SURVIVAL OF THE FIRST ANTI-TNF IN YOUNGER AND ELDERLY RHEUMATOID ARTHRITIS PATIENTS FROM BIOBADABRASIL REGISTRY

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BACKGROUND

Analysis of drug survival can provide useful information on treatment effectiveness and safety in rheumatic diseases, including rheumatoid arthritis (RA). The aim of the present study is to report the survival of the first anti-TNF agent in RA patients younger and older than 65 years of age.

METHODS

BiobadaBrasil is a multicentric, registry-based cohort study of Brazilian patients with rheumatic diseases starting their first biologic disease modifying antirheumatic drug. The present analysis includes patients with RA, recruited from January 2009 to October 2019, followed-up over the first course of treatment with an anti-TNF agent until censoring (latest date, November 19, 2019) or occurrence of the outcome of interest (interruption of treatment). Treatment course is defined as a period during which the medication scheme does not change. The primary outcome was the interruption of treatment course for any reason (except for pregnancy or disease remission); interruption of treatment due to adverse events/death and due to inefficacy served as secondary outcomes. Multivariable Cox proportional hazard models were applied.

RESULTS

In total, 1,011 RA patients from 27 Rheumatology centers (3,333.90 patient-years [PY]) were enrolled: 900 (2,980.72 PY) < 65 years old and 111 (353.18 PY) ≥ 65 years old. Adalimumab was the most frequently prescribed agent in younger and older patients (n = 321 and n = 33, respectively), followed by infliximab (n=236 and n=31) and etanercept (n=226 and n=31). The overall incidence of treatment interruption was 18.4/100 PY (younger = 18.3/100 PY; older = 19.0/100 PY; adjusted hazard ratio for older, 1.09 [95%CI = 0.83–1.43]). The hazard ratios of the primary and secondary outcomes according to anti-TNF agent in both subgroups are in Table 1.

Table 1. Hazard ratios (HR) of interruption of therapy course of each therapeutic agent (the reference category is infliximab). Results are HR, 95% CIs, and P values*.

RA patients < 65 years old			
Agent (number of patients)	Interruption of treatment for any reason (545 events)	Interruption of treatment due to adverse events or death (156 events)	Interruption of treatment due to inefficacy (279 events)
Adalimumab (321)	0.90 (0.73–1.11), P = 0.325	0.74 (0.51–1.08), P = 0.114	1.10 (0.82–1.49), P = 0.520
Etanercept (226)	0.83 (0.66–1.05), P = 0.113	0.54 (0.34–0.84), P = 0.006	0.94 (0.68–1.31), P = 0.719
Certolizumab/Golimumab (117)	0.75 (0.50–1.10), P = 0.146	0.37 (0.16–0.83), P = 0.016	1.02 (0.60–1.73), P = 0.957
RA patients ≥ 65 years old			
Agent (number of patients)	Interruption of treatment for any reason (67 events)	Interruption of treatment due to adverse events or death (25 events)	Interruption of treatment due to inefficacy (19 events)
Adalimumab (33)	0.41 (0.19–0.86), P = 0.019	0.22 (0.05–0.90), P = 0.035	0.43 (0.09–2.01), P = 0.285
Etanercept (31)	0.68 (0.32–1.41), P = 0.296	0.61 (0.17–2.16), P = 0.445	0.47 (0.10–2.24), P = 0.344
Certolizumab/Golimumab (16)	0.97 (0.35–2.71), P = 0.950	0.61 (0.10–3.84), P = 0.594	6.69 (0.79–56.47), P = 0.081

* All tests are adjusted for variables presented in the table and for disease duration, gender, smoking, previous malignancy, diabetes, hypertension, hypercholesterolemia, renal failure, ischemic cardiomyopathy, COPD, heart failure, use of corticosteroids, starting year, hypercholesterolemia, osteoporosis, hepatitis B and C.

CONCLUSION

In BiobadaBrasil, the risk of treatment interruption with anti-TNF agents is not significantly higher in older individuals. Anti-TNF interruption due to adverse events or death among RA patients < 65 years old was lower for etanercept and certolizumab/golimumab compared to infliximab, while among RA patients ≥ 65 years old the overall risk was lower for adalimumab compared to infliximab with a reduced risk of interruption due to adverse events.

KEYWORDS

Rheumatoid arthritis, Anti-TNF, Survival, Persistence.