No difference in treatment continuation of different biologics in elderly patients >70 years compared to younger patients ≤65 years

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Conclusions

Our results suggest that bDMARD treatment may be used for elderly patients with the same effectiveness as in younger patients.

Background

Due to demographic changes, an increasing number of persons reach an age above 70 years. Therefore, the adequate therapy of elderly patients with rheumatoid arthritis (RA) is an increasingly important topic.

Elderly patients >70 years are less frequently treated with biologic (b)DMARDs. This might be due to the hypothesis that biologic treatments are not safe enough for elderly patients, or it is assumed that these therapies are not as effective in elderly patients. For both assumptions there is a lack of data. Treatment continuation can be regarded as a surrogate marker for both safety and effectiveness of a treatment.

Objectives

To compare treatment continuation of different bDMARDs in patients ≤ 65 years with elderly patients > 70 years, stratified by onset of disease and by seropositivity.

Patients & Methods

The German register RABBIT (***R***heumatoid ***A***rthritis: O***b***servation of ***bi***ologic ***t***herapy) is a prospective longitudinally followed cohort of RA patients with a new start of a DMARD after at least one csDMARD failure. For this investigation, patients who were enrolled between 01/2007 and 04/2018 were included.

Patients over 70 years of age were stratified by age at onset of disease in LORA (late onset (≥65 years)) and YORA (young onset (< 65 years)) and compared to patients until the age of 65 years. Kaplan Meier methods were applied to analyse treatment continuation of different bDMARDs stratified by age, age at onset of disease and seropositivity.

Results

Among the 9,819 RA patients included in the analysis, 7,972 were ≤ 65 years old and 1,847 were older than 70 years (including 180 patients with an age above 80 years).

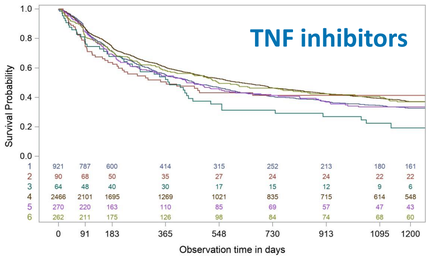
Patients' baseline characteristics

Among the patients ≤ 65 years, 28% received csDMARD treatment and 72% bDMARDs, while in patients above 70 years, 35% received a csDMARD and 65% a bDMARD. Elderly patients with a young disease onset (YORA) were more frequently women and more frequently seropositive, on average had a higher number of prior treatment failures, a worse physical function and were more likely to have joint erosions than elderly patients with late onset (LORA).

	≤ 65 years	> 70 years LORA	>70 years YORA
N	7,972	1,009	838
Age [years]	51.6 ± 9.5	76.4 ± 3.9	74.3 ± 2.9
Female patients	5,954 (74.7%)	734 (72.7%)	665 (79.4%)
Disease duration [years]	8.6 ± 7.8	4.4 ± 3.4	20.4 ± 10.4
No. of prior csDMARD therapies	2.1 ± 1.1	1.7 ± 0.9	2.5 ± 1.2
Seropositivity (rheumatoid factor or anti-CCP)	5,770 (72.4%)	697 (69.1%)	681 (81.3%)
Joint erosions	3,616 (47.9%)	445 (46.2%)	600 (76%)
DAS28-ESR	4.8 ± 1.3	5.0 ± 1.3	5.2 ± 1.3
Erythrocyte sedimentation rate [mm/h]	27.2 ± 21.3	34.6 ± 24.5	33.9 ± 23.6
C-reactive protein [mg/l]	13.4 ± 20	15.3 ± 20.5	16.4 ± 23.4
% of full physical function	67.5 ± 22.4	60.3 ± 24.4	55.4 ± 23.4
Glucocorticoid dosage [mg/d]	6.0 ± 6.2	6.1 ± 4.5	5.6 ± 4.4
Patients with >3 comorbidities	2,143 (26.9%)	560 (55.5%)	523 (62.4%)
Patients w/o comorbidities	2,240 (28.1%)	460 (4.6%)	350 (4.2%)

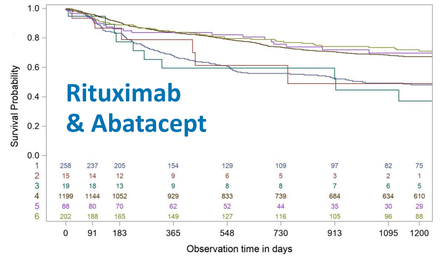
Table: Baseline characteristics of patients stratified by age and disease onset. Numbers are given as mean ± standard deviation or frequency (n (%)).

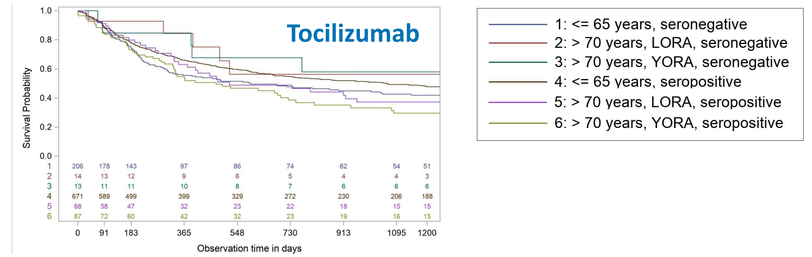
Treatment continuity stratified by age, onset of disease and seropositivity



On all bDMARD treatments investigated, elderly RA patients showed the same treatment continuation as seen in younger patients.

While neither the age of the patients nor the age at disease onset changed the continuation of biologics, patients being seronegative had a significantly lower continuation with rituximab and abatacept treatment, irrespective of age.





Figures: Treatment continuity in TNF inhibitors, abatacept and rituximab, and tocilizumab.

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