

Rheumatoid Arthritis: Causes, diagnosis and treatment.

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Abstract

Rheumatoid arthritis (RA) is a chronic disease which affects joints specifically small joints at wrist, fingers and at spinal cord etc. This disease happens due to the body's immune system attacks its own tissue and organs; it is an auto immune disorder in the human body. Timely diagnosis and proper treatment can save joint destruction and also save the patient from becoming a disable person. It is difficult to diagnose Rheumatoid arthritis at an initial stage as it looks like other common arthritis, most of the people suffer. It can be predicted based on inflammation in small joints and some clinical observations such as rise in ESR and Rheumatoid Factor. Incorporating this treatment particularly by combination of DMARDs concurrent with short duration of corticosteroid is expected to prevent progressive path and even change the natural course of RA. As if any patients with clinical synovitis consider to be having joints definite RA requiring aggressive treatment.

Rheumatoid arthritis (RA) is an inflammatory rheumatic disease which progressively affects articular and extra-articular structures resulting in pain and persistent inflammation leads to the beginning symptoms of disease are not similar in all patients but vary in regard to the pattern of joint involvement. The course of disease may also be differing according to the presence of several variables including genetic background.

The initial presenting features of early RA do not significantly swollen joints and the severity of inflammation differs from other inflammatory arthritis. So prior to come to the conclusion basing on diagnosis, patients with early RA are usually discriminated from other inflammatory arthritis. Up to now, early RA was mainly to patients with disease duration of less than 2 years preferentially less than 12 months. At present, "early" RA is regarded as patients with symptom duration more than 3 months as early disease. However, this term not been accepted by majority rheumatologists and believe that patients have either established RA or undifferentiated inflammatory arthritis

Causes of Rheumatoid Arthritis.

Rheumatoid arthritis occurs when ones immune system tries to attack its own body organs– the lining of the membranes that surround joints resulting inflammation and thickens the synovium, which can eventually destroys the cartilage and bone within the joint, the tendons and ligaments that hold the joint together weaken and stretch. Gradually the joint loses its shape and alignment. Although a genetic component appears likely cause for this Rheumatoid Arthritis people do not agree for this. Genes actually do not cause for this RA, they can make susceptible to environment factors – such as infection with certain viruses and bacteria – that may trigger the disease.

The Significance of Early Diagnosis And Management Of RA

Identification of RA at initial stage and starting treatment earlier can help patient reduce disease course, prevent the development of joint erosions and stop the progression of bone erosion.

This disease can be diagnosed by some laboratory tests such as Rheumatoid Factor and rising of ESR and physical observation of joint pains with inflammatory swelling etc. A patient with inflammatory arthritis may

pass through several stages since from the onset of arthritis. The period which leading up to the onset of arthritis considered to be first phase. The second phase is the period during which persistence or remission is tends to be determined. The third and the fourth phases lead to evolution of specific form of inflammatory arthritis and the outcome/severity of that arthritis. Joint involvement refers to swollen tendons and joints on close examination. In this category, at least one of the entailed joints must be a small joint; the other joints may include any combination of large additional small joints as well as some other such as temporomaibular acromioclavicular, sternoclavicular etc.

INITIATION OF EARLY TREATMENT

Based on the position of patients with at least one involved joint may require immune suppressants such as Disease modifying antirheumatic drugs (DMARDs). These drugs can slow down the progression of RA though there is no permanent cure for this disease. Non steroidal anti inflammatory drugs (NSAIDs) can also relieve pain and reduce inflammation. NSAIDs include ubuprofen and naproxen sodium and other stronger NSAIDs may have effects of stomach irritation heart problems and kidney damage

STEROIDS – Corticosteroid medications such as prednisone reduce inflammation and pain and slow joint damage and prevent structural damage and long term disability. Side effects may include thinning of bones and diabetes. It is important to identify RA in a very early phase.

Diseases modifying anti rheumatic drugs (DMARDs).

These drugs can slow down the progression of rheumatoid arthritis and save the joints and other tissues from permanent damage. Common DMARDs are methotrexate, leflunomide, hydrochloroquine and sulfasalazine. With these DMARDs supplement medication such as folic acid, calcium and other vitamins may be included to lessen side effects of DMARDs. Combination therapy is marks to be more effective than monotherapy which has a greater initial effect.

Early treatment with 3 DMADRs for two years limits the peripheral joint damages. Combination therapy exerts greater protection for joint damage and provides earlier clinical improvements Combination therapy using biological agents (infliximab, adalimumab) with methotrexate or biological therapy alone may induce remission in many patients with early RA. Combination therapy must be prescribed in patients who have risk factors such as high level of anti-CCP, RF, joint erosion in radiographs and those who have shared epitope.

Steroids

Administration of steroid along with combination of DMARDs or with biological therapies in early RA can induce a higher rate of remission, control of radiological progression compared with DMARD monotherapy. This medication provides better outcome and should be considered in all patients.

Treatment outcomes and Remission:

Efficacy of treatment on joint damages on radiography. During meta- analysis there was shown a Long-term impact on early treatment of bone radiographic progression in RA. The benefits sustained for up to 5 years. Addition of prednisolone to DMARD therapy at the beginning of the initial treatment retards progression of radiographic damages. The result of treatment with combination of 3 DMARDs on radiographic erosions in early RA was evaluated and made a versus with single DMARD.

Disease course in RA varies according to different studies. In early stage of RA naturally remission occurs in about 10% of cases. The long-term outcome with early RA defined as disease duration less than 2 years was prospectively assessed over 10 years. RA who was treated with either combination of 3 DMARDs or a single DMARD for two years, remission achieved in 40% and 18% of groups respectively. In patients treated with

prednisolone, remission rate was greater than those who did not take prednisolone. The outcome of treatment in patients initially treated with three DMARDs (methotrexate + Sulfasalazine + prednisolone) or initiated with methotrexate + infliximab was compared with those who have been treated with one DMARD alone (methotrexate or changed to other DMARDs) or step-up to combination therapy (initiated with methotrexate). Improvement appeared earlier and radiographic joint damage progression was significantly lower, remission rate was significantly higher in combination therapy than immunotherapy.

Conclusion: In conclusion, progressive course of RA may be mitigated or changed by appropriate treatment including combination of DMARDs started at earlier period. Developments of new benchmark classify RA patients at early phases and allow initiation of treatment for reduction of inflammation and decreasing disease activity.

