A proposed treatment algorithm for rheumatoid arthritis: Aggressive therapy, methotrexate, and quantitative measures

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A proposed treatment algorithm is presented for patient management of rheumatoid arthritis (RA). The treatment algorithm provides a guideline and not a directive. Three principles appear to pertain to all patients:

1. Treatment should be aggressive, directed towards remission or a near remission status for patients, with changes every 2-6 months (usually within 2 to 4 months) if results are not meeting this goal.
2. Early use of methotrexate is recommended, as most patients will ultimately take methotrexate and its long-term record of effectiveness and safety would make it the treatment of choice for most patients.
3. Rheumatologists should include a quantitative measure to document clinical status, which could be a joint count, formal disease activity score (DAS) (1) or the simplified disease activity index (SDAI) (2), health assessment questionnaire (HAQ) (3) or a multi-dimensional version (MDHAQ) (4), visual analog scale scores for pain and patient and physician global assessments, the erythrocyte sedimentation rate or C-reactive protein.

Rheumatologists are encouraged to apply formal indices, such as the DAS or the American College of Rheumatology (ACR) improvement criteria for 20%, 50%, and 70% (ACR20, 50, 70), although it is recognized that this is difficult in usual care, or a more simplified version such as the SDAI. Nonetheless, the use of some type of quantitative measure is most desirable, as descriptive monitoring of clinical status
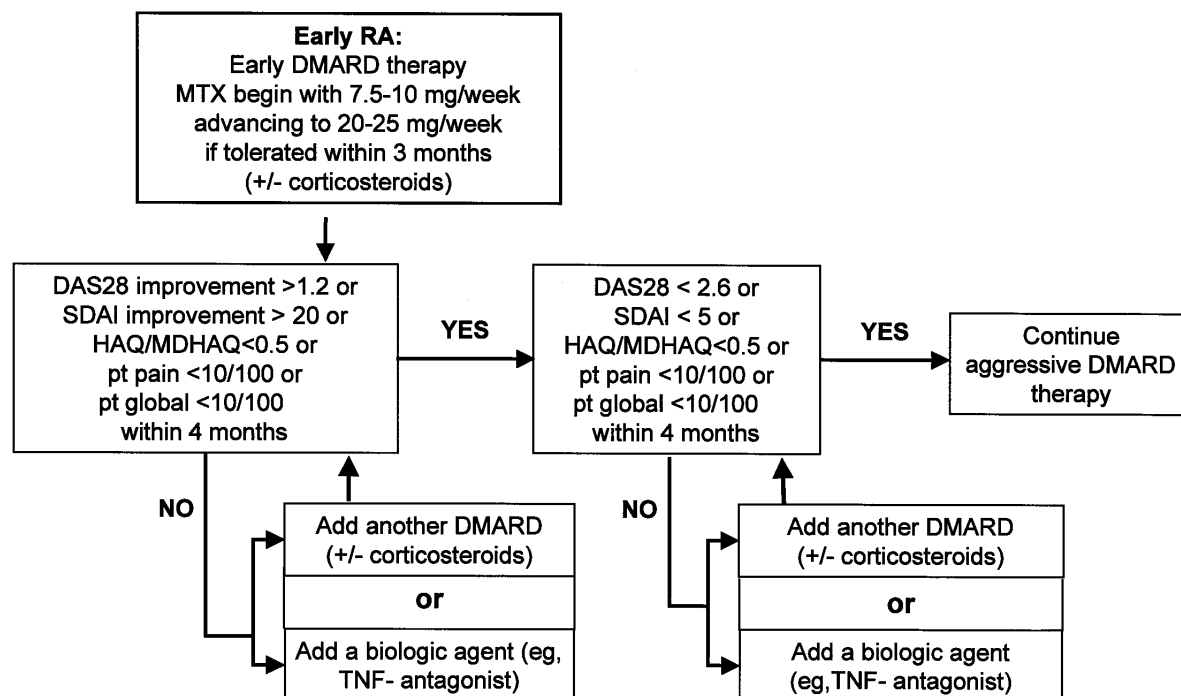

Fig. 1. Algorithm for achieving therapeutic success in rheumatoid arthritis. Lack of significant x-ray progression should be evaluated after 6 to 12 months.
RA:rheumatoid arthritis; SDAI:Simplified Disease Activity Index; DMARD: disease modifying anti-rheumatic drug; MTX: methotrexate; DAS: Disease Activity Score; HAQ: Health Assessment Questionnaire; MDHAQ: Multi-Dimensional Health Assessment Questionnaire; pt: patient; TNF: tumor necrosis factor.

from one visit to the next frequently underestimates functional declines and the progression of damage. A patient questionnaire such as an HAQ or one of its shorter versions can provide quantitative data which are as valuable as any clinical data in the prediction of severe outcomes including work disability, costs, and mortality.

References

1. PREVOO ML, VAN 'T HOF MA, KUPER HH, VAN LEEUWEN MA, VAN DE PUTTE LB, VAN RIEL PL: Modified disease activity scores that include twenty-eight-joint counts. Development and validation in a prospective longitudinal study of patients with rheumatoid arthritis. *Arthritis Rheum* 1995; 38: 44-8.
2. SMOLEN JS, BREEDVELD FC, SCHIFF MH *et al.*: A simplified disease activity index for rheumatoid arthritis for use in clinical practice. *Rheumatology (Oxford)* 2003; 42: 244-57.
3. FRIES JF, SPITZ P, KRAINES RG, HOLMAN HR: Measurement of patient outcome in arthritis. *Arthritis Rheum* 1980; 23: 137-45.
4. PINCUS T, SWEARINGEN C, WOLFE F: Toward a multidimensional health assessment questionnaire (MDHAQ): Assessment of advanced activities of daily living and psychological status in the patient friendly health assessment questionnaire format. *Arthritis Rheum* 1999; 42: 2220-30.