PROFILES OF SWITCHES IN PATIENT WITH ANKYLOSING SPONDYLITIS: COMPARING ADALIMUMAB, ETANERCEPT, INFLIXIMAB, GOLIMUMAB AND CERTOLIZUMAB

J.-P. Raynauld[1], L. Bessette[2], D. Choquette[1], I. Fortin[3], B. Haraoui[1], F. Massicotte[1], J.-P. Pelletier[1], M.A. Rémillard[1], D. Sauvageau[1], E. Villeneuve[1], and L. Coupal[1]
[1]Institut de rhumatologie de Montréal (IRM), [2]Centre d'ostéoporose et de rhumatologie de Québec (CORQ), [3]Centre de rhumatologie de l'est du Québec (CREQ).

INTRODUCTION

As much a 40% of patients with ankylosing spondylitis will fail (BASDAI≥ 4) different non-steroidal anti-inflammatory agents and will eventually be treated with an anti-TNF agents. Response is usually satisfactory but retention on drug may vary from one agent to the other and from one patient to the other. Reasons for stopping and/or switching are either inefficacy, intolerance or spontaneous improvement of the disease activity in a given individual.

OBJECTIVES

The goal of this analysis is to explore the first 6, 12 and 18 month period after first exposure to an initial agent and assess the cycling incidence from different anti-TNF agents namely adalimumab (ADA), etanercept (ETA), infliximab (INF), golimumab (GOL) or certolizumab (CERTO).

METHODS

Patients with ankylosing spondylitis as diagnosed by their treating rheumatologists and exposed to either adalimumab, etanercept, infliximab, golimumab or certolizumab in first intention after failing two different non-steroidal anti-inflammatory agents for a minimum of 3 months each were extracted from the Quebec inflammatory database Rhumadata®. Demographics and baseline characteristics includes age, gender, disease duration, Hla-B27, BASDAI, BASFI, patient global (VAS) and ASDAS (CRP). Cycling from one agent to another was then explore at 6, 12 and 18 month time point. Proportion of patients switching vs not switching at each time point are assessed. Reasons for switching at each time point (Inefficacy, AEs infections, surgery or death) are expressed in percentages.

Baseline characteristics

	ADA	ETA	GOL	INF	ALL
N	114	61	31	90	296
Age (years)*	45.9 (12.2)	54.2 (10.3)	42.8 (14.1)	48.7 (10.6)	47.4 (12.2)
Men (%)	61.88	72.34	58.62	64.91	63.85
Disease duration (years)	10.5 (9.1)	15.1 (11.1)	8.2 (10.6)	13.5 (10.7)	11.6 (10.0)
ESR (mm/hr)	19.2 (19.5)	28.1 (21.3)	21.4 (21.0)	25.6 (21.7)	21.9 (20.5)
CRP (mg/L)	13.5 (19.9)	17.8 (19.3)	13.5 (14.8)	15.3 (15.1)	14.4 (18.2)
BASDAI	5.9 (2.1)	5.7 (1.9)	5.9 (2.2)	6.0 (2.4)	5.8 (2.1)
BASFI	5.1 (2.4)	5.4 (2.1)	5.0 (2.5)	5.3 (2.3)	5.2 (2.3)

*Data are presented as means (STD), unless stated otherwise. Only two subjects initiated their therapy with certolizumab and one with anakinra.

Duration of first biologic treatment of AS patients.

Biologic	N	Months taken	STD	Min	Max	Stopped or switched treatment at 0-6 months	6-12 months	12-18 months	more than 18 months
ADA	114	39.7	31.3	2.9	122.6	14 (12.3%)	18 (15.8%)	10 (8.8%)	72 (63.2%)
ETA	61	51.0	38.2	0.9	140.6	7 (11.5%)	8 (13.1%)	1 (1.6%)	45 (73.8%)
GOL	31	21.0	15.5	3.5	55.7	4 (12.9%)	7 (22.6%)	8 (25.8%)	12 (38.7%)
INF	90	52.7	41.9	0.4	173.2	10 (11.1%)	8 (8.9%)	11 (12.2%)	61 (67.8%)
All	296	44.0	36.3	0.4	173.2	35 (11.8%)	41 (13.9%)	30 (10.1%)	190 (64.2%)

Biologic status at 6, 12 and 18 months

		6 month	12 month	18 month
ADA	Ongoing	100 (87.7%)	82 (71.9%)	72 (63.2%)
	no BIO	9 (7.9%)	21 (18.4%)	29 (25.4%)
	Switched	5 (4.4%)	11 (9.6%)	13 (11.4%)
	CERTO	1 (0.9%)	1 (0.9%)	1 (0.9%)
	ETA	2 (1.8%)	6 (5.3%)	6 (5.3%)
	GOL	1 (0.9%)	2 (1.8%)	3 (2.6%)
	INF	1 (0.9%)	2 (1.8%)	3 (2.6%)
ETA	Ongoing	54 (88.5%)	46 (75.4%)	45 (73.8%)
	no BIO	1 (1.6%)	6 (9.8%)	6 (9.8%)
	Switched	6 (9.8%)	9 (14.8%)	10 (16.4%)
	ADA	3 (4.9%)	5 (8.2%)	5 (8.2%)
	GOL	1 (1.6%)	1 (1.6%)	1 (1.6%)
	INF	2 (3.3%)	3 (4.9%)	4 (6.6%)
GOL	Ongoing	27 (87.1%)	20 (64.5%)	12 (38.7%)
	no BIO	2 (6.5%)	8 (25.8%)	16 (51.6%)
	Switched	2 (6.5%)	3 (9.7%)	3 (9.7%)
	ADA	2 (6.5%)	3 (9.7%)	3 (9.7%)
INF	Ongoing	80 (88.9%)	72 (80.0%)	61 (67.8%)
	no BIO	2 (2.2%)	6 (6.7%)	12 (13.3%)
	Switched	8 (8.9%)	12 (13.3%)	17 (18.9%)
	ADA	5 (5.6%)	7 (7.8%)	8 (8.9%)
	ANA	0 (0.0%)	0 (0.0%)	1 (1.1%)
	CERTO	0 (0.0%)	0 (0.0%)	1 (1.1%)
	ETA	3 (3.3%)	4 (4.4%)	5 (5.6%)
	GOL	0 (0.0%)	1 (1.1%)	2 (2.2%)

Reason for stopping or cycling biologic at 18 months

Reason treatment Stopped	ADA	ETA	GOL	INF	ALL
Inefficacy	32 (76.2%)	11 (68.8%)	17 (89.5%)	21 (72.4%)	81 (76.4%)
Adverse event	3 (7.1%)	2 (12.5%)	1 (5.3%)	0 (0.0%)	6 (5.7%)
Surgery	3 (7.1%)	3 (18.8%)	1 (5.3%)	8 (27.6%)	15 (14.2%)
Lost to follow-up	4 (9.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	4 (3.6%)
ALL	42	16	19	29	106

RESULTS

The data from 296 patients with ankylosing spondylitis and prescribed either adalimumab (114=39%), etanercept (61=21%), golimumab (31=10%) or infliximab (90=30%) as first biologic agent were extracted. These patients were treated for a period ranging from 0.4 to 173.2 months with a mean treatment duration of 44.0 (StD=36.3) months. At 6, 12 and 18 months, 11.8%, 25.7% and 35.8% of patients had either stopped or switched their medication. The reported reasons for stopping or switching medication were inefficacy (76.4%), adverse events (5.7%), surgery (14.2%) and lost to follow-up (3.6%).

CONCLUSIONS

Switches at the 6 month time point vary from 4.4% (ADA) to 9.8% (ETA). The percentage of switches increase with time for all agents except golimumab (9.7% at 12 and 18 months). A significantly higher proportion of patient stops golimumab and do not switches to another agent (51.6%). Main reason for stopping or cycling to another agent is inefficacy.

Supported by unrestricted grant from Abbvie Canada, Amgen Canada, BMS Canada, Celgene Canada, Janssen Canada, Pfizer Canada, Roche Canada
Disclosure of interest: None declared

CONTACT

Denis Choquette MD
Institut de Rhumatologie de Montréal
1551, Ontario Street East
Montreal, Canada
denis.choquette.irm@videotron.ca