4th ,8th and 12th weeks of the study in groups 2 & 3 and a significant increase is seen in group 3,having baseline value of 35.79 to 37.87 at the end of the study**.**

| **Serum HDL levels (mgs%)** | **Group** | | |
|---|---|---|---|
| | **1** | **2** | **3** |
| | Mean<br>Std Deviation | Mean<br>Std Deviation | Mean<br>Std Deviation |
| Baseline | 33.33 ± 1.77 | 37.73 ± 23.04 | 35.79 ± 3.41 |
| 4 weeks | 32.87 ± 1.78 | 37.76 ± 23.08 | 36.45 ± 3.03 |
| 8 weeks | 32.90 ± 1.94 | 37.78 ± 23.08 | 37.00 ± 3.15 |
| 12 weeks | 32.83 ± 1.74 | 37.89 ± 22.99 | 37.87 ± 2.91 |
| Mean HDL increase | -0.50 ± 0.90 | 0.15 ± 0.51 | 2.09 ± 0.73 |

ANOVA test was done to test the difference in mean HDL increase after 12 weeks of therapy between the three groups followed by Bonferroni post-Hoc test for inter-group comparisons.

**ANOVA test**

ANOVA test showed that there was a statistically significant difference in mean HDL increase between the three groups.

| | |
|---|---|
| p value | <0.001 |
| F statistic | 101.793 |
| Degree of freedom | 2 |

**Bonferroni Post-Hoc test**

Bonferroni test showed that the difference in rise in mean HDL levels between Group 1 Vs Group 3, Group 1 Vs Group 2 and Group 2 Vs Group 3 was statistically significant (p value: <0.05). This data implies that group 3 was effective in increasing HDL levels.

| **Dependent Variable (HDL rise after 12 weeks)** | Mean Difference (1st - 2nd) | p value | 95% Confidence Interval | |
|---|---|---|---|---|
| | | | Lower | Upper |
| Group 1 Vs Group 2 | -0.653 | 0.002 | -1.11 | -.19 |
| Group 1 Vs Group 3 | -2.587 | <0.001 | -3.05 | -2.13 |
| Group 2 Vs Group 3 | -1.933 | <0.001 | -2.39 | -1.47 |

**Fig.11: Profile plot showing distribution of HDL levels across the 3 groups at various time periods**

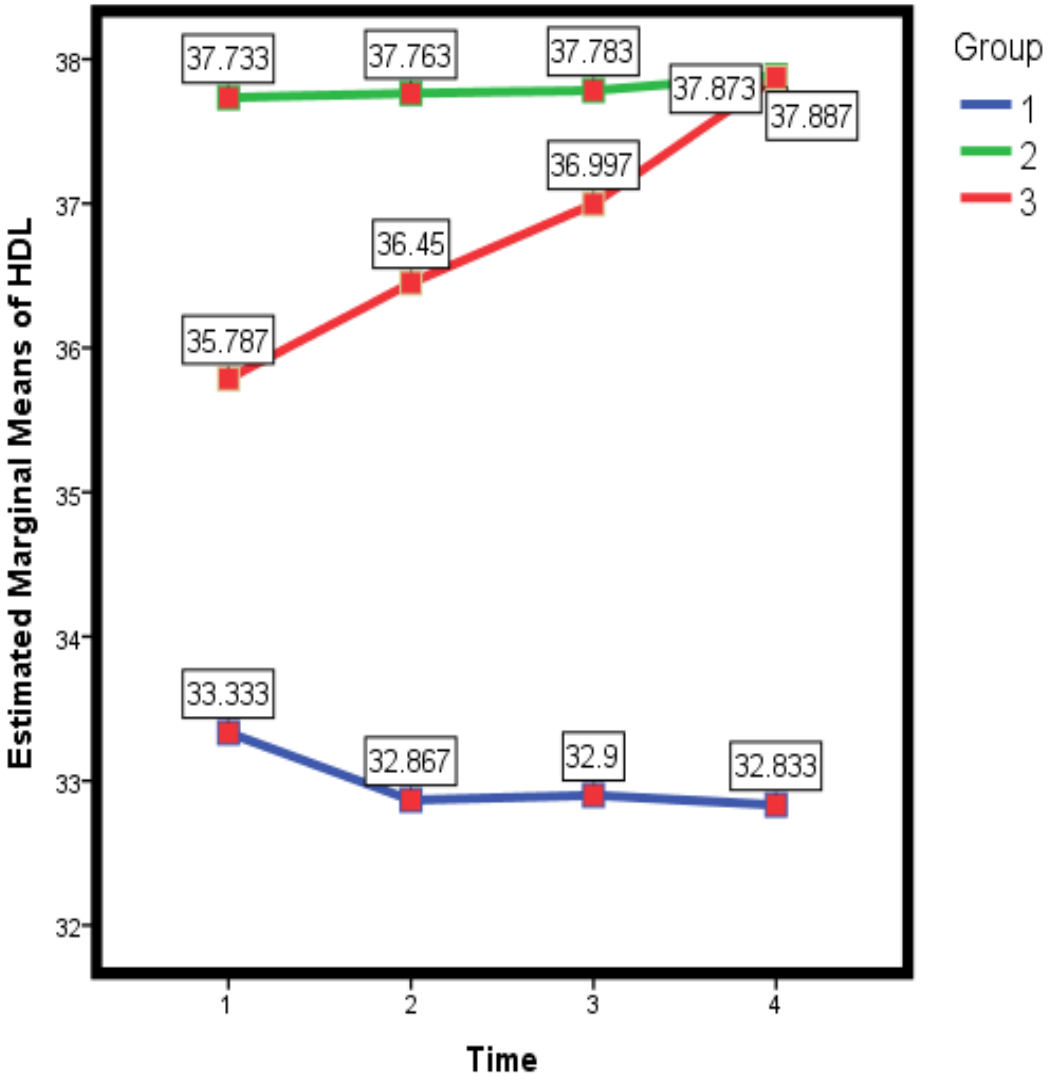


**Table 22 Distribution of serum total cholesterol (TC) levels across the 3 groups at various time periods (n=90)**

A reduction in the mean serum TC level was seen from the baseline at 4th ,8th and 12th weeks of the study in groups 2 & 3 a significant reduction is seen in group 3,having baseline value of 156.13 to 152.63 at the end of the study**.**

| **Serum TC levels (mgs%)** | **Group** | | |
|---|---|---|---|
| | **1** | **2** | **3** |
| | Mean<br>Std Deviation | Mean<br>Std Deviation | Mean<br>Std Deviation |
| Baseline | 160.13 ± 24.24 | 169.47 ± 17.87 | 156.13 ± 18.89 |
| 4 weeks | 159.67 ± 23.77 | 168.95 ± 17.91 | 154.93 ± 18.65 |
| 8 weeks | 159.33 ± 23.68 | 168.18 ± 18.17 | 153.65 ± 18.68 |
| 12 weeks | 159.73 ± 23.81 | 167.35 ± 18.57 | 152.63 ± 18.30 |
| Mean TC reduction | 0.40 ± 1.33 | 2.13 ± 1.84 | 3.50 ± 2.73 |

ANOVA test was done to test the difference in mean total cholesterol reduction after 12 weeks of therapy between the three groups followed by Bonferroni post-Hoc test for inter-group comparisons.

**ANOVA test**

ANOVA test showed that there was a statistically significant difference in reduction of the mean total cholesterol levels between the three groups.

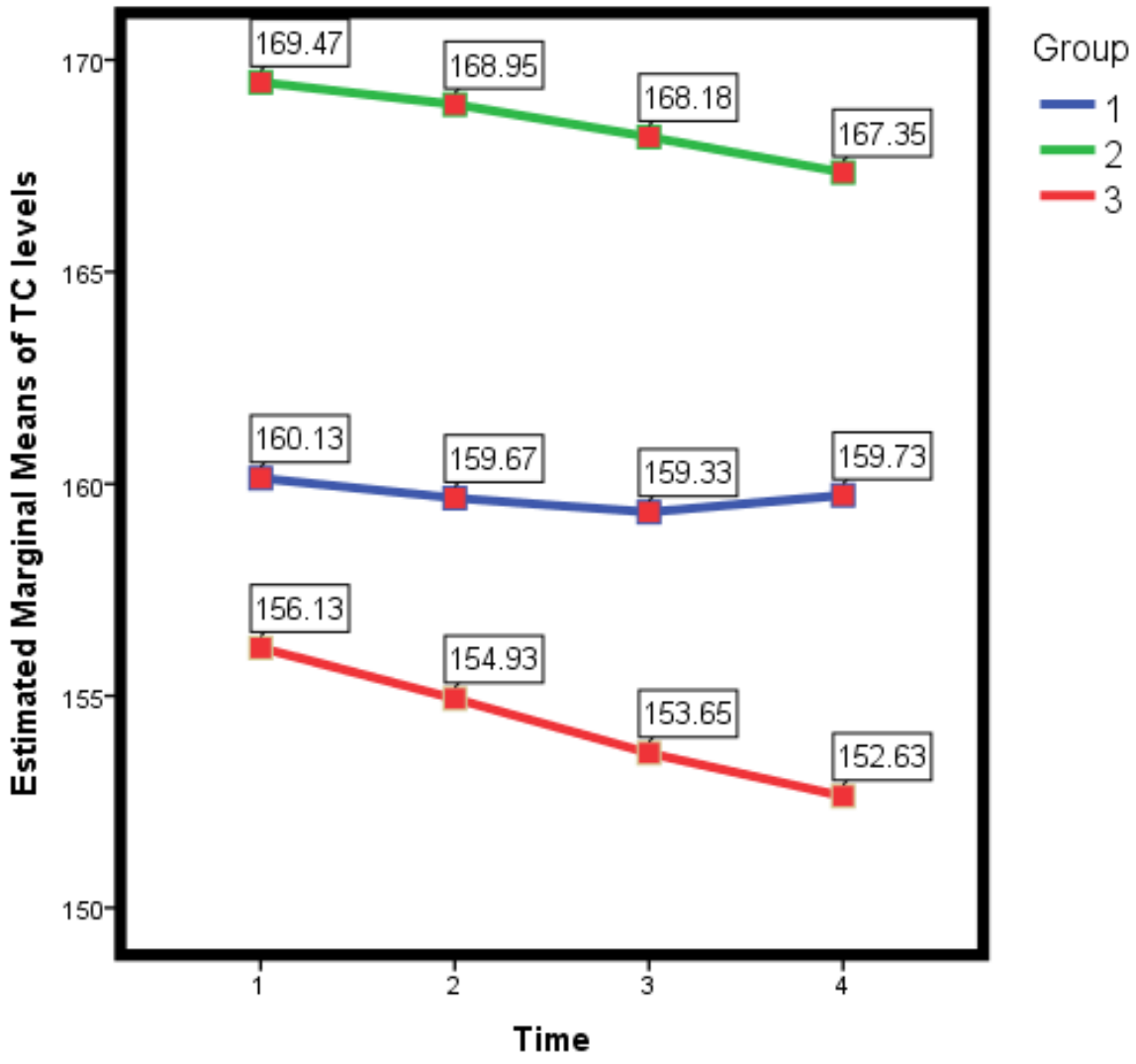
| | |
|---|---|
| p value | <0.001 |
| F statistic | 17.270 |
| Degree of freedom | 2 |

**Bonferroni Post-Hoc test**

Bonferroni test showed that the difference in reduction in mean total cholesterol levels between Group 1 Vs Group 3, Group 1 Vs Group 2 and Group 2 Vs Group 3 was statistically significant (p value: <0.05),denoting the superiority of group 3 in reducing total cholesterol.

| **Dependent Variable (TC reduction after 12 weeks)** | Mean Difference (1st - 2nd) | p value | 95% Confidence Interval | |
|---|---|---|---|---|
| | | | Lower | Upper |
| Group 1 Vs Group 2 | -1.727 | 0.005 | -3.02 | -0.44 |
| Group 1 Vs Group 3 | -3.100 | <0.001 | -4.39 | -1.81 |
| Group 2 Vs Group 3 | -1.373 | 0.033 | -2.66 | -0.08 |

**Fig.12: Profile plot showing distribution of TC levels across the 3 groups at various time periods**



# DISCUSSION

Rheumatoid arthritis is a chronic inflammatory, autoimmune disease which leads to rapid onset of clinically significant functional impairment, particularly if not controlled properly by DMARDs. Statins, because of their pleiotropic effects have been used in various trials to prove their efficacy in RA.

The present study was conducted to find out the effect of Pitavastatin in active RA patients along with Methotrexate,compared to Methotrexate monotherapy and Methotrexate ,Rosuvastatin combination therapy.This study was undertaken in 90 active RA patients who attended the medicine outpatient department of Chennai Medical College Hospital and Research Centre ,Trichy. The study population were divided into 3 groups of 30 each. A daily oral dose of 1 mg of Pitavastatin was administered to the 30 subjects with active RA belonging to group 3,along with Methotrexate 7.5 mg once weekly for a period of 12 weeks. The immunological parameters were tested at the end of the study i.e) after 3rd month and compared with the baseline.The biochemical parameters of all the three groups were evaluated at the end of each months,($4^{th}$ week, $8^{th}$ week.$12^{th}$ week) and the results were statistical analysed by ANOVA method. Additionally, post-hoc test (Bonferroni test) was used to compare the intergroup means.

**Effect of Pitavastatin on DAS score:**

The reduction in mean DAS scores was maximum among the subjects under pitavastatin + methotrexate group. Bonferroni test showed that the difference in reduction in mean DAS scores between Group 1 Vs Group 3 and Group 2 Vs Group 3 was statistically significant (p value: 0.004). Hence pitavastatin and methotrexate combined therapy is superior to methotrexate monotherapy and combined therapy with rosuvastatin and methotrexate in reducing the DAS scores.Though there is a difference in reduction in mean DAS scores between Group 1 Vs Group 2,it was not statistically significant (p value: >0.05). This result is comparable with the result of Kumar et al,[32] but against the studies conducted by Ekabmukther et al, Mc carrey et al & Das et al.[7,22,31]

**Effect of Pitavastatin on Immunological Parameters:**

The reduction in mean RA factor levels was maximum among the subjects under pitavastatin + methotrexate group followed by subjects under rosuvastatin and methotrexate. Bonferroni test showed that the difference in reduction in mean RA factor levels between Group 1 Vs Group 3 and Group 2 Vs Group 3 was statistically significant (p value: <0.002). Hence pitavastatin and methotrexate combined therapy is superior to methotrexate monotherapy and combined therapy with rosuvastatin and methotrexate in reducing the mean RA factor levels.The difference in reduction of mean RA factor levels between Group 1 Vs Group 2 was not statistically significant (p value: >0.05).

This correlates with the studies conducted by Abeles AM et al, Chan AU et al, Niwa S et al.[43,44,45]

The reduction in mean anti-CCP levels was maximum among the subjects under pitavastatin + methotrexate group followed by subjects under rosuvastatin and methotrexate.Bonferroni test showed that the difference in reduction in mean anti-CCP levels between Group 1 Vs Group 3 and Group 2 Vs Group 3 was statistically significant (p value: <0.001). Hence pitavastatin and methotrexate combined therapy is superior to methotrexate monotherapy and combined therapy with rosuvastatin and methotrexate in reducing the mean anti-CCP levels This correlates with the studies conducted by Abeles AM et al, Chan AU et al and Niwa S et al.[43,44,45]

**Effect of Pitavastatin on Acute Phase Reactants:**

The reduction in mean ESR levels was maximum among the subjects under pitavastatin + methotrexate group followed by subjects under methotrexate monotherapy.Bonferroni test showed that the difference in reduction in mean ESR levels between Group 1 Vs Group 3 and Group 2 Vs Group 3 was statistically significant (p value: <0.001). Pitavastatin and methotrexate combined therapy is superior to methotrexate monotherapy and combined therapy with rosuvastatin and methotrexate in reducing the mean ESR levels. However, difference in reduction of mean ESR levels between Group 1 Vs Group 2 was not statistically significant (p value: >0.05). This

result favours the previous studies by Kumar et al, Ekabmukther et al, Mccarrey et al and Das et al.[7,22,31,32]

The reduction in mean ESR levels was maximum among the subjects under pitavastatin + methotrexate group followed by subjects under rosuvastatin and methotrexate.Bonferroni test showed that the difference in reduction in mean CRP levels between Group 1 Vs Group 3 and Group 2 Vs Group 3 was statistically significant (p value: <0.001). This shows that pitavastatin and methotrexate combined therapy is superior to methotrexate monotherapy and combined therapy with rosuvastatin and methotrexate in reducing the mean CRP levels.Difference in reduction of mean CRP levels between Group 1 Vs Group 2 was not statistically significant (p value: >0.05), comparable to the studies by Kumar et al, Ekabmukther et al, Mc carrey et al and Das et al. [7,22,31,32]

All the three groups did not show a statistically significant change in blood glucose levels. This is in contrast with studies by Sattar Net et al, Ray K et al and Preiss et al.[46,47,48,49]

The renal parameters like blood urea, serum creatinine were also not showed any variations among the groups which is in contrast with studies by Mc carrey et al and Ogata et al.[7,51]

The serum SGOT, serum SGPT levels was maximum among the subjects under pitavastatin + methotrexate group.Bonferroni test showed that the difference in serum SGOT, serum SGPT levels between Group 1 Vs Group 3 was statistically significant (p value: <0.010) and (p value: <0.001) respectively. Hence pitavastatin and methotrexate combined therapy raised the serum SGOT levels in comparison to methotrexate monotherapy. However, difference in mean serum SGOT, serum SGPT levels between Group 1 Vs Group 2 and Group 2 Vs Group 3 was not statistically significant (p value: >0.05). No change in the mean ALP levels among the groups were noticed. Though the elevation in serum transaminases were statistically significant,there was no clinical significance. This result is in consistant with the study by Mukthar et al. [50]

**Effect of Pitavastatin on lipid profile:**

The reduction in mean TG levels was maximum among the subjects under pitavastatin + methotrexate group followed by subjects under rosuvastatin and methotrexate.Bonferroni test showed that the difference in reduction in mean TG levels between Group 1 Vs Group 3 and Group 2 Vs Group 3 was statistically significant (p value: <0.002). The difference in reduction of mean TG levels between Group 1 Vs Group 2 was not statistically significant (p value: >0.05).Hence pitavastatin and methotrexate combined therapy is superior to methotrexate monotherapy and combined therapy with rosuvastatin and methotrexate in reducing the mean TG levels.

This correlates with the studies conducted by Jick et al, LIVES study, JAPAN-ACS study, CHIBA study and PATROL trial.[14,37,38,39]

The reduction in mean LDL levels was maximum among the subjects under pitavastatin + methotrexate group followed by subjects under rosuvastatin and methotrexate. Bonferroni test showed that the difference in reduction in mean LDL levels between Group 1 Vs Group 3, Group 1 Vs Group 2 and Group 2 Vs Group 3 was statistically significant (p value: <0.001). Hence pitavastatin and methotrexate combined therapy is superior to methotrexate monotherapy and combined therapy with rosuvastatin and methotrexate in reducing the mean LDL levels, comparable to studies by Jick et al, LIVES study, JAPAN-ACS study, CHIBA study, PATROL trial, Fujino et al and Sailo et al. [14,35,36,37,38,39]

The mean increment in HDL levels of 3 groups in descending order is Group 3 > Group 2 > Group 1. The rise in mean HDL levels was maximum among the subjects under pitavastatin + methotrexate group followed by subjects under rosuvastatin and methotrexate. Bonferroni test showed that the difference in rise in mean HDL levels between Group 1 Vs Group 3, Group 1 Vs Group 2 and Group 2 Vs Group 3 was statistically significant (p value: <0.001). Hence pitavastatin and methotrexate combined therapy is superior to methotrexate monotherapy and combined therapy with rosuvastatin and methotrexate in rising the mean HDL levels which is in relevant to the LIVES

study, JAPAN-ACS study, CHIBA study, PATROL trial and study by Jick et al. [14,37,38,39]

The reduction in mean total cholesterol levels was maximum among the subjects under pitavastatin + methotrexate group (p value: <0.001), compared to other groups showing the superiority in reducing the mean total cholesterol levels as seen in the LIVES study, JAPAN-ACS study, CHIBA study, PATROL trial and study by Jick et al. [14,37,38,39]

The highlight of the present study is the identification of superiority of pitavastatin as an adjuvant therapy along with methotrexate in the management of patients with active RA with marked inflammation.

# CONCLUSION

Pitavastatin decreases the disease activity score, and improves the well-being of patients with active RA by lowering the rheumatoid factors and anti CCP levels. It significantly reduces inflammation in active RA which is evident from the decrease in the ESR and CRP levels. Further the side effects such as myopathy, precipitation of diabetes seen with others statins are not that much pronounced while using Pitavastatin except a slight elevation in the hepatic transaminases ,which is not clinically significant but statistically significant, which may be attributed to the concurrent use of methotrexate. Further studies with large sample size can clearly justify the occurrence of this side effect.Further it raises the HDL level,lowers TG,TC and LDL levels and have a favouring effect in reducing the cardiovascular risk factors .Considering the increasing morbidity and mortality in crippling disease-RA, particularly involving the cardiovascular system, addition of a potent statin like Pitavastatin as an adjuvant to DMARDs can improve the quality of life of patients.

| S.no | Group | Name | Age | Agegroup | Sex | Wt | Ht | BMI | BMIgroup | DAS.0 | DAS.1 | DAS.2 | DAS.3 | ESR.0 | ESR.1 | ESR.2 | ESR.3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | Chitra | 41 | 41 to 50 years | Female | 54 | 1.43 | 26.40716 | >25 | 7.68 | 7.43 | 7.02 | 6.92 | 27 | 25 | 25 | 24 |
| 2 | 1 | Haridoss | 52 | 51 to 60 years | Male | 62 | 1.64 | 23.05176 | 23 to 24.9 | 7.74 | 6.82 | 4.72 | 2.66 | 46 | 34 | 38 | 40 |
| 3 | 1 | Kalaiselvi | 40 | 31 to 40 years | Female | 50 | 1.42 | 24.79667 | 23 to 24.9 | 7.15 | 6.98 | 6.78 | 6.62 | 62 | 60 | 62 | 66 |
| 4 | 1 | Mehraj Banu | 38 | 31 to 40 years | Female | 69 | 1.58 | 27.6398 | >25 | 5.97 | 5.47 | 5.38 | 5.12 | 33 | 25 | 25 | 24 |
| 5 | 1 | Sangeetha | 48 | 41 to 50 years | Female | 78 | 1.64 | 29.0006 | >25 | 6.46 | 6.04 | 5.73 | 5.28 | 38 | 32 | 32 | 32 |
| 6 | 1 | kermals | 39 | 31 to 40 years | Female | 58 | 1.63 | 21.82995 | 18.5 to 22.9 | 6.88 | 6.25 | 5.9 | 5.67 | 48 | 39 | 31 | 24 |
| 7 | 1 | Mani Kandan | 52 | 51 to 60 years | Male | 82 | 1.68 | 29.05329 | >25 | 6.51 | 5.85 | 5.66 | 5.61 | 36 | 29 | 22 | 24 |
| 8 | 1 | Mohamed Ismail | 55 | 51 to 60 years | Male | 66 | 1.72 | 22.30936 | 18.5 to 22.9 | 6.6 | 6.11 | 5.83 | 5.67 | 32 | 28 | 22 | 20 |
| 9 | 1 | Kasthuri | 60 | 51 to 60 years | Female | 56 | 1.49 | 25.22409 | >25 | 5.95 | 5.31 | 5.13 | 4.92 | 24 | 20 | 20 | 18 |
| 10 | 1 | Mallika | 36 | 31 to 40 years | Female | 52 | 1.49 | 23.42237 | 23 to 24.9 | 6.69 | 6.27 | 5.79 | 5.66 | 36 | 38 | 38 | 40 |
| 11 | 1 | Kanagasabai, 43 | 43 | 41 to 50 years | Male | 75 | 1.78 | 23.778 | 23 to 24.9 | 6.34 | 5.85 | 5.47 | 4.99 | 32 | 29 | 24 | 20 |
| 12 | 1 | Ayeesha Begum 6 | 60 | 51 to 60 years | Female | 88 | 1.56 | 36.16042 | >25 | 8.07 | 7.68 | 7.32 | 7.16 | 85 | 88 | 80 | 60 |
| 13 | 1 | Mageshwaran | 43 | 41 to 50 years | Male | 97 | 1.8 | 29.93827 | >25 | 7.01 | 6.14 | 5.56 | 5.26 | 52 | 48 | 48 | 46 |
| 14 | 1 | Nagavalli 59/F | 59 | 51 to 60 years | Female | 65 | 1.62 | 24.76757 | 23 to 24.9 | 6.82 | 6.27 | 5.72 | 5.42 | 38 | 32 | 24 | 19 |
| 15 | 1 | Thambidhurai 38 | 38 | 31 to 40 years | Male | 69 | 1.68 | 24.44728 | 23 to 24.9 | 7.16 | 6.6 | 6.11 | 5.83 | 36 | 28 | 24 | 24 |
| 16 | 1 | Rajakumari 3/F | 34 | 31 to 40 years | Female | 62 | 1.54 | 26.14269 | >25 | 7.82 | 7.13 | 6.98 | 6.71 | 64 | 56 | 54 | 54 |
| 17 | 1 | Angayarkanni 56 | 56 | 51 to 60 years | Female | 54 | 1.57 | 21.90758 | 18.5 to 22.9 | 6.47 | 6.14 | 5.94 | 5.74 | 36 | 20 | 16 | 12 |
| 18 | 1 | Dharmambal 60/F | 60 | 51 to 60 years | Female | 54 | 1.62 | 20.57613 | 18.5 to 22.9 | 6.42 | 6.22 | 6 | 5.31 | 36 | 24 | 20 | 18 |
| 19 | 1 | Mariyapushpam 4 | 43 | 41 to 50 years | Female | 72 | 1.59 | 28.47989 | >25 | 5.97 | 5.46 | 5.34 | 5.06 | 28 | 19 | 17 | 14 |
| 20 | 1 | Anbuselvi 58/F | 58 | 51 to 60 years | Female | 82 | 1.6 | 32.03125 | >25 | 7.77 | 7.24 | 6.82 | 6.28 | 86 | 67 | 44 | 26 |
| 21 | 1 | Manoharan 49/M | 49 | 41 to 50 years | Male | 80 | 1.76 | 25.82645 | >25 | 6.74 | 5.89 | 5.64 | 5.23 | 48 | 21 | 18 | 12 |
| 22 | 1 | Mohanambal 52/F | 52 | 51 to 60 years | Female | 77 | 1.6 | 30.07813 | >25 | 6.72 | 6.04 | 5.92 | 5.63 | 38 | 21 | 15 | 14 |
| 23 | 1 | Suriyanarayanan | 50 | 41 to 50 years | Male | 75 | 1.8 | 23.14815 | 23 to 24.9 | 7.11 | 6.82 | 6.74 | 5.73 | 60 | 50 | 48 | 34 |

| S.no | Group | Name | Age | Agegroup | Sex | Wt | Ht | BMI | BMIgroup | DAS.0 | DAS.1 | DAS.2 | DAS.3 | ESR.0 | ESR.1 | ESR.2 | ESR.3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 | 1 | Abdul rehman 58 | 58 | 51 to 60 years | Male | 86 | 1.78 | 27.14304 | >25 | 7.97 | 7.41 | 6.62 | 6.52 | 78 | 62 | 49 | 48 |
| 25 | 1 | Lakhsmi 34/F | 34 | 31 to 40 years | Female | 62 | 1.59 | 24.52435 | 23 to 24.9 | 6.67 | 6.21 | 5.82 | 5.36 | 39 | 24 | 22 | 22 |
| 26 | 1 | Vishalatchi 40/ | 40 | 31 to 40 years | Female | 72 | 1.49 | 32.43097 | >25 | 7.61 | 6.82 | 6.52 | 6.34 | 84 | 68 | 52 | 36 |
| 27 | 1 | Mohanraj 52/M | 52 | 51 to 60 years | Male | 64 | 1.6 | 25 | >25 | 8.15 | 7.37 | 7.06 | 6.55 | 95 | 62 | 54 | 39 |
| 28 | 1 | Vijayalakhsmi 4 | 49 | 41 to 50 years | Female | 54 | 1.56 | 22.18935 | 18.5 to 22.9 | 6.54 | 6.32 | 6.02 | 5.96 | 62 | 50 | 42 | 29 |
| 29 | 1 | Radhabai 60/F | 60 | 51 to 60 years | Female | 62 | 1.56 | 25.47666 | >25 | 4.92 | 4.52 | 3.94 | 3.62 | 48 | 32 | 20 | 14 |
| 30 | 1 | Soundarajan 50/ | 50 | 41 to 50 years | Male | 82 | 1.79 | 25.59221 | >25 | 5.9 | 5.42 | 5.22 | 5.08 | 44 | 38 | 39 | 38 |
| 31 | 2 | Selvi | 40 | 31 to 40 years | Female | 85 | 1.62 | 32.38836 | >25 | 8.21 | 7.34 | 7.06 | 6.09 | 37 | 33 | 26 | 19 |
| 32 | 2 | Ramasamy 53/M | 53 | 51 to 60 years | Male | 75 | 1.78 | 23.67125 | 23 to 24.9 | 7.49 | 7 | 6.76 | 6.29 | 35 | 29 | 21 | 14 |
| 33 | 2 | Vedivazhagi 70/ | 70 | 61 to 70 years | Female | 59 | 1.62 | 22.48133 | 18.5 to 22.9 | 8.07 | 6.52 | 5.49 | 4.27 | 85 | 52 | 45 | 23 |
| 34 | 2 | Suriya Begum 55 | 55 | 51 to 60 years | Female | 71 | 1.56 | 29.17489 | >25 | 7.66 | 7.06 | 6.36 | 6.04 | 85 | 69 | 56 | 42 |
| 35 | 2 | Mangayarkarashi | 39 | 31 to 40 years | Female | 49 | 1.63 | 18.44255 | <18.5 | 5.47 | 5.12 | 4.76 | 4.39 | 42 | 38 | 41 | 43 |
| 36 | 2 | Samsunisha 50/F | 50 | 41 to 50 years | Female | 89 | 1.62 | 33.91251 | >25 | 6.08 | 5.68 | 5.22 | 4.98 | 33 | 25 | 28 | 20 |
| 37 | 2 | Chitradevi 49/F | 49 | 41 to 50 years | Female | 68 | 1.6 | 26.5625 | >25 | 6.57 | 6.14 | 5.93 | 5.6 | 44 | 37 | 28 | 20 |
| 38 | 2 | Therasa 60/F | 60 | 51 to 60 years | Female | 59 | 1.55 | 24.55775 | 23 to 24.9 | 6.99 | 6.32 | 5.94 | 5.69 | 63 | 56 | 44 | 32 |
| 39 | 2 | Ponnammal 62/F | 62 | 61 to 70 years | Female | 47 | 1.54 | 19.81784 | 18.5 to 22.9 | 5.4 | 4.94 | 4.78 | 4.3 | 52 | 41 | 30 | 21 |
| 40 | 2 | Malathi 50/F | 50 | 41 to 50 years | Female | 85 | 1.58 | 34.04903 | >25 | 7.02 | 6.48 | 6.48 | 5.98 | 84 | 71 | 54 | 42 |
| 41 | 2 | Jeenath koloru | 48 | 41 to 50 years | Female | 86 | 1.59 | 34.01764 | >25 | 6.16 | 5.95 | 5.75 | 5.38 | 45 | 33 | 25 | 17 |
| 42 | 2 | Jeenath 44/F | 44 | 41 to 50 years | Female | 78 | 1.78 | 24.6181 | 23 to 24.9 | 7.27 | 6.77 | 6.36 | 5.93 | 95 | 82 | 73 | 73 |
| 43 | 2 | Murugesan 43/M | 43 | 41 to 50 years | Male | 91 | 1.75 | 29.71429 | >25 | 6.18 | 5.97 | 5.46 | 5.19 | 46 | 38 | 32 | 27 |
| 44 | 2 | Dhanalakshmi48/ | 48 | 41 to 50 years | Female | 59 | 1.68 | 20.9042 | 18.5 to 22.9 | 5.9 | 5.51 | 5.07 | 4.82 | 46 | 38 | 32 | 27 |
| 45 | 2 | Rajagopalan 56 | 56 | 51 to 60 years | Male | 86 | 1.81 | 26.25073 | >25 | 6.53 | 6.09 | 5.71 | 5.22 | 62 | 58 | 57 | 55 |
| 46 | 2 | Abdul Rahman 50 | 50 | 41 to 50 years | Male | 90 | 1.8 | 27.77778 | >25 | 5.77 | 5.39 | 4.89 | 4.54 | 33 | 28 | 22 | 18 |

| S.no | Group | Name | Age | Agegroup | Sex | Wt | Ht | BMI | BMIgroup | DAS.0 | DAS.1 | DAS.2 | DAS.3 | ESR.0 | ESR.1 | ESR.2 | ESR.3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 47 | 2 | Navmadha 48/F | 48 | 41 to 50 years | Female | 52 | 1.5 | 23.11111 | 23 to 24.9 | 6.18 | 5.85 | 5.47 | 4.96 | 32 | 27 | 24 | 18 |
| 48 | 2 | Fousal Hithaua | 39 | 31 to 40 years | Female | 62 | 1.49 | 27.92667 | >25 | 5.95 | 5.33 | 4.98 | 4.78 | 30 | 28 | 28 | 28 |
| 49 | 2 | Marimuthu 52/M | 52 | 51 to 60 years | Male | 60 | 1.75 | 19.59184 | 18.5 to 22.9 | 7.11 | 6.7 | 6.18 | 5.69 | 62 | 57 | 56 | 54 |
| 50 | 2 | Swarnalatha46/F | 46 | 41 to 50 years | Female | 48 | 1.56 | 19.72387 | 18.5 to 22.9 | 5.5 | 5.06 | 4.61 | 4.18 | 29 | 24 | 20 | 16 |
| 51 | 2 | Usharani 48/F | 48 | 41 to 50 years | Female | 70 | 1.58 | 28.04038 | >25 | 6.58 | 6.08 | 5.49 | 5.08 | 48 | 40 | 33 | 25 |
| 52 | 2 | Shanmugasundram | 50 | 41 to 50 years | Male | 50 | 1.79 | 15.60501 | <18.5 | 5.23 | 4.82 | 4.71 | 3.48 | 22 | 19 | 18 | 16 |
| 53 | 2 | Mohan kumar 54 | 54 | 51 to 60 years | Male | 90 | 1.81 | 27.47169 | >25 | 7.18 | 6.5 | 6.12 | 5.96 | 68 | 60 | 52 | 43 |
| 54 | 2 | Vasanthi, 51/F | 51 | 51 to 60 years | Female | 54 | 1.47 | 24.98959 | 23 to 24.9 | 6.29 | 5.87 | 5.52 | 5.02 | 54 | 49 | 46 | 40 |
| 55 | 2 | Jeyashankar, 48 | 48 | 41 to 50 years | Male | 60 | 1.65 | 22.03857 | 18.5 to 22.9 | 7.26 | 6.73 | 6.39 | 5.97 | 76 | 78 | 70 | 64 |
| 56 | 2 | Narendran, 39/M | 39 | 31 to 40 years | Male | 74 | 1.81 | 22.58783 | 18.5 to 22.9 | 5.68 | 5.2 | 4.68 | 4.3 | 28 | 22 | 20 | 20 |
| 57 | 2 | Saravanaperumal | 52 | 51 to 60 years | Male | 72 | 1.75 | 23.5102 | 23 to 24.9 | 6.18 | 5.73 | 5.16 | 4.82 | 33 | 30 | 30 | 30 |
| 58 | 2 | Vetriselvi 56/F | 56 | 51 to 60 years | Female | 62 | 1.64 | 23.05176 | 23 to 24.9 | 7.27 | 6.51 | 6.11 | 5.55 | 88 | 81 | 80 | 78 |
| 59 | 2 | Thamarai, 49/F | 49 | 41 to 50 years | Female | 69 | 1.51 | 30.26183 | >25 | 6.69 | 5.96 | 5.23 | 5.16 | 73 | 70 | 69 | 67 |
| 60 | 2 | Abirami, 36/F | 36 | 31 to 40 years | Female | 75 | 1.63 | 28.22839 | >25 | 4.91 | 4.32 | 4.11 | 3.78 | 32 | 32 | 31 | 31 |
| 61 | 3 | Chandra, 55/F | 55 | 51 to 60 years | Female | 75 | 1.51 | 32.89329 | >25 | 6.53 | 5.86 | 4.92 | 2.96 | 45 | 36 | 25 | 14 |
| 62 | 3 | Mahendran, 34/F | 34 | 31 to 40 years | Female | 90 | 1.82 | 27.17063 | >25 | 5.9 | 4.98 | 3.55 | 2.99 | 42 | 34 | 23 | 14 |
| 63 | 3 | Jeyakodi, 46/F | 46 | 41 to 50 years | Female | 55 | 1.54 | 23.1911 | 23 to 24.9 | 7.08 | 5.08 | 3.63 | 2.83 | 48 | 33 | 22 | 18 |
| 64 | 3 | Manivannan, 52/ | 52 | 51 to 60 years | Male | 80 | 1.75 | 26.12245 | >25 | 5.91 | 4.86 | 4.14 | 2.97 | 34 | 24 | 19 | 15 |
| 65 | 3 | Chitra, 43/F | 43 | 41 to 50 years | Female | 49 | 1.52 | 21.20845 | 18.5 to 22.9 | 6.11 | 4.89 | 4.06 | 2.97 | 42 | 25 | 18 | 15 |
| 66 | 3 | Thenmozhi, 60/F | 60 | 51 to 60 years | Female | 66 | 1.52 | 28.56648 | >25 | 5.18 | 4.33 | 3.78 | 2.92 | 31 | 24 | 18 | 15 |
| 67 | 3 | Prabakaram, 46/ | 46 | 41 to 50 years | Male | 94 | 1.82 | 28.37822 | >25 | 6.92 | 5.87 | 4.99 | 4.27 | 60 | 30 | 23 | 18 |
| 68 | 3 | Anushuya, 46/f | 46 | 41 to 50 years | Female | 51 | 1.53 | 21.78649 | 18.5 to 22.9 | 5.77 | 5.15 | 4.21 | 2.92 | 30 | 22 | 18 | 14 |
| 69 | 3 | Sivakami, 54/F | 54 | 51 to 60 years | Female | 49 | 1.58 | 19.62827 | 18.5 to 22.9 | 6.63 | 5.5 | 4.28 | 3.03 | 40 | 36 | 22 | 12 |

| S.no | Group | Name | Age | Agegroup | Sex | Wt | Ht | BMI | BMIgroup | DAS.0 | DAS.1 | DAS.2 | DAS.3 | ESR.0 | ESR.1 | ESR.2 | ESR.3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 70 | 3 | Savithri, 52/F | 52 | 51 to 60 years | Female | 72 | 1.6 | 28.125 | >25 | 5.93 | 4.73 | 3.69 | 2.84 | 61 | 42 | 28 | 14 |
| 71 | 3 | Padma, 42/F | 42 | 41 to 50 years | Female | 61 | 1.54 | 25.72103 | >25 | 6.39 | 5.42 | 4.02 | 2.96 | 49 | 35 | 25 | 18 |
| 72 | 3 | Radha krishnan, | 49 | 41 to 50 years | Male | 94 | 1.84 | 27.76465 | >25 | 6.93 | 5.83 | 4.17 | 2.99 | 45 | 41 | 30 | 21 |
| 73 | 3 | Ambika, 49/F | 49 | 41 to 50 years | Female | 65 | 1.56 | 26.7094 | >25 | 6.33 | 5.52 | 4.02 | 3.09 | 54 | 46 | 35 | 22 |
| 74 | 3 | Majibhur ghari, | 58 | 51 to 60 years | Male | 94 | 1.8 | 29.01235 | >25 | 6.04 | 5.17 | 3.41 | 2.73 | 42 | 33 | 21 | 13 |
| 75 | 3 | RehmathNisha, 3 | 35 | 31 to 40 years | Female | 72 | 1.61 | 27.77671 | >25 | 5.72 | 4.6 | 3.28 | 2.04 | 38 | 30 | 22 | 15 |
| 76 | 3 | Grace mary, 51/ | 51 | 51 to 60 years | Female | 50 | 1.49 | 22.52151 | 18.5 to 22.9 | 6.27 | 5.08 | 4.1 | 2.8 | 41 | 32 | 22 | 13 |
| 77 | 3 | Rajarajan, 50/M | 50 | 41 to 50 years | Male | 68 | 1.79 | 21.22281 | 18.5 to 22.9 | 7.16 | 5.52 | 4.16 | 3.18 | 42 | 38 | 43 | 21 |
| 78 | 3 | Mariyakokila, 5 | 54 | 51 to 60 years | Female | 60 | 1.6 | 23.4375 | 23 to 24.9 | 7.6 | 6.12 | 4.64 | 3.03 | 68 | 66 | 32 | 19 |
| 79 | 3 | Muthulakshmi, 4 | 40 | 31 to 40 years | Female | 69 | 1.64 | 25.65437 | >25 | 6.34 | 5.01 | 3.63 | 2.06 | 54 | 29 | 22 | 14 |
| 80 | 3 | Narayanan, 52/M | 52 | 51 to 60 years | Male | 80 | 1.75 | 26.12245 | >25 | 7 | 6.04 | 4.68 | 3.25 | 60 | 49 | 41 | 20 |
| 81 | 3 | G.Chandra, 46/F | 46 | 41 to 50 years | Female | 54 | 1.5 | 24 | 23 to 24.9 | 8.35 | 5.75 | 4.39 | 2.76 | 62 | 40 | 29 | 18 |
| 82 | 3 | Malathi, 52/f | 52 | 51 to 60 years | Female | 70 | 1.62 | 26.67276 | >25 | 7.18 | 5.69 | 4.43 | 3.43 | 78 | 59 | 44 | 23 |
| 83 | 3 | Riswan Beevi, 4 | 40 | 31 to 40 years | Female | 64 | 1.52 | 27.70083 | >25 | 6.56 | 5.2 | 3.42 | 2.67 | 41 | 32 | 21 | 15 |
| 84 | 3 | Zaheer hussari, | 44 | 41 to 50 years | Male | 82 | 1.79 | 25.59221 | >25 | 7.28 | 6.43 | 5.5 | 4.54 | 70 | 60 | 42 | 20 |
| 85 | 3 | Neournisha, 38/ | 38 | 31 to 40 years | Female | 56 | 1.58 | 22.4323 | 18.5 to 22.9 | 6.35 | 5.43 | 4.2 | 3.38 | 56 | 48 | 39 | 25 |
| 86 | 3 | Ranjani, 44/F | 44 | 41 to 50 years | Female | 74 | 1.63 | 27.85201 | >25 | 6.58 | 5.41 | 4.2 | 2.86 | 55 | 45 | 41 | 22 |
| 87 | 3 | Sivaraman, 39/M | 39 | 31 to 40 years | Male | 85 | 1.81 | 25.94548 | >25 | 7.66 | 6.49 | 5.12 | 3.73 | 48 | 32 | 27 | 21 |
| 88 | 3 | Rajendran, 50/M | 50 | 41 to 50 years | Male | 85 | 1.76 | 27.4406 | >25 | 6.2 | 5.97 | 4.38 | 2.78 | 48 | 36 | 22 | 14 |
| 89 | 3 | Dheergasumangal | 49 | 41 to 50 years | Female | 52 | 1.49 | 23.42237 | 23 to 24.9 | 6.4 | 5.11 | 3.83 | 3.06 | 62 | 41 | 32 | 14 |
| 90 | 3 | Devarajan, 45/M | 45 | 41 to 50 years | Male | 70 | 1.68 | 24.80159 | 23 to 24.9 | 5.98 | 4.59 | 3.48 | 2.87 | 44 | 32 | 21 | 16 |

| S.no | Group | Name | ESR.reduction | BL.H6.0 | BL.H6.1 | BL.H6.2 | BL.H6.3 | TC.0 | TC.1 | TC.2 | TC.3 | Platelet.0 | Platelet.1 | Platelet.2 | Platelet.3 | CRP.0 | CRP.1 | CRP.2 | CRP.3 | CRP.reduction |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | Chitra | 3 | 9.1 | 8.8 | 7.8 | 9 | 9400 | 8000 | 7000 | 6200 | 1.6 | 1.5 | 1.5 | 2 | 40 | 35 | 32 | 24 | 16 |
| 2 | 1 | Haridoss | 6 | 12.2 | 12.4 | 12 | 12.1 | 9200 | 8700 | 9000 | 9300 | 1.5 | 2 | 2 | 1.8 | 32 | 30 | 24 | 22 | 10 |
| 3 | 1 | Kalaiselvi | -4 | 12.8 | 11.8 | 12 | 11.5 | 13600 | 10100 | 950 | 9900 | 2.2 | 2 | 2 | 1.8 | 30 | 28 | 24 | 26 | 4 |
| 4 | 1 | Mehraj Banu | 9 | 8.1 | 8 | 7.8 | 8 | 10700 | 9800 | 9400 | 8800 | 2 | 2 | 1.8 | 1.8 | 20 | 18 | 20 | 20 | 0 |
| 5 | 1 | Sangeetha | 6 | 9.4 | 9.8 | 10 | 9.6 | 10900 | 10200 | 9900 | 10100 | 1.8 | 1.6 | 1.6 | 1.7 | 22 | 20 | 19 | 15 | 7 |
| 6 | 1 | kermals | 24 | 9 | 9 | 8.8 | 8.8 | 10920 | 10800 | 10300 | 10400 | 2 | 2 | 1.8 | 2 | 33 | 30 | 27 | 24 | 9 |
| 7 | 1 | Mani Kandan | 12 | 9.2 | 9 | 9.2 | 8.8 | 9900 | 9800 | 9900 | 9400 | 1.8 | 1.8 | 1.6 | 1.8 | 29 | 27 | 20 | 18 | 11 |
| 8 | 1 | Mohamed Ismail | 12 | 9.4 | 9.6 | 9.2 | 9.2 | 9900 | 9600 | 9700 | 9400 | 2.2 | 2.2 | 2 | 2 | 28 | 24 | 20 | 16 | 12 |
| 9 | 1 | Kasthuri | 6 | 9.2 | 9 | 9.2 | 9 | 10200 | 10400 | 10300 | 10100 | 1.8 | 2 | 1.8 | 1.8 | 11 | 10 | 9 | 7 | 4 |
| 10 | 1 | Mallika | -4 | 9.6 | 9 | 9.2 | 9 | 9200 | 9400 | 9500 | 9300 | 2 | 1.8 | 1.8 | 1.8 | 13 | 11 | 11 | 8 | 5 |
| 11 | 1 | Kanagasabai, 43 | 12 | 9.8 | 9.6 | 9.4 | 9.4 | 9200 | 9100 | 8900 | 8900 | 2.2 | 2 | 2 | 2.1 | 11 | 10 | 8 | 8 | 3 |
| 12 | 1 | Ayeesha Begum 6 | 25 | 10.6 | 10.7 | 9 | 10.1 | 8000 | 6400 | 6800 | 6300 | 1.6 | 1.5 | 1.6 | 1.6 | 26 | 22 | 16 | 14 | 12 |
| 13 | 1 | Mageshwaran | 6 | 11.6 | 11 | 10.8 | 10.6 | 9400 | 8800 | 9200 | 9300 | 1.7 | 1.8 | 1.8 | 1.7 | 34 | 28 | 22 | 16 | 18 |
| 14 | 1 | Nagavalli 59/F | 19 | 9 | 8.8 | 9 | 8.6 | 8900 | 9100 | 9100 | 9000 | 1.8 | 2 | 1.8 | 1.6 | 30 | 26 | 20 | 11 | 19 |
| 15 | 1 | Thambidhurai 38 | 12 | 9 | 8.4 | 8.6 | 8.8 | 7900 | 8000 | 8400 | 8100 | 1.8 | 2 | 1.6 | 1.8 | 19 | 12 | 9 | 7 | 12 |
| 16 | 1 | Rajakumari 3/F | 10 | 9.6 | 9.6 | 9.4 | 9 | 8600 | 8000 | 7800 | 7300 | 1.8 | 1.6 | 1.6 | 1.5 | 19 | 12 | 9 | 8 | 11 |
| 17 | 1 | Angayarkanni 56 | 24 | 10.2 | 10 | 9.4 | 9.4 | 9500 | 9600 | 9300 | 8900 | 2 | 2 | 1.8 | 1.6 | 28 | 12 | 9 | 9 | 19 |
| 18 | 1 | Dharmambal 60/F | 18 | 9.8 | 9.8 | 9.6 | 9.6 | 9720 | 9600 | 9800 | 9300 | 2 | 2 | 1.8 | 1.6 | 29 | 21 | 19 | 11 | 18 |
| 19 | 1 | Mariyapushpam 4 | 14 | 8.8 | 8.4 | 8.6 | 8.4 | 10200 | 9800 | 9200 | 9400 | 1.6 | 1.8 | 1.6 | 1.6 | 13 | 9 | 7 | 7 | 6 |
| 20 | 1 | Anbuselvi 58/F | 60 | 11.2 | 10.8 | 10.8 | 10.4 | 8600 | 6100 | 6600 | 6400 | 1.8 | 1.6 | 1.6 | 1.6 | 30 | 22 | 16 | 11 | 19 |
| 21 | 1 | Manoharan 49/M | 36 | 8.4 | 8.4 | 8.6 | 8.4 | 10400 | 10200 | 10100 | 9800 | 1.8 | 1.6 | 1.5 | 1.5 | 24 | 13 | 11 | 9 | 15 |
| 22 | 1 | Mohanambal 52/F | 24 | 10.2 | 10.4 | 10 | 10 | 9800 | 9600 | 9600 | 9200 | 1.8 | 1.8 | 2 | 1.8 | 20 | 11 | 9 | 7 | 13 |
| 23 | 1 | Suriyanarayanan | 26 | 11.6 | 10.6 | 9.8 | 9.8 | 9600 | 9400 | 9200 | 9000 | 2 | 1.8 | 1.8 | 1.6 | 31 | 22 | 18 | 16 | 15 |

| S.no | Group | Name | ESR.reduction | BL.H6.0 | BL.H6.1 | BL.H6.2 | BL.H6.3 | TC.0 | TC.1 | TC.2 | TC.3 | Platelet.0 | Platelet.1 | Platelet.2 | Platelet.3 | CRP.0 | CRP.1 | CRP.2 | CRP.3 | CRP.reduction |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 | 1 | Abdul rehman 58 | 30 | 9.6 | 9.2 | 8.8 | 8.8 | 10800 | 10600 | 10600 | 9800 | 1.5 | 1.5 | 1.5 | 1.5 | 42 | 30 | 26 | 19 | 23 |
| 25 | 1 | Lakhsmi 34/F | 17 | 10.6 | 10.2 | 10.2 | 10.2 | 9800 | 9400 | 9600 | 9200 | 2 | 1.8 | 1.8 | 1.6 | 20 | 13 | 11 | 9 | 11 |
| 26 | 1 | Vishalatchi 40/ | 48 | 9 | 8.8 | 8.6 | 8.4 | 9400 | 9200 | 9800 | 9500 | 1.5 | 1.5 | 1.5 | 1.4 | 32 | 28 | 20 | 13 | 19 |
| 27 | 1 | Mohanraj 52/M | 56 | 10.2 | 9.8 | 9.8 | 8.8 | 11000 | 10600 | 10200 | 10200 | 1.5 | 1.5 | 1.6 | 1.5 | 38 | 32 | 26 | 20 | 18 |
| 28 | 1 | Vijayalakhsmi 4 | 33 | 9.8 | 9.6 | 9.8 | 9.4 | 8600 | 8500 | 8600 | 8200 | 1.6 | 1.6 | 1.5 | 1.6 | 40 | 31 | 29 | 29 | 11 |
| 29 | 1 | Radhabai 60/F | 34 | 12 | 11.6 | 11.6 | 10.4 | 11400 | 11000 | 10900 | 10600 | 1.5 | 1.8 | 1.8 | 1.6 | 30 | 28 | 24 | 20 | 10 |
| 30 | 1 | Soundarajan 50/ | 6 | 11.2 | 11 | 10.6 | 10.8 | 8600 | 8600 | 7900 | 7800 | 2 | 1.8 | 1.8 | 1.8 | 19 | 12 | 8 | 7 | 12 |
| 31 | 2 | Selvi | 18 | 10.9 | 12.8 | 12 | 11.6 | 8100 | 7300 | 7200 | 6900 | 1.5 | 1.6 | 1.6 | 1.5 | 36 | 30 | 22 | 14 | 22 |
| 32 | 2 | Ramasamy 53/M | 21 | 10.3 | 10.2 | 9.8 | 9.6 | 10300 | 10000 | 9800 | 9600 | 2 | 2 | 1.8 | 1.8 | 38 | 30 | 22 | 16 | 22 |
| 33 | 2 | Vedivazhagi 70/ | 62 | 10.6 | 10.7 | 9.9 | 10.1 | 8000 | 6400 | 6200 | 7000 | 2 | 2 | 1.5 | 1.8 | 40 | 32 | 28 | 20 | 20 |
| 34 | 2 | Suriya Begum 55 | 43 | 9 | 9 | 8.6 | 8.4 | 8800 | 8600 | 8600 | 8200 | 1.6 | 1.6 | 1.5 | 1.5 | 42 | 32 | 24 | 13 | 29 |
| 35 | 2 | Mangayarkarashi | -1 | 10.6 | 10.4 | 9.8 | 9.6 | 9400 | 9500 | 9400 | 8900 | 2 | 1.8 | 1.8 | 1.8 | 30 | 22 | 16 | 8 | 22 |
| 36 | 2 | Samsunisha 50/F | 13 | 11.2 | 11.2 | 10.8 | 11 | 10600 | 9200 | 9700 | 8600 | 1.8 | 1.8 | 1.8 | 1.6 | 26 | 20 | 15 | 6 | 20 |
| 37 | 2 | Chitradevi 49/F | 24 | 9.6 | 9.2 | 9 | 8.8 | 11200 | 11000 | 11000 | 10800 | 1.6 | 1.6 | 1.5 | 1.5 | 24 | 18 | 11 | 8 | 16 |
| 38 | 2 | Therasa 60/F | 31 | 10.8 | 10.6 | 10.4 | 10.4 | 9800 | 9900 | 9700 | 9600 | 1.6 | 1.5 | 1.5 | 1.4 | 35 | 29 | 20 | 11 | 24 |
| 39 | 2 | Ponnammal 62/F | 31 | 9.6 | 9.4 | 9.2 | 9.2 | 9800 | 9400 | 9100 | 8900 | 2 | 1.8 | 1.8 | 1.6 | 36 | 28 | 20 | 12 | 24 |
| 40 | 2 | Malathi 50/F | 42 | 10.6 | 10.6 | 10.4 | 10 | 11200 | 11000 | 9500 | 9300 | 1.9 | 1.8 | 1.8 | 1.8 | 42 | 34 | 26 | 45 | -3 |
| 41 | 2 | Jeenath koloru | 28 | 10.2 | 10 | 9.8 | 10 | 9600 | 9800 | 9400 | 9700 | 1.8 | 1.8 | 1.8 | 1.6 | 28 | 20 | 11 | 17 | 11 |
| 42 | 2 | Jeenath 44/F | 22 | 10.9 | 10.6 | 10.4 | 10.2 | 9000 | 8800 | 9000 | 8500 | 2 | 2 | 2 | 1.8 | 50 | 40 | 29 | 17 | 33 |
| 43 | 2 | Murugesan 43/M | 19 | 10.4 | 10.6 | 10.4 | 10.2 | 11200 | 11000 | 10600 | 10400 | 2 | 2 | 1.8 | 1.8 | 28 | 22 | 16 | 9 | 19 |
| 44 | 2 | Dhanalakshmi48/ | 19 | 8.9 | 8.6 | 8.6 | 8.4 | 9900 | 9700 | 9800 | 9500 | 1.8 | 1.8 | 1.6 | 1.6 | 28 | 22 | 16 | 9 | 19 |
| 45 | 2 | Rajagopalan 56 | 7 | 11.6 | 11.4 | 11 | 10.8 | 11600 | 10900 | 10500 | 10200 | 2 | 2 | 2 | 2 | 34 | 28 | 23 | 14 | 20 |
| 46 | 2 | Abdul Rahman 50 | 15 | 8.9 | 9 | 8.8 | 8.6 | 10500 | 10400 | 10400 | 10500 | 1.6 | 1.6 | 1.6 | 1.6 | 25 | 20 | 14 | 7 | 18 |

| S.no | Group | Name | ESR.reduction | BL.H6.0 | BL.H6.1 | BL.H6.2 | BL.H6.3 | TC.0 | TC.1 | TC.2 | TC.3 | Platelet.0 | Platelet.1 | Platelet.2 | Platelet.3 | CRP.0 | CRP.1 | CRP.2 | CRP.3 | CRP.reduction |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 47 | 2 | Navmadha 48/F | 14 | 90 | 8.8 | 8.8 | 8.8 | 11200 | 11000 | 11100 | 10800 | 1.6 | 1.6 | 1.5 | 1.5 | 15 | 13 | 9 | 6 | 9 |
| 48 | 2 | Fousal Hithaua | 2 | 9.4 | 9.2 | 9.2 | 9 | 10600 | 10400 | 10500 | 10500 | 2 | 1.8 | 1.6 | 1.5 | 116 | 122 | 124 | 129 | -13 |
| 49 | 2 | Marimuthu 52/M | 8 | 11.2 | 11 | 10.8 | 10.6 | 11500 | 11400 | 11300 | 11100 | 22 | 2.2 | 2.1 | 2 | 28 | 24 | 19 | 12 | 16 |
| 50 | 2 | Swarnalatha46/F | 13 | 8.8 | 8.6 | 8.6 | 8.5 | 10600 | 10400 | 10500 | 10400 | 1.8 | 1.6 | 1.6 | 1.5 | 14 | 11 | 8 | 5 | 9 |
| 51 | 2 | Usharani 48/F | 23 | 10.6 | 10.4 | 10 | 9.8 | 10600 | 10500 | 10600 | 10200 | 2 | 2.1 | 2 | 1.9 | 24 | 19 | 14 | 10 | 14 |
| 52 | 2 | Shanmugasundram | 6 | 9.6 | 9.2 | 9 | 9 | 9500 | 9300 | 8900 | 8700 | 1.8 | 1.6 | 1.6 | 1.6 | 16 | 13 | 9 | 7 | 9 |
| 53 | 2 | Mohan kumar 54 | 25 | 9.8 | 9.8 | 9.4 | 9 | 11600 | 11200 | 10700 | 10400 | 2 | 1.8 | 1.6 | 1.6 | 30 | 22 | 16 | 11 | 19 |
| 54 | 2 | Vasanthi, 51/F | 14 | 8.8 | 8.6 | 8.4 | 8.4 | 9400 | 8900 | 8800 | 8500 | 1.6 | 1.5 | 1.6 | 1.5 | 24 | 19 | 16 | 12 | 12 |
| 55 | 2 | Jeyashankar, 48 | 12 | 11.2 | 11 | 11.2 | 11 | 10400 | 40300 | 10200 | 10300 | 2.2 | 2.1 | 2.1 | 2 | 38 | 32 | 24 | 16 | 22 |
| 56 | 2 | Narendran, 39/M | 8 | 11 | 9.9 | 9.8 | 9.6 | 7900 | 8000 | 7600 | 7500 | 1.8 | 1.6 | 1.6 | 1.6 | 14 | 11 | 9 | 7 | 7 |
| 57 | 2 | Saravanaperumal | 3 | 10.8 | 10.6 | 10.4 | 9.8 | 10900 | 10500 | 10100 | 90900 | 2 | 2 | 2 | 1.8 | 29 | 25 | 20 | 15 | 14 |
| 58 | 2 | Vetriselvi 56/F | 10 | 8.8 | 8.6 | 8.4 | 8.2 | 9800 | 9700 | 9300 | 9100 | 1.6 | 1.6 | 1.6 | 1.5 | 43 | 37 | 29 | 21 | 22 |
| 59 | 2 | Thamarai, 49/F | 6 | 10.4 | 10.4 | 10 | 9.6 | 11200 | 11000 | 10900 | 10700 | 1.8 | 1.8 | 105 | 106 | 31 | 25 | 20 | 16 | 15 |
| 60 | 2 | Abirami, 36/F | 1 | 9.6 | 9.6 | 9.2 | 9 | 8900 | 8500 | 8400 | 8400 | 1.8 | 1.6 | 1.6 | 1.6 | 21 | 18 | 11 | 8 | 13 |
| 61 | 3 | Chandra, 55/F | 31 | 10.7 | 10.1 | 10 | 9.6 | 11400 | 9800 | 9300 | 9400 | 1.6 | 1.5 | 1.5 | 1.5 | 42 | 34 | 22 | 11 | 31 |
| 62 | 3 | Mahendran, 34/F | 28 | 13.6 | 12.4 | 11.8 | 11.4 | 7400 | 7500 | 7400 | 6900 | 1.8 | 1.8 | 1.6 | 1.6 | 36 | 26 | 18 | 9 | 27 |
| 63 | 3 | Jeyakodi, 46/F | 30 | 11 | 10.3 | 10.1 | 9.8 | 8600 | 6200 | 6500 | 5800 | 1.6 | 1.8 | 1.6 | 1.5 | 32 | 24 | 28 | 30 | 2 |
| 64 | 3 | Manivannan, 52/ | 19 | 9.6 | 9.4 | 9.2 | 9.4 | 10900 | 10700 | 10500 | 10000 | 2 | 1.6 | 1.5 | 1.6 | 20 | 15 | 9 | 6 | 14 |
| 65 | 3 | Chitra, 43/F | 27 | 12.1 | 10.8 | 11.4 | 11 | 10900 | 10900 | 10500 | 10400 | 2 | 2 | 1.8 | 1.9 | 20 | 12 | 9 | 5 | 15 |
| 66 | 3 | Thenmozhi, 60/F | 16 | 9.4 | 9.2 | 9 | 9 | 11700 | 11500 | 11600 | 11500 | 1.8 | 1.8 | 1.6 | 1.6 | 21 | 14 | 9 | 5 | 16 |
| 67 | 3 | Prabakaram, 46/ | 42 | 12.4 | 12 | 11.6 | 11.4 | 12500 | 11000 | 10500 | 10200 | 2.1 | 2 | 2 | 1.8 | 29 | 22 | 16 | 9 | 20 |
| 68 | 3 | Anushuya, 46/f | 16 | 9.2 | 9 | 8.9 | 8.8 | 9600 | 9500 | 9500 | 9500 | 2 | 1.8 | 1.8 | 1.5 | 21 | 15 | 10 | 6 | 15 |
| 69 | 3 | Sivakami, 54/F | 28 | 10.8 | 10.6 | 10.4 | 10.4 | 11000 | 9900 | 9800 | 9500 | 1.9 | 1.8 | 1.6 | 1.5 | 29 | 20 | 11 | 7 | 22 |

| S.no | Group | Name | ESR.reduction | BL.H6.0 | BL.H6.1 | BL.H6.2 | BL.H6.3 | TC.0 | TC.1 | TC.2 | TC.3 | Platelet.0 | Platelet.1 | Platelet.2 | Platelet.3 | CRP.0 | CRP.1 | CRP.2 | CRP.3 | CRP.reduction |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 70 | 3 | Savithri, 52/F | 47 | 9.8 | 9.5 | 9.4 | 9.2 | 8900 | 9000 | 9100 | 8800 | 1.6 | 1.6 | 1.5 | 1.5 | 29 | 20 | 13 | 7 | 22 |
| 71 | 3 | Padma, 42/F | 31 | 9.2 | 9.1 | 9 | 8.8 | 10900 | 10700 | 10600 | 10200 | 2 | 202 | 201 | 2 | 26 | 20 | 15 | 9 | 17 |
| 72 | 3 | Radha krishnan, | 24 | 9.6 | 9.4 | 9.2 | 9 | 8900 | 8700 | 8600 | 8500 | 1.8 | 1.6 | 1.6 | 1.5 | 31 | 25 | 18 | 11 | 20 |
| 73 | 3 | Ambika, 49/F | 32 | 10.2 | 10.4 | 10.2 | 10.2 | 9900 | 9800 | 9700 | 9500 | 1.8 | 1.6 | 1.5 | 1.5 | 29 | 22 | 15 | 9 | 20 |
| 74 | 3 | Majibhur ghari, | 29 | 9.6 | 9.4 | 9.2 | 8.8 | 8900 | 9000 | 8800 | 8600 | 1.8 | 1.7 | 1.8 | 1.6 | 24 | 16 | 9 | 5 | 19 |
| 75 | 3 | RehmathNisha, 3 | 23 | 8.8 | 8.6 | 8.4 | 8.2 | 11400 | 11200 | 11000 | 10800 | 1.8 | 1.6 | 1.6 | 1.5 | 20 | 13 | 8 | 4 | 16 |
| 76 | 3 | Grace mary, 51/ | 28 | 9.8 | 9.8 | 9.6 | 9.2 | 11200 | 10900 | 10500 | 10600 | 2 | 2 | 1.8 | 1.9 | 22 | 15 | 9 | 5 | 17 |
| 77 | 3 | Rajarajan, 50/M | 21 | 11.2 | 11.4 | 10.8 | 10.2 | 10700 | 10600 | 10100 | 9800 | 2.2 | 2.2 | 2.2 | 2.2 | 29 | 20 | 12 | 8 | 21 |
| 78 | 3 | Mariyakokila, 5 | 49 | 8.8 | 8.8 | 8.6 | 8.6 | 11500 | 10600 | 10200 | 10000 | 2 | 1.8 | 1.8 | 1.8 | 42 | 32 | 21 | 10 | 32 |
| 79 | 3 | Muthulakshmi, 4 | 40 | 10 | 9.8 | 9.4 | 9.4 | 10300 | 9700 | 9500 | 9200 | 1.9 | 1.8 | 1.8 | 1.6 | 24 | 17 | 10 | 7 | 17 |
| 80 | 3 | Narayanan, 52/M | 40 | 11.4 | 11.2 | 11.2 | 11 | 9500 | 8900 | 8800 | 8600 | 1.8 | 1.8 | 1.6 | 1.6 | 39 | 24 | 15 | 8 | 31 |
| 81 | 3 | G.Chandra, 46/F | 44 | 9.8 | 8.7 | 8.3 | 8.8 | 4900 | 4200 | 5500 | 6800 | 1.5 | 1.6 | 1.6 | 1.8 | 43 | 42 | 30 | 20 | 23 |
| 82 | 3 | Malathi, 52/f | 55 | 9.8 | 9.6 | 9.4 | 9.2 | 11000 | 10800 | 10800 | 1500 | 2 | 1.8 | 1.6 | 1.5 | 40 | 30 | 19 | 9 | 31 |
| 83 | 3 | Riswan Beevi, 4 | 26 | 8.9 | 8.8 | 8.6 | 8.5 | 9700 | 9500 | 9600 | 9300 | 1.9 | 1.8 | 1.6 | 1.6 | 26 | 18 | 10 | 5 | 21 |
| 84 | 3 | Zaheer hussari, | 50 | 12 | 11.8 | 11.2 | 11 | 10900 | 10900 | 10800 | 10500 | 2.1 | 2 | 2 | 2 | 40 | 31 | 22 | 11 | 29 |
| 85 | 3 | Neournisha, 38/ | 31 | 10.8 | 10.6 | 10.6 | 10.2 | 9400 | 9200 | 8900 | 8800 | 1.8 | 1.7 | 1.7 | 1.5 | 30 | 22 | 15 | 8 | 22 |
| 86 | 3 | Ranjani, 44/F | 33 | 10.2 | 10.4 | 10.2 | 9.8 | 10200 | 10100 | 10000 | 9800 | 2 | 2 | 1.7 | 1.8 | 37 | 29 | 20 | 7 | 30 |
| 87 | 3 | Sivaraman, 39/M | 27 | 10.8 | 10.8 | 10.6 | 10.5 | 9900 | 9700 | 9500 | 9100 | 2.2 | 2.2 | 2.2 | 2.1 | 41 | 28 | 18 | 10 | 31 |
| 88 | 3 | Rajendran, 50/M | 34 | 11.4 | 11.4 | 11.6 | 11.2 | 9200 | 9200 | 9000 | 8900 | 2.4 | 2.2 | 2.2 | 2 | 23 | 18 | 12 | 7 | 16 |
| 89 | 3 | Dheergasumangal | 48 | 8.8 | 8.6 | 8.5 | 8.7 | 9700 | 9500 | 9400 | 9100 | 1.8 | 1.8 | 1.6 | 1.5 | 28 | 20 | 12 | 7 | 21 |
| 90 | 3 | Devarajan, 45/M | 28 | 11.4 | 11.2 | 11 | 10.9 | 10900 | 10800 | 10800 | 10500 | 2.1 | 1.9 | 2 | 1.9 | 24 | 18 | 11 | 7 | 17 |

| S.no | Group | Name | Bl.Glucose.0 | Bl.Glucose.1 | Bl.Glucose.2 | Bl.Glucose.3 | urea.0 | urea.1 | urea.2 | urea.3 | Creatinine.0 | Creatinine.1 | Creatinine.2 | Creatinine.3 | SGOT.0 | SGOT.1 | SGOT.2 | SGOT.3 | SGPT.0 | SGPT.1 | SGPT.2 | SGPT.3 | ALP.0 | ALP.1 | ALP.2 | ALP.3 | TGL.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | Chitra | 102 | 98 | 98 | 104 | 27 | 30 | 32 | 30 | 0.9 | 0.9 | 0.9 | 0.8 | 26 | 26 | 28 | 28 | 30 | 34 | 29 | 32 | 9 | 10 | 11 | 10 | 140 |
| 2 | 1 | Haridoss | 96 | 108 | 112 | 104 | 32 | 36 | 38 | 36 | 1 | 0.9 | 0.9 | 0.9 | 29 | 28 | 28 | 28 | 31 | 34 | 32 | 30 | 12 | 11 | 11 | 11 | 160 |
| 3 | 1 | Kalaiselvi | 98 | 94 | 98 | 106 | 22 | 28 | 24 | 27 | 0.8 | 0.8 | 0.9 | 0.8 | 25 | 28 | 25 | 25 | 29 | 26 | 29 | 30 | 11 | 12 | 9 | 10 | 154 |
| 4 | 1 | Mehraj Banu | 90 | 92 | 98 | 94 | 23 | 24 | 22 | 30 | 0.8 | 0.8 | 0.8 | 0.9 | 24 | 25 | 26 | 26 | 31 | 29 | 31 | 30 | 12 | 12 | 10 | 12 | 164 |
| 5 | 1 | Sangeetha | 94 | 98 | 100 | 96 | 28 | 26 | 28 | 28 | 0.9 | 0.9 | 0.9 | 0.8 | 26 | 27 | 27 | 26 | 29 | 29 | 28 | 30 | 11 | 9 | 11 | 10 | 168 |
| 6 | 1 | kermals | 99 | 106 | 102 | 116 | 30 | 26 | 28 | 28 | 0.9 | 0.8 | 0.9 | 0.9 | 30 | 28 | 30 | 30 | 32 | 30 | 30 | 30 | 11 | 11 | 12 | 11 | 156 |
| 7 | 1 | Mani Kandan | 142 | 128 | 138 | 134 | 34 | 32 | 32 | 30 | 1.1 | 0.9 | 0.9 | 0.9 | 28 | 28 | 28 | 28 | 30 | 30 | 28 | 30 | 11 | 11 | 10 | 11 | 164 |
| 8 | 1 | Mohamed Ismail | 96 | 98 | 98 | 98 | 28 | 26 | 24 | 28 | 0.8 | 0.9 | 0.9 | 0.9 | 26 | 28 | 28 | 26 | 28 | 28 | 28 | 29 | 9 | 10 | 10 | 10 | 146 |
| 9 | 1 | Kasthuri | 112 | 114 | 108 | 116 | 28 | 26 | 28 | 28 | 0.9 | 0.9 | 0.9 | 0.8 | 28 | 29 | 30 | 28 | 30 | 30 | 30 | 29 | 11 | 9 | 10 | 10 | 136 |
| 10 | 1 | Mallika | 116 | 108 | 104 | 112 | 30 | 28 | 30 | 28 | 1 | 0.9 | 0.9 | 0.9 | 28 | 29 | 28 | 26 | 30 | 29 | 29 | 28 | 11 | 11 | 12 | 11 | 146 |
| 11 | 1 | Kanagasabai, 43 | 112 | 106 | 114 | 108 | 28 | 32 | 30 | 28 | 0.9 | 0.9 | 1 | 0.9 | 28 | 28 | 29 | 28 | 30 | 29 | 31 | 31 | 9 | 9 | 9 | 9 | 196 |
| 12 | 1 | Ayeesha Begum 6 | 134 | 102 | 148 | 112 | 36 | 34 | 34 | 36 | 1.2 | 1.2 | 1.2 | 1 | 29 | 31 | 34 | 31 | 36 | 36 | 35 | 36 | 10 | 11 | 10 | 11 | 178 |
| 13 | 1 | Mageshwaran | 122 | 116 | 108 | 118 | 34 | 28 | 32 | 34 | 1.1 | 1 | 1.1 | 1 | 28 | 30 | 31 | 28 | 35 | 32 | 35 | 34 | 11 | 10 | 11 | 11 | 168 |
| 14 | 1 | Nagavalli 59/F | 112 | 118 | 106 | 110 | 32 | 28 | 28 | 30 | 0.8 | 0.8 | 0.9 | 0.8 | 28 | 28 | 29 | 29 | 30 | 29 | 29 | 30 | 9 | 9 | 10 | 9 | 176 |
| 15 | 1 | Thambidhurai 38 | 106 | 98 | 104 | 96 | 32 | 30 | 32 | 32 | 1.1 | 0.9 | 1 | 1 | 28 | 28 | 29 | 29 | 30 | 28 | 30 | 30 | 11 | 11 | 11 | 12 | 165 |
| 16 | 1 | Rajakumari 3/F | 128 | 132 | 134 | 130 | 28 | 28 | 32 | 30 | 1 | 0.9 | 0.9 | 1 | 28 | 29 | 28 | 28 | 29 | 29 | 28 | 30 | 11 | 10 | 10 | 11 | 175 |
| 17 | 1 | Angayarkanni 56 | 118 | 116 | 120 | 114 | 26 | 28 | 26 | 30 | 0.8 | 0.8 | 0.9 | 0.9 | 29 | 29 | 29 | 29 | 31 | 32 | 31 | 31 | 10 | 9 | 9 | 9 | 156 |
| 18 | 1 | Dharmambal 60/F | 106 | 112 | 116 | 104 | 26 | 26 | 28 | 26 | 0.8 | 0.8 | 0.9 | 0.8 | 30 | 28 | 30 | 30 | 32 | 32 | 32 | 32 | 11 | 10 | 11 | 10 | 155 |
| 19 | 1 | Mariyapushpam 4 | 142 | 138 | 140 | 136 | 28 | 28 | 26 | 28 | 1.2 | 0.9 | 1 | 1 | 28 | 30 | 28 | 28 | 29 | 32 | 32 | 32 | 11 | 10 | 10 | 10 | 188 |
| 20 | 1 | Anbuselvi 58/F | 102 | 96 | 112 | 102 | 32 | 32 | 30 | 28 | 0.9 | 0.8 | 0.8 | 0.8 | 26 | 27 | 28 | 27 | 32 | 32 | 30 | 32 | 11 | 9 | 11 | 10 | 233 |
| 21 | 1 | Manoharan 49/M | 122 | 131 | 128 | 124 | 27 | 28 | 26 | 27 | 0.8 | 0.8 | 0.8 | 0.9 | 26 | 28 | 28 | 28 | 30 | 32 | 32 | 32 | 9 | 10 | 9 | 10 | 173 |
| 22 | 1 | Mohanambal 52/F | 133 | 128 | 150 | 138 | 28 | 27 | 29 | 30 | 0.9 | 0.9 | 1 | 1 | 28 | 28 | 29 | 28 | 32 | 30 | 30 | 32 | 9 | 9 | 11 | 10 | 172 |
| 23 | 1 | Suriyanarayanan | 96 | 98 | 112 | 94 | 26 | 26 | 26 | 28 | 0.8 | 0.9 | 0.8 | 0.8 | 29 | 29 | 29 | 28 | 31 | 31 | 30 | 31 | 10 | 9 | 9 | 10 | 162 |

| S.no | Group | Name | Bl.Glucose.0 | Bl.Glucose.1 | Bl.Glucose.2 | Bl.Glucose.3 | urea.0 | urea.1 | urea.2 | urea.3 | Creatinine.0 | Creatinine.1 | Creatinine.2 | Creatinine.3 | SGOT.0 | SGOT.1 | SGOT.2 | SGOT.3 | SGPT.0 | SGPT.1 | SGPT.2 | SGPT.3 | ALP.0 | ALP.1 | ALP.2 | ALP.3 | TGL.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 | 1 | Abdul rehman 58 | 163 | 159 | 160 | 150 | 32 | 30 | 30 | 28 | 1 | 0.9 | 0.9 | 0.9 | 29 | 30 | 30 | 30 | 36 | 34 | 34 | 34 | 11 | 11 | 11 | 11 | 241 |
| 25 | 1 | Lakhsmi 34/F | 116 | 98 | 109 | 112 | 28 | 28 | 29 | 28 | 0.8 | 0.9 | 0.9 | 0.9 | 29 | 28 | 29 | 28 | 31 | 30 | 32 | 32 | 10 | 9 | 11 | 10 | 172 |
| 26 | 1 | Vishalatchi 40/ | 158 | 144 | 138 | 152 | 30 | 28 | 30 | 28 | 1.1 | 1 | 1 | 1 | 30 | 31 | 28 | 29 | 32 | 32 | 30 | 31 | 11 | 9 | 8 | 11 | 179 |
| 27 | 1 | Mohanraj 52/M | 34 | 32 | 36 | 36 | 34 | 32 | 36 | 36 | 1 | 1 | 1.2 | 1.2 | 30 | 29 | 30 | 30 | 34 | 32 | 34 | 34 | 10 | 11 | 9 | 11 | 189 |
| 28 | 1 | Vijayalakhsmi 4 | 156 | 146 | 138 | 150 | 30 | 32 | 30 | 32 | 1.1 | 1.1 | 1.1 | 1.2 | 30 | 31 | 29 | 29 | 32 | 32 | 30 | 32 | 10 | 11 | 9 | 11 | 179 |
| 29 | 1 | Radhabai 60/F | 108 | 106 | 108 | 104 | 30 | 30 | 28 | 28 | 0.9 | 0.8 | 0.8 | 0.8 | 29 | 30 | 28 | 29 | 31 | 32 | 30 | 32 | 11 | 10 | 11 | 11 | 162 |
| 30 | 1 | Soundarajan 50/ | 136 | 128 | 132 | 134 | 28 | 28 | 30 | 28 | 0.9 | 0.9 | 1 | 0.9 | 28 | 28 | 29 | 28 | 30 | 32 | 32 | 30 | 9 | 10 | 10 | 11 | 156 |
| 31 | 2 | Selvi | 96 | 100 | 100 | 106 | 36 | 36 | 32 | 34 | 0.9 | 0.9 | 0.9 | 0.9 | 26 | 26 | 28 | 26 | 29 | 30 | 29 | 29 | 13 | 11 | 11 | 12 | 166 |
| 32 | 2 | Ramasamy 53/M | 102 | 100 | 104 | 104 | 28 | 30 | 28 | 28 | 0.9 | 1 | 0.9 | 0.9 | 24 | 26 | 28 | 28 | 29 | 29 | 29 | 29 | 11 | 10 | 11 | 10 | 200 |
| 33 | 2 | Vedivazhagi 70/ | 134 | 102 | 148 | 112 | 36 | 34 | 34 | 36 | 1.2 | 0.9 | 1 | 1 | 30 | 29 | 31 | 31 | 36 | 37 | 36 | 35 | 11 | 13 | 11 | 11 | 182 |
| 34 | 2 | Suriya Begum 55 | 128 | 128 | 130 | 130 | 27 | 26 | 26 | 26 | 1 | 1 | 0.9 | 0.9 | 34 | 32 | 32 | 32 | 39 | 38 | 39 | 39 | 12 | 13 | 12 | 13 | 180 |
| 35 | 2 | Mangayarkarashi | 94 | 94 | 96 | 96 | 26 | 26 | 26 | 28 | 0.8 | 0.8 | 0.8 | 0.9 | 32 | 32 | 30 | 30 | 33 | 35 | 33 | 33 | 10 | 11 | 12 | 12 | 196 |
| 36 | 2 | Samsunisha 50/F | 140 | 142 | 140 | 142 | 24 | 26 | 26 | 26 | 0.9 | 0.9 | 0.9 | 0.9 | 24 | 28 | 26 | 28 | 29 | 29 | 28 | 29 | 9 | 11 | 11 | 10 | 242 |
| 37 | 2 | Chitradevi 49/F | 98 | 98 | 102 | 102 | 32 | 30 | 30 | 30 | 0.9 | 0.9 | 0.9 | 0.8 | 26 | 26 | 27 | 27 | 29 | 26 | 27 | 27 | 10 | 10 | 9 | 10 | 234 |
| 38 | 2 | Therasa 60/F | 116 | 118 | 118 | 118 | 30 | 32 | 30 | 32 | 0.9 | 1 | 0.9 | 0.8 | 29 | 30 | 32 | 31 | 30 | 31 | 36 | 35 | 11 | 10 | 11 | 10 | 232 |
| 39 | 2 | Ponnammal 62/F | 98 | 102 | 100 | 110 | 28 | 28 | 30 | 28 | 0.9 | 1 | 0.8 | 0.9 | 30 | 28 | 26 | 28 | 32 | 30 | 30 | 32 | 11 | 10 | 11 | 10 | 204 |
| 40 | 2 | Malathi 50/F | 116 | 116 | 108 | 110 | 30 | 30 | 32 | 30 | 1 | 1 | 1 | 0.9 | 30 | 30 | 28 | 28 | 32 | 32 | 30 | 30 | 13 | 12 | 11 | 12 | 232 |
| 41 | 2 | Jeenath koloru | 110 | 110 | 108 | 112 | 26 | 26 | 28 | 30 | 0.9 | 1 | 1 | 1 | 26 | 26 | 28 | 30 | 30 | 30 | 32 | 29 | 11 | 11 | 12 | 10 | 229 |
| 42 | 2 | Jeenath 44/F | 108 | 108 | 110 | 110 | 26 | 28 | 28 | 32 | 0.9 | 1 | 0.9 | 1 | 29 | 28 | 26 | 28 | 34 | 32 | 30 | 32 | 12 | 10 | 9 | 12 | 236 |
| 43 | 2 | Murugesan 43/M | 142 | 140 | 136 | 144 | 32 | 32 | 32 | 30 | 1.1 | 1.1 | 10 | 10 | 30 | 30 | 28 | 30 | 32 | 30 | 32 | 30 | 12 | 12 | 11 | 12 | 110 |
| 44 | 2 | Dhanalakshmi48/ | 30 | 28 | 30 | 28 | 0.8 | 0.8 | 0.9 | 0.9 | 28 | 29 | 28 | 28 | 30 | 31 | 31 | 32 | 32 | 32 | 32 | 34 | 11 | 11 | 11 | 10 | 200 |
| 45 | 2 | Rajagopalan 56 | 108 | 99 | 112 | 116 | 30 | 28 | 29 | 28 | 0.9 | 0.8 | 1 | 0.9 | 28 | 29 | 29 | 29 | 30 | 31 | 32 | 30 | 156 | 156 | 155 | 155 | 111 |
| 46 | 2 | Abdul Rahman 50 | 102 | 110 | 110 | 116 | 28 | 28 | 30 | 30 | 0.9 | 0.9 | 1 | 1 | 28 | 29 | 29 | 30 | 32 | 31 | 33 | 33 | 156 | 156 | 155 | 154 | 139 |

| S.no | Group | Name | Bl.Glucose.0 | Bl.Glucose.1 | Bl.Glucose.2 | Bl.Glucose.3 | urea.0 | urea.1 | urea.2 | urea.3 | Creatinine.0 | Creatinine.1 | Creatinine.2 | Creatinine.3 | SGOT.0 | SGOT.1 | SGOT.2 | SGOT.3 | SGPT.0 | SGPT.1 | SGPT.2 | SGPT.3 | ALP.0 | ALP.1 | ALP.2 | ALP.3 | TGL.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 47 | 2 | Navmadha 48/F | 103 | 164 | 172 | 168 | 32 | 33 | 30 | 30 | 1 | 1.1 | 1 | 1 | 29 | 29 | 29 | 30 | 31 | 31 | 34 | 33 | 10 | 9 | 10 | 10 | 200 |
| 48 | 2 | Fousal Hithaua | 30 | 31 | 29 | 26 | 30 | 31 | 29 | 26 | 1 | 1 | 1 | 0.9 | 28 | 30 | 30 | 30 | 32 | 33 | 32 | 34 | 11 | 12 | 11 | 11 | 176 |
| 49 | 2 | Marimuthu 52/M | 124 | 128 | 126 | 126 | 30 | 28 | 28 | 28 | 0.9 | 1 | 0.9 | 1 | 28 | 30 | 31 | 31 | 29 | 31 | 33 | 32 | 9 | 10 | 9 | 10 | 204 |
| 50 | 2 | Swarnalatha46/F | 116 | 114 | 109 | 115 | 28 | 29 | 30 | 32 | 0.9 | 1 | 0.9 | 1.1 | 28 | 30 | 32 | 30 | 29 | 32 | 34 | 32 | 10 | 9 | 9 | 9 | 166 |
| 51 | 2 | Usharani 48/F | 121 | 118 | 122 | 124 | 28 | 26 | 28 | 29 | 0.9 | 0.9 | 0.8 | 0.9 | 30 | 30 | 29 | 30 | 34 | 34 | 33 | 33 | 13 | 12 | 12 | 12 | 193 |
| 52 | 2 | Shanmugasundram | 98 | 96 | 106 | 110 | 28 | 32 | 32 | 29 | 0.8 | 0.9 | 0.9 | 0.8 | 28 | 29 | 30 | 30 | 32 | 31 | 33 | 33 | 11 | 10 | 10 | 12 | 173 |
| 53 | 2 | Mohan kumar 54 | 104 | 105 | 108 | 106 | 32 | 30 | 28 | 30 | 0.8 | 0.9 | 0.8 | 1 | 28 | 29 | 30 | 31 | 31 | 33 | 32 | 36 | 11 | 10 | 12 | 11 | 201 |
| 54 | 2 | Vasanthi, 51/F | 124 | 126 | 126 | 128 | 28 | 30 | 32 | 30 | 0.9 | 0.9 | 1 | 1 | 30 | 30 | 28 | 28 | 32 | 33 | 31 | 32 | 13 | 12 | 11 | 10 | 169 |
| 55 | 2 | Jeyashankar, 48 | 102 | 104 | 108 | 112 | 26 | 29 | 26 | 26 | 0.8 | 0.8 | 0.9 | 0.9 | 30 | 30 | 29 | 29 | 32 | 33 | 31 | 32 | 11 | 11 | 11 | 10 | 185 |
| 56 | 2 | Narendran, 39/M | 100 | 104 | 98 | 106 | 28 | 29 | 28 | 26 | 0.9 | 1 | 0.8 | 0.9 | 29 | 28 | 29 | 28 | 31 | 32 | 33 | 32 | 10 | 9 | 11 | 9 | 168 |
| 57 | 2 | Saravanaperumal | 110 | 112 | 112 | 114 | 28 | 28 | 30 | 30 | 0.8 | 0.9 | 0.8 | 0.9 | 30 | 28 | 29 | 28 | 32 | 30 | 30 | 30 | 11 | 10 | 10 | 10 | 178 |
| 58 | 2 | Vetriselvi 56/F | 139 | 142 | 136 | 144 | 29 | 30 | 30 | 32 | 1 | 1.1 | 1 | 1.1 | 29 | 28 | 29 | 30 | 33 | 30 | 32 | 34 | 10 | 10 | 11 | 12 | 214 |
| 59 | 2 | Thamarai, 49/F | 94 | 98 | 98 | 96 | 28 | 29 | 32 | 34 | 0.8 | 0.8 | 0.9 | 0.9 | 28 | 29 | 30 | 32 | 30 | 33 | 33 | 34 | 11 | 12 | 11 | 10 | 168 |
| 60 | 2 | Abirami, 36/F | 104 | 110 | 112 | 114 | 30 | 32 | 28 | 28 | 0.9 | 0.9 | 0.9 | 0.9 | 30 | 29 | 28 | 29 | 33 | 31 | 32 | 32 | 12 | 9 | 10 | 11 | 182 |
| 61 | 3 | Chandra, 55/F | 121 | 118 | 116 | 118 | 25 | 36 | 27 | 29 | 0.9 | 1 | 1 | 1 | 25 | 26 | 28 | 29 | 30 | 32 | 32 | 33 | 13 | 11 | 9 | 10 | 186 |
| 62 | 3 | Mahendran, 34/F | 94 | 94 | 92 | 94 | 20 | 24 | 24 | 24 | 0.8 | 0.9 | 0.9 | 0.9 | 32 | 30 | 30 | 30 | 35 | 33 | 32 | 32 | 13 | 13 | 13 | 13 | 168 |
| 63 | 3 | Jeyakodi, 46/F | 98 | 102 | 94 | 92 | 32 | 24 | 28 | 30 | 0.9 | 0.8 | 0.9 | 0.9 | 26 | 27 | 26 | 24 | 35 | 32 | 38 | 29 | 11 | 11 | 10 | 11 | 162 |
| 64 | 3 | Manivannan, 52/ | 104 | 106 | 108 | 102 | 26 | 28 | 26 | 29 | 0.9 | 0.9 | 0.8 | 1 | 28 | 30 | 31 | 30 | 29 | 32 | 33 | 34 | 10 | 11 | 12 | 9 | 234 |
| 65 | 3 | Chitra, 43/F | 201 | 142 | 140 | 126 | 32 | 28 | 30 | 30 | 0.9 | 0.9 | 0.8 | 0.8 | 26 | 24 | 25 | 28 | 28 | 29 | 29 | 32 | 11 | 10 | 11 | 10 | 240 |
| 66 | 3 | Thenmozhi, 60/F | 102 | 108 | 109 | 99 | 26 | 28 | 28 | 28 | 0.9 | 0.9 | 1 | 1 | 30 | 29 | 28 | 30 | 32 | 31 | 32 | 33 | 11 | 10 | 9 | 10 | 215 |
| 67 | 3 | Prabakaram, 46/ | 110 | 112 | 108 | 116 | 28 | 30 | 28 | 26 | 0.9 | 0.9 | 0.9 | 1 | 25 | 28 | 29 | 29 | 28 | 29 | 33 | 31 | 10 | 9 | 10 | 9 | 176 |
| 68 | 3 | Anushuya, 46/f | 108 | 120 | 122 | 118 | 28 | 30 | 27 | 28 | 0.9 | 0.9 | 0.8 | 0.8 | 30 | 29 | 28 | 29 | 33 | 32 | 31 | 34 | 12 | 11 | 10 | 12 | 167 |
| 69 | 3 | Sivakami, 54/F | 146 | 150 | 132 | 129 | 32 | 30 | 30 | 30 | 1.1 | 1 | 1 | 1 | 33 | 31 | 30 | 30 | 35 | 34 | 32 | 32 | 13 | 12 | 11 | 12 | 204 |

| S.no | Group | Name | Bl.Glucose.0 | Bl.Glucose.1 | Bl.Glucose.2 | Bl.Glucose.3 | urea.0 | urea.1 | urea.2 | urea.3 | Creatinine.0 | Creatinine.1 | Creatinine.2 | Creatinine.3 | SGOT.0 | SGOT.1 | SGOT.2 | SGOT.3 | SGPT.0 | SGPT.1 | SGPT.2 | SGPT.3 | ALP.0 | ALP.1 | ALP.2 | ALP.3 | TGL.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 70 | 3 | Savithri, 52/F | 126 | 128 | 116 | 120 | 28 | 28 | 27 | 28 | 0.9 | 0.9 | 0.8 | 0.8 | 30 | 31 | 30 | 30 | 32 | 33 | 33 | 32 | 9 | 10 | 11 | 9 | 178 |
| 71 | 3 | Padma, 42/F | 120 | 108 | 110 | 116 | 29 | 28 | 27 | 26 | 0.9 | 0.8 | 0.8 | 0.8 | 28 | 30 | 32 | 31 | 32 | 32 | 34 | 33 | 11 | 10 | 12 | 10 | 172 |
| 72 | 3 | Radha krishnan, | 110 | 108 | 112 | 96 | 30 | 31 | 32 | 29 | 0.9 | 0.9 | 1 | 0.8 | 28 | 29 | 28 | 29 | 31 | 32 | 33 | 32 | 10 | 11 | 11 | 10 | 168 |
| 73 | 3 | Ambika, 49/F | 104 | 108 | 102 | 112 | 32 | 30 | 28 | 30 | 1.1 | 1 | 1 | 1 | 29 | 28 | 29 | 30 | 33 | 32 | 33 | 33 | 10 | 11 | 11 | 10 | 174 |
| 74 | 3 | Majibhur ghari, | 108 | 110 | 112 | 110 | 28 | 32 | 30 | 30 | 0.8 | 1.1 | 0.9 | 1 | 28 | 29 | 30 | 29 | 30 | 32 | 33 | 34 | 11 | 12 | 9 | 11 | 216 |
| 75 | 3 | RehmathNisha, 3 | 94 | 97 | 98 | 102 | 28 | 29 | 30 | 28 | 0.8 | 0.8 | 0.9 | 0.9 | 28 | 30 | 31 | 30 | 30 | 32 | 32 | 31 | 10 | 11 | 10 | 11 | 190 |
| 76 | 3 | Grace mary, 51/ | 122 | 124 | 118 | 114 | 28 | 28 | 30 | 29 | 0.9 | 0.9 | 0.9 | 1 | 30 | 29 | 30 | 29 | 32 | 33 | 32 | 32 | 10 | 11 | 10 | 11 | 167 |
| 77 | 3 | Rajarajan, 50/M | 96 | 98 | 96 | 96 | 29 | 30 | 32 | 30 | 0.8 | 0.8 | 0.9 | 0.8 | 32 | 32 | 32 | 32 | 35 | 35 | 33 | 34 | 11 | 11 | 10 | 10 | 193 |
| 78 | 3 | Mariyakokila, 5 | 99 | 98 | 100 | 98 | 29 | 30 | 28 | 29 | 0.8 | 0.9 | 0.8 | 0.9 | 30 | 30 | 32 | 33 | 32 | 32 | 34 | 35 | 10 | 11 | 10 | 11 | 173 |
| 79 | 3 | Muthulakshmi, 4 | 120 | 118 | 122 | 109 | 29 | 30 | 27 | 29 | 0.8 | 0.9 | 0.8 | 0.9 | 30 | 28 | 28 | 29 | 34 | 31 | 32 | 32 | 12 | 9 | 9 | 10 | 161 |
| 80 | 3 | Narayanan, 52/M | 102 | 106 | 104 | 98 | 29 | 30 | 32 | 28 | 0.8 | 0.9 | 0.9 | 0.9 | 30 | 30 | 28 | 29 | 32 | 33 | 30 | 32 | 11 | 10 | 9 | 10 | 159 |
| 81 | 3 | G.Chandra, 46/F | 108 | 108 | 106 | 108 | 30 | 32 | 30 | 34 | 1 | 0.9 | 0.9 | 0.9 | 28 | 29 | 28 | 28 | 33 | 33 | 33 | 34 | 12 | 11 | 11 | 12 | 180 |
| 82 | 3 | Malathi, 52/f | 108 | 104 | 98 | 104 | 29 | 29 | 32 | 30 | 0.8 | 0.8 | 0.8 | 0.9 | 30 | 29 | 30 | 30 | 34 | 32 | 32 | 34 | 11 | 10 | 10 | 11 | 177 |
| 83 | 3 | Riswan Beevi, 4 | 111 | 112 | 114 | 110 | 28 | 30 | 32 | 30 | 0.8 | 1.1 | 1.1 | 0.9 | 29 | 30 | 28 | 29 | 32 | 33 | 31 | 33 | 11 | 9 | 10 | 11 | 156 |
| 84 | 3 | Zaheer hussari, | 118 | 120 | 121 | 121 | 28 | 28 | 30 | 29 | 0.8 | 0.9 | 0.9 | 0.8 | 30 | 30 | 30 | 29 | 34 | 35 | 34 | 34 | 13 | 13 | 12 | 12 | 194 |
| 85 | 3 | Neournisha, 38/ | 99 | 97 | 98 | 97 | 32 | 30 | 29 | 31 | 0.9 | 0.9 | 0.8 | 1 | 30 | 29 | 30 | 29 | 32 | 32 | 33 | 32 | 9 | 10 | 9 | 9 | 152 |
| 86 | 3 | Ranjani, 44/F | 112 | 108 | 119 | 105 | 29 | 28 | 30 | 31 | 0.8 | 0.9 | 0.8 | 0.9 | 32 | 31 | 30 | 29 | 35 | 33 | 32 | 33 | 11 | 11 | 10 | 11 | 163 |
| 87 | 3 | Sivaraman, 39/M | 94 | 96 | 98 | 96 | 29 | 31 | 30 | 27 | 0.8 | 0.9 | 0.8 | 0.8 | 30 | 30 | 31 | 30 | 32 | 31 | 33 | 34 | 10 | 9 | 10 | 11 | 196 |
| 88 | 3 | Rajendran, 50/M | 121 | 118 | 122 | 120 | 32 | 35 | 33 | 32 | 0.9 | 1.1 | 1 | 1 | 30 | 32 | 31 | 32 | 32 | 35 | 34 | 35 | 10 | 11 | 11 | 10 | 231 |
| 89 | 3 | Dheergasumangal | 110 | 98 | 99 | 112 | 29 | 27 | 28 | 28 | 0.9 | 0.8 | 0.8 | 0.8 | 31 | 32 | 30 | 31 | 33 | 35 | 32 | 33 | 10 | 10 | 9 | 9 | 163 |
| 90 | 3 | Devarajan, 45/M | 105 | 102 | 98 | 99 | 29 | 29 | 34 | 32 | 0.8 | 0.8 | 1 | 0.9 | 31 | 32 | 30 | 31 | 34 | 35 | 33 | 33 | 12 | 12 | 11 | 11 | 171 |

| S.no | Group | Name | TGL.1 | TGL.2 | TGL.3 | TG.reduction | LDL.0 | LDL.1 | LDL.2 | LDL.3 | LDLdecrease | HDL.0 | HDL.1 | HDL.2 | HDL.3 | HDLincrease | TCH.0 | TCH.1 | TCH.2 | TCH.3 | TC.reduction | RF | RF.12wks | RFreduction | ANTICCP | ANTICCP3 | ACCP.reduction |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | Chitra | 150 | 144 | 148 | -8 | 153 | 156 | 150 | 152 | 1 | 36 | 36 | 36 | 36 | 0 | 168 | 168 | 166 | 168 | 0 | 82 | 70 | 12 | 13 | 6 | 7.3 |
| 2 | 1 | Haridoss | 160 | 162 | 160 | 0 | 160 | 158 | 158 | 160 | 0 | 32 | 30 | 32 | 31 | -1 | 188 | 188 | 188 | 186 | 2 | 43 | 28 | 15 | 16 | 12 | 4.2 |
| 3 | 1 | Kalaiselvi | 154 | 154 | 156 | -2 | 146 | 146 | 146 | 148 | -2 | 33 | 32 | 32 | 33 | 0 | 172 | 174 | 174 | 174 | -2 | 539 | 402 | 137 | 200 | 157 | 43 |
| 4 | 1 | Mehraj Banu | 164 | 162 | 162 | 2 | 160 | 162 | 162 | 160 | 0 | 32 | 33 | 33 | 33 | 1 | 186 | 186 | 184 | 184 | 2 | 21 | 10 | 11 | 9 | 5 | 4 |
| 5 | 1 | Sangeetha | 168 | 168 | 170 | -2 | 156 | 150 | 152 | 152 | 4 | 33 | 33 | 30 | 32 | -1 | 212 | 212 | 208 | 210 | 2 | 41 | 32 | 8.6 | 13 | 8 | 5 |
| 6 | 1 | kermals | 156 | 160 | 158 | -2 | 124 | 122 | 121 | 124 | 0 | 35 | 35 | 35 | 34 | -1 | 178 | 178 | 178 | 178 | 0 | 47 | 31 | 17 | 0 | 13 | -13 |
| 7 | 1 | Mani Kandan | 160 | 162 | 162 | 2 | 126 | 124 | 126 | 126 | 0 | 32 | 30 | 32 | 32 | 0 | 196 | 194 | 192 | 194 | 2 | 61 | 42 | 18 | 18 | 14 | 3.7 |
| 8 | 1 | Mohamed Ismail | 146 | 142 | 142 | 4 | 98 | 96 | 98 | 98 | 0 | 34 | 33 | 33 | 32 | -2 | 135 | 134 | 134 | 135 | 0 | 43 | 34 | 8.9 | 18 | 11 | 7.2 |
| 9 | 1 | Kasthuri | 138 | 132 | 138 | -2 | 102 | 98 | 100 | 100 | 2 | 34 | 33 | 33 | 33 | -1 | 120 | 121 | 121 | 121 | -1 | 31 | 20 | 10 | 17 | 12 | 4.6 |
| 10 | 1 | Mallika | 138 | 138 | 140 | 6 | 102 | 95 | 100 | 100 | 2 | 33 | 32 | 32 | 33 | 0 | 163 | 164 | 163 | 164 | -1 | 52 | 39 | 13 | 26 | 18 | 8.1 |
| 11 | 1 | Kanagasabai, 43 | 188 | 190 | 192 | 4 | 116 | 116 | 110 | 114 | 2 | 34 | 32 | 33 | 32 | -2 | 174 | 172 | 174 | 174 | 0 | 36 | 34 | 2 | 19 | 17 | 2.1 |
| 12 | 1 | Ayeesha Begum 6 | 178 | 175 | 176 | 2 | 135 | 133 | 133 | 135 | 0 | 34 | 34 | 33 | 33 | -1 | 152 | 152 | 151 | 152 | 0 | 208 | 160 | 48 | 133 | 108 | 25 |
| 13 | 1 | Mageshwaran | 166 | 168 | 170 | -2 | 128 | 132 | 130 | 132 | -4 | 34 | 35 | 35 | 33 | -1 | 148 | 147 | 148 | 147 | 1 | 56 | 32 | 24 | 13 | 9.8 | 3.2 |
| 14 | 1 | Nagavalli 59/F | 176 | 178 | 178 | -2 | 109 | 108 | 109 | 110 | -1 | 33 | 32 | 33 | 33 | 0 | 158 | 158 | 159 | 158 | 0 | 58 | 32 | 26 | 21 | 13 | 8.3 |
| 15 | 1 | Thambidhurai 38 | 160 | 164 | 162 | 3 | 104 | 106 | 105 | 105 | -1 | 34 | 32 | 31 | 33 | -1 | 136 | 138 | 138 | 138 | -2 | 75 | 30 | 45 | 13 | 8 | 5.3 |
| 16 | 1 | Rajakumari 3/F | 173 | 175 | 175 | 0 | 130 | 132 | 131 | 132 | -2 | 32 | 32 | 31 | 32 | 0 | 156 | 154 | 154 | 154 | 2 | 173 | 140 | 33 | 109 | 91 | 18 |
| 17 | 1 | Angayarkanni 56 | 156 | 155 | 156 | 0 | 110 | 112 | 110 | 110 | 0 | 38 | 38 | 38 | 38 | 0 | 130 | 130 | 129 | 130 | 0 | 64 | 30 | 35 | 21 | 11 | 10 |
| 18 | 1 | Dharmambal 60/F | 155 | 155 | 155 | 0 | 98 | 96 | 98 | 98 | 0 | 35 | 35 | 33 | 33 | -2 | 129 | 130 | 129 | 129 | 0 | 49 | 30 | 18 | 17 | 11 | 5.8 |
| 19 | 1 | Mariyapushpam 4 | 185 | 183 | 188 | 0 | 109 | 107 | 107 | 107 | 2 | 32 | 32 | 33 | 32 | 0 | 160 | 161 | 160 | 160 | 0 | 62 | 30 | 32 | 19 | 9 | 10 |
| 20 | 1 | Anbuselvi 58/F | 227 | 228 | 224 | 9 | 169 | 167 | 169 | 169 | 0 | 30 | 32 | 30 | 30 | 0 | 195 | 192 | 193 | 193 | 2 | 119 | 69 | 50 | 72 | 88 | -16 |
| 21 | 1 | Manoharan 49/M | 173 | 173 | 172 | 1 | 122 | 123 | 122 | 122 | 0 | 33 | 33 | 32 | 32 | -1 | 148 | 146 | 145 | 146 | 2 | 92 | 40 | 52 | 61 | 26 | 34 |
| 22 | 1 | Mohanambal 52/F | 163 | 170 | 170 | 2 | 116 | 112 | 112 | 116 | 0 | 35 | 34 | 35 | 33 | -2 | 153 | 152 | 152 | 154 | -1 | 36 | 19 | 17 | 18 | 10 | 8.1 |
| 23 | 1 | Suriyanarayanan | 162 | 162 | 162 | 0 | 95 | 96 | 95 | 95 | 0 | 33 | 32 | 34 | 35 | 2 | 148 | 147 | 148 | 147 | 1 | 83 | 33 | 50 | 36 | 21 | 15 |

| S.no | Group | Name | TGL.1 | TGL.2 | TGL.3 | TG.reduction | LDL.0 | LDL.1 | LDL.2 | LDL.3 | LDLdecrease | HDL.0 | HDL.1 | HDL.2 | HDL.3 | HDLincrease | TCH.0 | TCH.1 | TCH.2 | TCH.3 | TC.reduction | RF | RF.12wks | RFreduction | ANTICCP | ANTICCP3 | ACCP.reduction |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 | 1 | Abdul rehman 58 | 243 | 241 | 240 | 1 | 116 | 115 | 116 | 116 | 0 | 35 | 34 | 35 | 35 | 0 | 210 | 208 | 210 | 210 | 0 | 146 | 130 | 16 | 68 | 38 | 30 |
| 25 | 1 | Lakhsmi 34/F | 174 | 172 | 172 | 0 | 95 | 98 | 98 | 98 | -3 | 34 | 33 | 34 | 33 | -1 | 160 | 158 | 156 | 160 | 0 | 84 | 48 | 36 | 37 | 20 | 17 |
| 26 | 1 | Vishalatchi 40/ | 178 | 178 | 179 | 0 | 142 | 142 | 144 | 143 | -1 | 32 | 31 | 31 | 31 | -1 | 138 | 139 | 139 | 139 | -1 | 121 | 78 | 43 | 78 | 42 | 36 |
| 27 | 1 | Mohanraj 52/M | 190 | 190 | 150 | 39 | 150 | 148 | 148 | 150 | 0 | 30 | 32 | 30 | 30 | 0 | 168 | 164 | 166 | 168 | 0 | 212 | 159 | 54 | 98 | 86 | 12 |
| 28 | 1 | Vijayalakhsmi 4 | 180 | 178 | 180 | -1 | 135 | 135 | 135 | 136 | -1 | 30 | 30 | 30 | 30 | 0 | 153 | 153 | 152 | 150 | 3 | 73 | 39 | 34 | 30 | 20 | 10 |
| 29 | 1 | Radhabai 60/F | 162 | 160 | 162 | 0 | 120 | 122 | 122 | 122 | -2 | 33 | 32 | 33 | 33 | 0 | 140 | 140 | 141 | 141 | -1 | 56 | 32 | 24 | 17 | 12 | 5.1 |
| 30 | 1 | Soundarajan 50/ | 156 | 149 | 150 | 6 | 108 | 106 | 108 | 104 | 4 | 35 | 34 | 35 | 35 | 0 | 130 | 130 | 128 | 128 | 2 | 64 | 45 | 19 | 36 | 16 | 20 |
| 31 | 2 | Selvi | 160 | 164 | 164 | 2 | 130 | 126 | 122 | 122 | 8 | 30 | 30 | 30 | 30 | 0 | 142 | 142 | 140 | 140 | 2 | 26 | 18 | 7.9 | 17 | 10 | 6.8 |
| 32 | 2 | Ramasamy 53/M | 207 | 205 | 202 | -2 | 170 | 172 | 166 | 164 | 6 | 34 | 34 | 33 | 33 | -1 | 178 | 178 | 176 | 176 | 2 | 29 | 12 | 16 | 7.9 | 5.1 | 2.8 |
| 33 | 2 | Vedivazhagi 70/ | 180 | 169 | 154 | 28 | 160 | 158 | 152 | 150 | 10 | 32 | 33 | 33 | 33 | 1 | 168 | 164 | 164 | 164 | 4 | 208 | 102 | 106 | 133 | 91 | 42 |
| 34 | 2 | Suriya Begum 55 | 182 | 182 | 180 | 0 | 163 | 160 | 157 | 154 | 9 | 32 | 32 | 32 | 32 | 0 | 152 | 153 | 152 | 152 | 0 | 110 | 95 | 15 | 200 | 148 | 52 |
| 35 | 2 | Mangayarkarashi | 196 | 197 | 195 | 1 | 150 | 148 | 146 | 142 | 8 | 32 | 32 | 32 | 32 | 0 | 164 | 164 | 164 | 163 | 1 | 62 | 30 | 31 | 23 | 12 | 11 |
| 36 | 2 | Samsunisha 50/F | 242 | 242 | 242 | 0 | 146 | 144 | 142 | 138 | 8 | 35 | 35 | 35 | 35 | 0 | 197 | 196 | 196 | 196 | 1 | 127 | 79 | 48 | 65 | 36 | 28 |
| 37 | 2 | Chitradevi 49/F | 234 | 234 | 233 | 1 | 109 | 107 | 104 | 101 | 8 | 36 | 36 | 36 | 36 | 0 | 188 | 188 | 187 | 188 | 0 | 82 | 32 | 50 | 54 | 23 | 31 |
| 38 | 2 | Therasa 60/F | 232 | 232 | 230 | 2 | 136 | 135 | 132 | 128 | 8 | 33 | 32 | 33 | 34 | 1 | 198 | 198 | 197 | 197 | 1 | 84 | 42 | 42 | 53 | 21 | 32 |
| 39 | 2 | Ponnammal 62/F | 204 | 202 | 202 | 2 | 116 | 114 | 110 | 104 | 12 | 37 | 36 | 37 | 37 | 0 | 164 | 163 | 163 | 163 | 1.5 | 49 | 18 | 31 | 15 | 7 | 8.3 |
| 40 | 2 | Malathi 50/F | 232 | 231 | 230 | 2 | 127 | 125 | 122 | 117 | 10 | 33 | 33 | 32 | 33 | 0 | 187 | 187 | 187 | 185 | 2 | 69 | 42 | 27 | 43 | 26 | 17 |
| 41 | 2 | Jeenath koloru | 227 | 228 | 228 | 1 | 105 | 104 | 100 | 94 | 11 | 36 | 36 | 36 | 37 | 1 | 185 | 184 | 184 | 183 | 2 | 108 | 67 | 40 | 84 | 50 | 34 |
| 42 | 2 | Jeenath 44/F | 234 | 234 | 236 | 0.5 | 108 | 107 | 102 | 99 | 8.8 | 36 | 36 | 37 | 36 | 0 | 193 | 193 | 192 | 190 | 3 | 75 | 38 | 37 | 42 | 21 | 21 |
| 43 | 2 | Murugesan 43/M | 108 | 105 | 102 | 8 | 39 | 38 | 39 | 39 | 0 | 154 | 154 | 154 | 154 | 0 | 194 | 194 | 194 | 194 | 0.5 | 39 | 20 | 19 | 20 | 14 | 6.5 |
| 44 | 2 | Dhanalakshmi48/ | 200 | 199 | 199 | 1 | 108 | 106 | 104 | 99 | 9 | 38 | 38 | 37 | 38 | 0 | 146 | 146 | 145 | 145 | 1 | 106 | 69 | 37 | 76 | 51 | 25 |
| 45 | 2 | Rajagopalan 56 | 109 | 105 | 102 | 9 | 35 | 35 | 36 | 35 | 0 | 10 | 9 | 10 | 11 | 1 | 192 | 192 | 192 | 192 | 0 | 57 | 24 | 34 | 16 | 8.2 | 8.1 |
| 46 | 2 | Abdul Rahman 50 | 137 | 132 | 127 | 12 | 36 | 36 | 35 | 35 | 1 | 10 | 10 | 9 | 10 | 0 | 194 | 193 | 193 | 193 | 0.8 | 43 | 22 | 21 | 27 | 12 | 15 |

| S.no | Group | Name | TGL.1 | TGL.2 | TGL.3 | TG.reduction | LDL.0 | LDL.1 | LDL.2 | LDL.3 | LDLdecrease | HDL.0 | HDL.1 | HDL.2 | HDL.3 | HDLincrease | TCH.0 | TCH.1 | TCH.2 | TCH.3 | TC.reduction | RF | RF.12wks | RFreduction | ANTICCP | ANTICCP3 | ACCP.reduction |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 47 | 2 | Navmadha 48/F | 198 | 199 | 199 | 1 | 152 | 149 | 148 | 145 | 7.5 | 36 | 35 | 36 | 35 | -1 | 176 | 175 | 174 | 174 | 2 | 65 | 35 | 30 | 49 | 22 | 27 |
| 48 | 2 | Fousal Hithaua | 176 | 177 | 177 | -1 | 110 | 107 | 105 | 102 | 7.9 | 37 | 38 | 37 | 37 | 0 | 157 | 157 | 157 | 157 | 0 | 38 | 17 | 21 | 18 | 9.8 | 8.2 |
| 49 | 2 | Marimuthu 52/M | 203 | 203 | 203 | 1 | 142 | 140 | 138 | 136 | 6 | 34 | 35 | 35 | 35 | 0.5 | 176 | 177 | 176 | 176 | 0 | 295 | 68 | 227 | 98 | 52 | 46 |
| 50 | 2 | Swarnalatha46/F | 166 | 165 | 165 | 1 | 95 | 95 | 93 | 92 | 3.4 | 39 | 40 | 40 | 40 | 0.5 | 143 | 143 | 143 | 143 | 0 | 49 | 24 | 25 | 12 | 8.8 | 3.6 |
| 51 | 2 | Usharani 48/F | 193 | 192 | 193 | 0 | 130 | 127 | 125 | 121 | 8.7 | 36 | 36 | 36 | 36 | 0 | 164 | 164 | 162 | 162 | 2.5 | 47 | 23 | 25 | 21 | 15 | 6 |
| 52 | 2 | Shanmugasundram | 173 | 173 | 173 | 0.5 | 132 | 129 | 126 | 121 | 11 | 34 | 35 | 34 | 34 | 0 | 159 | 158 | 157 | 154 | 5 | 29 | 17 | 11 | 14 | 11 | 3.6 |
| 53 | 2 | Mohan kumar 54 | 200 | 200 | 200 | 1 | 114 | 112 | 108 | 105 | 8.7 | 40 | 40 | 41 | 41 | 0.5 | 163 | 162 | 162 | 160 | 3 | 99 | 43 | 56 | 79 | 62 | 18 |
| 54 | 2 | Vasanthi, 51/F | 168 | 168 | 169 | 0 | 103 | 102 | 100 | 98 | 4.8 | 41 | 41 | 41 | 41 | 0 | 149 | 149 | 148 | 144 | 5 | 38 | 22 | 16 | 16 | 10 | 5.6 |
| 55 | 2 | Jeyashankar, 48 | 184 | 184 | 184 | 0.4 | 122 | 120 | 121 | 117 | 5 | 37 | 38 | 37 | 38 | 0.5 | 165 | 164 | 163 | 161 | 4.5 | 63 | 31 | 33 | 32 | 19 | 13 |
| 56 | 2 | Narendran, 39/M | 168 | 169 | 169 | -1 | 95 | 95 | 94 | 94 | 1 | 40 | 40 | 40 | 40 | 0 | 146 | 145 | 142 | 139 | 7 | 97 | 30 | 67 | 40 | 20 | 20 |
| 57 | 2 | Saravanaperumal | 178 | 178 | 179 | -1 | 129 | 127 | 125 | 121 | 8 | 38 | 37 | 38 | 38 | -0.4 | 154 | 153 | 153 | 151 | 3 | 29 | 16 | 13 | 15 | 10 | 5 |
| 58 | 2 | Vetriselvi 56/F | 214 | 214 | 214 | 0 | 150 | 148 | 142 | 139 | 11 | 32 | 32 | 33 | 33 | 1 | 173 | 172 | 172 | 171 | 2 | 45 | 25 | 20 | 32 | 21 | 12 |
| 59 | 2 | Thamarai, 49/F | 168 | 168 | 167 | 1 | 98 | 97 | 97 | 96 | 2 | 36 | 36 | 36 | 36 | 0 | 149 | 148 | 147 | 146 | 3 | 181 | 100 | 81 | 122 | 95 | 27 |
| 60 | 2 | Abirami, 36/F | 182 | 182 | 181 | 1 | 182 | 182 | 182 | 181 | 1 | 34 | 34 | 35 | 34 | 0 | 168 | 167 | 165 | 163 | 5 | 55 | 29 | 27 | 39 | 24 | 15 |
| 61 | 3 | Chandra, 55/F | 184 | 182 | 180 | 6 | 170 | 162 | 156 | 149 | 21 | 30 | 32 | 33 | 33 | 3 | 148 | 146 | 140 | 138 | 10 | 157 | 70 | 87 | 47 | 8.7 | 38 |
| 62 | 3 | Mahendran, 34/F | 166 | 166 | 163 | 5 | 152 | 150 | 148 | 139 | 13 | 34 | 34 | 34 | 36 | 2 | 146 | 146 | 146 | 146 | 0 | 52 | 24 | 28 | 13 | 5.9 | 7 |
| 63 | 3 | Jeyakodi, 46/F | 160 | 160 | 156 | 6 | 158 | 152 | 152 | 150 | 8 | 30 | 32 | 34 | 34 | 4 | 138 | 133 | 132 | 130 | 8 | 182 | 56 | 126 | 98 | 32 | 66 |
| 64 | 3 | Manivannan, 52/ | 234 | 233 | 233 | 1.4 | 107 | 107 | 106 | 106 | 0.9 | 40 | 40 | 41 | 41 | 1.6 | 198 | 192 | 188 | 186 | 12 | 56 | 26 | 30 | 15 | 8.7 | 6.7 |
| 65 | 3 | Chitra, 43/F | 236 | 232 | 229 | 11 | 156 | 150 | 148 | 144 | 12 | 39 | 39 | 40 | 41 | 2 | 195 | 194 | 192 | 190 | 5 | 37 | 20 | 17 | 30 | 5.1 | 25 |
| 66 | 3 | Thenmozhi, 60/F | 210 | 202 | 197 | 18 | 152 | 150 | 146 | 141 | 11 | 31 | 32 | 32 | 33 | 2 | 196 | 195 | 192 | 190 | 6 | 60 | 26 | 34 | 22 | 10 | 12 |
| 67 | 3 | Prabakaram, 46/ | 174 | 172 | 170 | 6 | 121 | 117 | 115 | 109 | 12 | 37 | 38 | 38 | 39 | 2 | 159 | 158 | 156 | 156 | 3 | 416 | 123 | 293 | 179 | 68 | 111 |
| 68 | 3 | Anushuya, 46/f | 165 | 164 | 163 | 4 | 93 | 92 | 92 | 91 | 2 | 40 | 40 | 41 | 41 | 1 | 149 | 148 | 148 | 146 | 3 | 64 | 32 | 32 | 32 | 15 | 16 |
| 69 | 3 | Sivakami, 54/F | 202 | 196 | 191 | 13 | 135 | 132 | 127 | 122 | 13 | 36 | 37 | 37 | 39 | 2.5 | 168 | 166 | 166 | 165 | 3 | 339 | 120 | 219 | 17 | 9 | 8.1 |

| S.no | Group | Name | TGL.1 | TGL.2 | TGL.3 | TG.reduction | LDL.0 | LDL.1 | LDL.2 | LDL.3 | LDLdecrease | HDL.0 | HDL.1 | HDL.2 | HDL.3 | HDLincrease | TCH.0 | TCH.1 | TCH.2 | TCH.3 | TC.reduction | RF | RF.12wks | RFreduction | ANTICCP | ANTICCP3 | ACCP.reduction |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 70 | 3 | Savithri, 52/F | 176 | 174 | 171 | 7 | 123 | 120 | 118 | 115 | 8 | 36 | 37 | 37 | 38 | 2 | 152 | 151 | 151 | 150 | 2 | 78 | 39 | 39 | 49 | 17 | 32 |
| 71 | 3 | Padma, 42/F | 170 | 168 | 165 | 7 | 124 | 121 | 119 | 117 | 7 | 34 | 36 | 36 | 37 | 3 | 143 | 142 | 141 | 138 | 5 | 96 | 53 | 43 | 43 | 14 | 29 |
| 72 | 3 | Radha krishnan, | 166 | 164 | 160 | 8 | 104 | 102 | 99 | 96 | 8 | 39 | 40 | 41 | 41 | 2 | 139 | 138 | 137 | 137 | 2 | 70 | 31 | 39 | 30 | 15 | 15 |
| 73 | 3 | Ambika, 49/F | 172 | 170 | 168 | 6 | 121 | 119 | 116 | 114 | 7 | 36 | 37 | 37 | 38 | 2 | 156 | 155 | 155 | 154 | 2 | 28 | 17 | 11 | 32 | 8.1 | 24 |
| 74 | 3 | Majibhur ghari, | 214 | 210 | 209 | 7 | 150 | 148 | 142 | 139 | 11 | 33 | 34 | 35 | 36 | 3 | 174 | 172 | 172 | 171 | 3 | 311 | 140 | 171 | 48 | 27 | 21 |
| 75 | 3 | RehmathNisha, 3 | 185 | 183 | 181 | 9 | 134 | 131 | 127 | 124 | 10 | 32 | 33 | 34 | 34 | 2 | 154 | 153 | 152 | 151 | 3 | 68 | 30 | 38 | 130 | 39 | 91 |
| 76 | 3 | Grace mary, 51/ | 165 | 163 | 164 | 3 | 129 | 126 | 122 | 118 | 11 | 37 | 38 | 38 | 39 | 1.5 | 148 | 147 | 146 | 146 | 2 | 38 | 15 | 23 | 70 | 27 | 43 |
| 77 | 3 | Rajarajan, 50/M | 190 | 187 | 186 | 7 | 139 | 134 | 130 | 126 | 13 | 34 | 35 | 35 | 36 | 2 | 162 | 162 | 161 | 160 | 2 | 91 | 49 | 42 | 52 | 20 | 32 |
| 78 | 3 | Mariyakokila, 5 | 170 | 168 | 166 | 7 | 124 | 124 | 117 | 115 | 9 | 38 | 38 | 39 | 40 | 2 | 152 | 151 | 150 | 150 | 2 | 133 | 66 | 67 | 59 | 27 | 33 |
| 79 | 3 | Muthulakshmi, 4 | 157 | 154 | 153 | 8 | 116 | 112 | 108 | 105 | 11 | 40 | 40 | 41 | 41 | 1 | 147 | 146 | 146 | 145 | 2 | 110 | 61 | 49 | 61 | 25 | 35 |
| 80 | 3 | Narayanan, 52/M | 157 | 156 | 151 | 8 | 120 | 118 | 115 | 110 | 10 | 40 | 40 | 41 | 42 | 2 | 134 | 134 | 133 | 132 | 2 | 44 | 18 | 26 | 55 | 8.1 | 47 |
| 81 | 3 | G.Chandra, 46/F | 174 | 170 | 168 | 12 | 160 | 158 | 156 | 152 | 8 | 32 | 32 | 32 | 34 | 2 | 130 | 126 | 120 | 122 | 8 | 191 | 60 | 131 | 23 | 8.1 | 15 |
| 82 | 3 | Malathi, 52/f | 175 | 172 | 170 | 7 | 135 | 133 | 130 | 127 | 8 | 34 | 35 | 35 | 36 | 2 | 156 | 155 | 155 | 154 | 2 | 95 | 47 | 48 | 39 | 19 | 20 |
| 83 | 3 | Riswan Beevi, 4 | 154 | 151 | 148 | 8 | 115 | 113 | 112 | 110 | 5 | 41 | 41 | 41 | 42 | 1 | 138 | 138 | 137 | 136 | 2 | 30 | 13 | 17 | 10 | 8.1 | 2.2 |
| 84 | 3 | Zaheer hussari, | 192 | 190 | 186 | 8 | 140 | 137 | 132 | 129 | 11 | 32 | 33 | 33 | 35 | 3 | 165 | 164 | 163 | 162 | 3 | 78 | 33 | 45 | 36 | 19 | 17 |
| 85 | 3 | Neournisha, 38/ | 150 | 149 | 148 | 4 | 125 | 123 | 120 | 116 | 9 | 38 | 38 | 39 | 40 | 2 | 137 | 137 | 136 | 136 | 1 | 54 | 24 | 30 | 21 | 10 | 11 |
| 86 | 3 | Ranjani, 44/F | 161 | 158 | 155 | 8 | 122 | 120 | 119 | 117 | 5 | 40 | 40 | 40 | 41 | 1 | 142 | 142 | 142 | 140 | 2 | 24 | 11 | 13 | 114 | 59 | 56 |
| 87 | 3 | Sivaraman, 39/M | 194 | 193 | 191 | 5 | 143 | 141 | 137 | 134 | 9 | 34 | 35 | 36 | 37 | 3 | 165 | 165 | 164 | 163 | 2 | 389 | 46 | 343 | 32 | 19 | 13 |
| 88 | 3 | Rajendran, 50/M | 229 | 225 | 224 | 7 | 167 | 165 | 162 | 158 | 9 | 31 | 32 | 32 | 34 | 3 | 194 | 193 | 193 | 191 | 3 | 173 | 37 | 137 | 81 | 29 | 52 |
| 89 | 3 | Dheergasumangal | 162 | 159 | 156 | 7 | 115 | 113 | 112 | 109 | 6 | 39 | 40 | 41 | 41 | 2 | 145 | 145 | 143 | 142 | 3 | 144 | 39 | 104 | 98 | 25 | 73 |
| 90 | 3 | Devarajan, 45/M | 169 | 168 | 164 | 7 | 120 | 118 | 115 | 114 | 6 | 37 | 37 | 37 | 38 | 1 | 154 | 154 | 153 | 152 | 2 | 75 | 33 | 43 | 34 | 13 | 21 |

**DEPARTMENT OF PHARMACOLOGY**

**EFFECT OF PITAVASTATIN IN PATIENTS WITH ACTIVE RHEUMATOID ARTHRITIS TREATED WITH AT A RURAL TERTIARY CARE HOSPITAL**

## CASE SHEET

**Registration no:** **Date:**

Name: Age: Sex:

Address: Phone no:

Occupation: Marital Status: Weight (Kg):

Height (Cm): BMI:

Complaints:

H/o Present illness:

Past History

Personal History:

Family History:

Treatment History:

**General Examination:**

Pt conscious: oriented: pallor: cyanosis:

Clubbing: pedal edema : generalised lymphadenopathy

| General Examination | Weight | BMI | Pulse | BP | Morning Stiffness |
|---|---|---|---|---|---|
| Day-0 | | | | | |
| 4th Week | | | | | |
| 8th week | | | | | |
| 12th Week | | | | | |

**Systemic examination:**

| Joint Name | Day-0 | | | | 4th Week | | | | 8th Week | | | | 12th Week | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | L | R | T | S | L | R | T | S | L | R | T | S | **L** | **R** | **T** | **S** |
| Shoulder Joint | | | | | | | | | | | | | | | | |
| Elbow Joint | | | | | | | | | | | | | | | | |
| Wrist Joint | | | | | | | | | | | | | | | | |
| Metacarpo phalangeal Joint | | | | | | | | | | | | | | | | |
| Proximal inter phalangeal Joint | | | | | | | | | | | | | | | | |
| Knee Joint | | | | | | | | | | | | | | | | |

L- Left
R- Right
T- Tender
S- Swollen

| SCORING SYSTEM | Day-0 | 4th Week | 8th Week | 12th Week |
|---|---|---|---|---|
| DAS SCORE | | | | |
| VAS SCORE | | | | |

**HEALTH ASSESSMENT QUESTIONNAIRE**

| | Day-0 | | | 4th Week | | | 8th Week | | | 12th Week | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Are you able to dress yourself? | YES | With Difficulty | NO | YES | With Difficulty | NO | YES | With Difficulty | NO | YES | With Difficulty | NO |
| Are you able to standup from a straight chair? | | | | | | | | | | | | |
| Are you able to open a container? | | | | | | | | | | | | |
| Are you able to climb up 5 steps? | | | | | | | | | | | | |
| Are you able to handle TV remotes? | | | | | | | | | | | | |

## Investigation:

| Name of the Investigation | Day =0 | 4th week | 8th week | 12th week |
|---|---|---|---|---|
| **COMPLETE HAEMOGRAM** | | | | |
| Blood Hb% | | | | |
| RBC Count | | | | |
| WBC Count | | | | |
| Platelet Count | | | | |
| **INFLAMMATORY MARKERS** | | | | |
| ESR | | | | |
| CRP | | | | |

| | | | | |
|---|---|---|---|---|
| **IMMUNOLOGICAL MARKERS** | | | | |
| Rheumatoid Factors | | | | |
| Anti CCP | | | | |
| **BIOCHEMICAL MARKERS** | | | | |
| Blood Glucose | | | | |
| **LIVER FUNCTION TEST** | | | | |
| SGOT | | | | |
| SGPT | | | | |
| Serum alkaline phosphatase | | | | |
| **RENAL FUNCTION TEST** | | | | |
| Blood Urea | | | | |
| Serum creatinine | | | | |
| **LIPID PROFILE** | | | | |
| Total Cholesterol | | | | |
| TGL | | | | |
| LDL | | | | |
| HDL | | | | |

Treatment:

Signature of Investigator.

# CONSENT FORM

Name of the participant:

Documentation of the informed consent:

I have read the information in this form (or it has been read to me ). I was free to ask any questions and they have been answered. I am over 18 years of age and I am exercising my free power of choice, hereby give my consent to be included as a participant in the study of "**A STUDY ON THE EFFECT OF PITAVASTATIN IN PATIENTS WITH ACTIVE RHEUMATOID ARTHRITIS TREATED AT A RURAL TERTIARY CARE HOSPITAL**". The nature and purpose of data is for research work. The procedure has been explained to me in detail in the language understandable to me by the investigator. It has been made clear to me that all personal details like name, place, religion, past history etc., will be kept strictly confidential. I permit the result obtained to be used for academic purpose.

Trichy

Date:

Signature of the patient:

Investigator Certificate:

I certify that all the elements including the nature, purpose and possible risks of the above study as described in this consent document have been fully explained to the subject.

Signature of the investigator:

Date:

Name of the Investigator:

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