

Background

During the last years treatment aims in patients with rheumatoid arthritis (RA) have changed. Nowadays, achieving remission is a major goal. We therefore analyzed whether the proportion of patients who achieved remission in DAS28 after three years of treatment with biologic agents has changed.

Objectives

To investigate whether the proportion of patients with RA who achieve remission (DAS28 < 2.6) has increased during the last years.

Patients

- RA patients who were enrolled between 2001 and 2006 in the German biologics register RABBIT
- start of treatment with etanercept, infliximab or adalimumab
- 3 years of follow-up irrespective of treatment changes

Methods

- remission rates after 3 years of patients enrolled from 2001 to 2003 were compared to the rates of patients enrolled from 2004 to 2006
- identification of predictors for remission with multiple logistic regression
- estimation of remission rates adjusted for relevant predictors (age, sex, body mass index, DAS28 at baseline and at six months and functional capacity assessed by the FFbH at baseline)

Conclusion

The availability of more treatment options accompanied with changes in treatment strategies increases the chance for RA patients to achieve remission.

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Results

Change in baseline characteristics

From 2001 to 2006 n = 2337 patients (with a follow-up of at least 3 years) were enrolled in RABBIT at start of an anti-TNF therapy. The mean disease activity at baseline decreased continuously from 2001 to 2006. The functional capacity increased accordingly i.e. patients were less disabled at start of treatment. The proportion of patients with a disease duration not exceeding 2 years increased from 8% in patients recruited in 2001 to 14% in patients enrolled 2004.

	2001 – 2003 (n = 841)	2004 – 2006 (n = 1496)
Age	53.0 ± 12.4	53.7 ± 12.0
Female	77.2%	79.6%
Disease duration, years (median, IQR)	9 (5-16)	9 (5-16)
No. of previous therapy failures	3.9 ± 1.4	3.4 ± 1.3
Rheumatoid factor positive	81.6%	79.9%

Table 1. Baseline characteristics of patients. (Values represent means (standard deviations) if not otherwise indicated.)

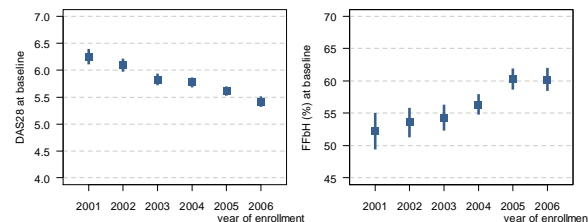


Fig. 1. DAS28 and FFbH at baseline (mean and 95% confidence interval).

Increasing remission rates

Crude remission rates at 36 months were significantly higher in patients enrolled between 2004-2006 than in those enrolled between 2001-2003 (26% vs. 19%).

The short term response measured with the DAS28 after 6 months of treatment was the most distinct predictor for being in remission after 3 years.

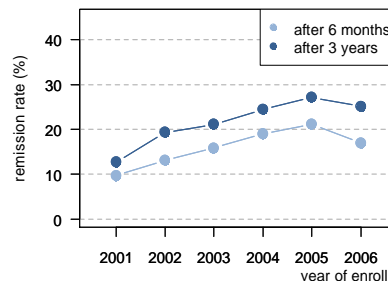


Fig. 2. Proportion of patients in remission after 6 months / 3 years.

Remission rates adjusted for differences in the case mix

Patients achieving low disease activity (DAS28 ≤ 3.2) at 6 months had an equal chance of being in remission at 3 years irrespective of the enrollment period. A benefit was observed in patients with an active disease six months after start of treatment. These patients had a higher chance to achieve remission if they were enrolled 2004 - 2006.

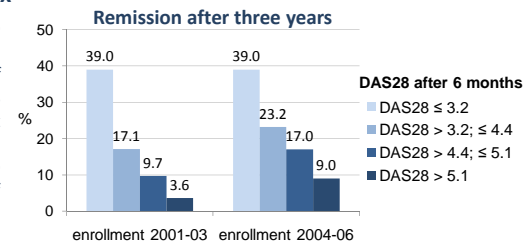


Fig. 3. Estimated probabilities for remission after 3 years depending on the DAS28 after 6 months (adjusted for further predictors, see methods).

Changes in treatment strategies

A comparison of the two periods of enrollment did not show fundamental differences concerning the number of treatment changes. In both periods about 38% of patients started at least one new biologic. The proportion of patients that switched to a novel biologic with different mechanisms of action increased significantly among the later recruited patients.

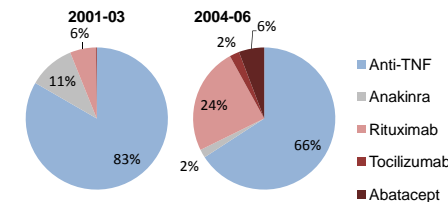


Fig. 4. Choice of the new biologic at change of treatment for patients enrolled between 2001-2003 and 2004-2006.

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