Differentiating Care In Early Arthritis By Prognosis And Risk Stratification: A Therapeutic Algorithm To Improve Outcome and Reduce Costs

Hans-Eckhard Langer, Stephanie Langer
Schwerpunkt für Rheumatologie, klinische Immunologie und Osteologie am Evangelischen Krankenhaus Düsseldorf, Heinrich-Heine-Universität Düsseldorf, Germany
Fürstenwall 99, D-40217 Düsseldorf, E-Mail: Dr.Langer@rheuma-online.de, WWW: www.rheuma-online.de

Background
New therapies have improved the outcome of rheumatoid arthritis and related conditions dramatically. On the other hand, healthcare resources require a well directed assignment of biological agents and other cost-intensive treatments. For a managed care program in our early arthritis clinic we developed a therapeutic algorithm that differentiates defined treatment strategies using a prognostic score. By periodical re-grading and re-staging the therapy is adjusted with the treatment objectives clinical remission, unimpaired functional capacity and inhibition of radiographic progression.

Methods
In the early arthritis cohort (disease duration < 2 years; mean disease duration at entry 17.3 months, median 12.0 months, age 57.2 years, median 55.2 years, 58% females) an initial appraisal of prognosis resulted from a modified Visser-score (erosion score, Visser et al. 2002, plus shared epitopes and MRT-findings as additional prognostic markers). Final classification was performed after consideration of clinical data (DAS-28, HAQ). For a following treatment period (treatment corridor) patients were divided into low, moderate, high and very high risk groups. In the low risk group treatment of newly diagnosed patients was continued unchanged within the treatment corridor of that group.

Results
150 patients with early arthritis were recruited from July 2005 to December 2007. For the present, follow-up data over 12 months were available in 85 patients and over 24 months in 32 patients. Over these periods the intended objectives could be achieved. The majority of patients were in clinical remission after 12 months (DAS28 < 3.2: 13/32 (40%), DAS28 < 2.6: 20/32 (63%)) and after 24 months (DAS28 < 3.2: 23/32 (72%), DAS28 < 2.6: 18/32 (56%)) despite different treatment modalities with different assignment of medications (DMARDs at 12 months: no DMARDs 21/32 (67%), conventional mono 7/32 (22%), conventional combi 9/32 (28%), biologic 5/32 (16%)). Radiographic progression was observed in 2/26 patients at 12 months (7.7%) and 2/24 patients at 24 months (8%). Conversely, at 24 months healing phenomena with regression of erosions were seen in 3 patients with erosions at entry.

Conclusions
This managed care project combines five principles to achieve better outcomes for early arthritis patients:

- Stratification of therapy depending on prediction criteria (modified Visser-Score)
- Aiming for clinical remission (Fin-RAcO)
- DMARD-related modification of antirheumatic therapy (BeSt)
- Tight control (TICORA)
- Tailoring of therapy to the individual patient using a predefined algorithm (CAMERA)

The results suggest that this approach may result in good clinical outcomes and save resources by well directed assignment of therapy.

Key references

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