IN EARLY RA, THE MULTI-BIOMARKER DISEASE ACTIVITY SCORE AT DIFFERENT TIME-POINTS IS PREDICTIVE OF SUBSEQUENT RADIOGRAPHIC PROGRESSION


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Background

Identification of rheumatoid arthritis (RA) patients at high vs low risk of rapid radiographic progression would improve treatment optimisation. Previously it was shown that the MBDA score at baseline (BL) predicts radiographic progression over the following one year. This study is done on serum samples from the SWEFOT trial.1

Methods

- Analysed van der Heijde modified Sharp scores for RADAR-RA.
- MBDA categories in patients with early RA at the end of year 1: Moderate MBDA (n=36), Low MBDA (n=1) and High MBDA (n=32).
- Cutoffs for categories of disease activity measures at baseline: Low MBDA (<30), Moderate MBDA (30-44), High MBDA (>44).
- Low CRP (<10 mg/L), Moderate CRP (10-30 mg/L), High CRP (>30 mg/L).
- Low DAS28 (≤3.2), Moderate DAS28 (3.2-5.1), High DAS28 (>5.1).
- Significant change in MBDA score (in response to treatment) is associated with a lower radiographic progression, but subsequent lowering of MBDA score (in response to treatment) is associated with a lower risk, whereas persisting high MBDA score is associated with an up to 42% risk of radiographic progression.

Results

- Table 1. Baseline characteristics and demographic data of patients from SWEFOT trial.
- Table 2. Proportion of radiographic progressors (at year 1, year 2, and from year 1 to year 2) and patients with low treatment adherence.

Figure 1: Number of radiographic progressors of RA patients in groups according to MBDA and CRP categories

Figure 2: Proportion of radiographic progressors among MT and anti-TNF arms: 2 years BL stratified by MBDA status at BL. (A) at month 3 (B) and RP from year 1 to year 2 stratified by MBDA status at year 2 (C)

Conclusions

- At each of the three time points studied (BL, 3 months and 12 months), MBDA score provided more accurate prediction of subsequent radiographic progression than DAS28 or CRP.
- Patients with high MBDA score at baseline are at risk for radiographic progression, but subsequent lowering of MBDA score (in response to treatment) is associated with a lower risk, whereas persisting high MBDA score is associated with an up to 42% risk of radiographic progression.
- These results suggest that monitoring MBDA score during treatment may help identify patients at lower versus higher risk and contribute to more individualized therapy.