TOCILIZUMAB USE IN PATIENTS WITH RHEUMATOID ARTHRITIS HAVING FAILED ONE PREVIOUS ANTI-TNF AGENT: COMPARISON WITH ADALIMUMAB, ETANERCEPT AND INFLIXIMAB FROM THE PROVINCIAL ELECTRONIC DATABASE AND REGISTRY RHUMADATA®

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INTRODUCTION

Tocilizumab, as an intra-venous agent, has been approved for rheumatoid arthritis (RA) in Canada on April 30th, 2010. It was the sixth approved agent after adalimumab, etanercept, abatacept, infliximab and rituximab. It has been demonstrated effective in the treatment of RA either in monotherapy or combo therapy after non-biologic or biologic DMARDS [1-3].

OBJECTIVES

The goal of this analysis is to describe the effectiveness of tocilizumab in patients with RA failing a first anti-TNF DMARDs and to compare its retention rate versus adalimumab, etanercept and infliximab in the same clinical situation.

METHODS

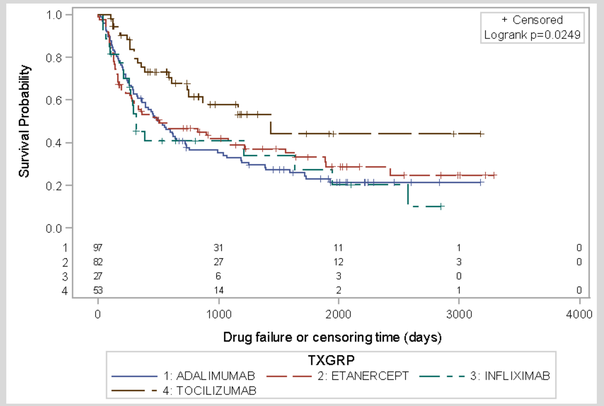
All patients with RA having failed a first anti-TNF agents and subsequently exposed to tocilizumab after the 1st of January 2005 were extracted from the Rhumadata® database. Four cohorts were created according to the time tocilizumab or the subsequent anti-TNF agents were introduced: One cohort of patients starting tocilizumab and 3 other cohorts starting either adalimumab, etanercept or infliximab. Demographics and baseline characteristics including age, gender, disease duration, Rheumatoid factor and anti-CCP antibodies, CRP and ESR, previous failed treatment number, DAS 28 ESR and CDAI, HAQ-DI were included for each cohorts.

BASELINE CHARACTERISTICS

Second biologic agent

	ADALIMUMAB	ETANERCEPT	INFLIXIMAB	TOCILIZUMAB	ALL
N	97	82	27	53	259
Mean Age (years)*	57.5 (14.5)	59.8 (13.3)	55.3 (17.8)	58.2 (13.7)	58.2 (14.3)
% Women	65.0%	81.7%	77.8%	79.3%	74.5%
Disease duration (years)	5.7 (2.0)	5.3 (2.6)	5.8 (2.7)	2.9 (1.8)	5.1 (2.5)
HAQ-Score	1.2 (0.7)	1.4 (0.6)	1.3 (0.7)	1.2 (0.6)	1.3 (0.7)
CRP [mg/L]	14.6 (22.9)	19.1 (39.7)	17.8 (28.4)	17.1 (22.4)	17.0 (29.5)
ESR [mm/hr]	24.7 (19.5)	24.7 (23.2)	26.6 (25.6)	32.8 (30.5)	26.6 (24.1)
RF+	69.2%	57.3%	61.1%	76.3%	65.6%
anti-CCP+	64.5%	57.9%	62.5%	76.2%	64.3%
DAS28-4(ESR)	3.9 (1.2)	4.2 (1.4)	3.9 (1.6)	4.2 (1.6)	4.1 (1.4)
CDAI	20.3 (11.3)	23.2 (14.5)	19.5 (13.9)	24.0 (17.3)	22.2 (14.3)

* Data are presented as means (STD), unless stated otherwise.



RESULTS

The data from 259 patients prescribed either tocilizumab (53=20%), adalimumab (97=37%), etanercept (82=33%) or infliximab (27=10%) as a second biologic agent were extracted from the Rhumadata® registry and clinical database. Most subjects were female (75%) and the average age of cohort subjects was 58.2 (STD=14.3). Mean CRP and ESR were respectively 17.0 (STD=29.5) mg per L and 26.6 (STD=24.1) mm per hour. No clinically significant differences at baseline were observed between groups. The four year retention rates of tocilizumab, adalimumab, etanercept and infliximab as second line biologic agents were 44.3%, 27.2%, 37.1% and 34.0% respectively. Kaplan-Meier survival analysis revealed significant differences in the drug retention rates (logrank-p=0.0249).

CONCLUSIONS

In RA patient having failed their first anti-TNF agent, tocilizumab, an Il-6 inhibitor, could be a more valuable alternative than cycling to a second anti-TNF agent.

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