Secukinumab sustainability: The Belgian Experience

J. Lambert[1], V. Failla[2], F. Willaert[3], X. Lam[4], T. Hillary[5], B. Kint[6], H. Boonen[7], J. Lambert[8], F. Guiot[9], PD Ghislain[10]

Universitair Ziekenhuis Gent (Belgium)[1]; Clinique André Renard (Herstal, Belgium)[2]; Hôpital Erasme (Bruxelles, Belgium)[3]; CHU Saint-Pierre (Bruxelles, Belgium)[4]; Universitair Ziekenhuis Leuven (Belgium)[5]; Algemeen Ziekenhuis Sint-Lucas (Gent, Belgium)[6]; Algemeen Ziekenhuis Mol (Belgium)[7]; Universitair Ziekenhuis Antwerpen (Belgium)[8]; Centre Médical Saint Georges (Grez-Doiceau, Belgium)[9]; Cliniques Universitaires Saint-Luc (Belgium)[10]

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INTRODUCTION

Secukinumab, a fully human monoclonal antibody that selectively neutralizes anti-interleukin (IL)–17A, has demonstrated strong and sustained efficacy with a favorable safety profile for the treatment of moderate-to-severe plaque psoriasis, psoriatic arthritis, and ankylosing spondylitis in randomized controlled trials[1,2]. Very little is known about the sustainability of response of biologic treatment in psoriasis patients in the daily clinical practice in Belgium. Here, we assessed the real-world patient characteristics, sustainability and effectiveness of secukinumab treatment in a Belgian population, up to 24 months.

METHODS

Design:

The data presented here are the outcome of 2 Novartis advisory boards. Data on secukinumab treatment in real life were retrospectively retrieved in 10 participating academic and non-academic centers. All data were anonymously, aggregated and statistically analyzed by MODIS (XPE Group NV). The sample size represents the population of psoriasis patients treated with secukinumab in Belgium.

Key Inclusion:

Adult patients with the diagnosis of moderate to severe plaque psoriasis and treated with secukinumab for at least 1 year were included. The observational period was minimum 1 year and started at the initiation of secukinumab treatment, until the date of data entry by the participating physician.

Analysis:

Categorical and continuous data were aggregated and descriptively analyzed. No hypothesis was formulated. Patient characteristics (weight, comorbidities, type of treatment center, psoriasis history and disease duration), previous treatment exposure, secukinumab response and longitudinal data of patients with more than 2 years of secukinumab treatment, were analyzed.

For each categorical variable, number and percentages were calculated. For continuous data, number of observations, mean, median, standard deviation and range were calculated.

Sustainability of treatment was described as “Stable efficacy: efficacy >PASI response 75 without any reduction over time”; “Reduction with subsequent increase: efficacy >PASI response 75 over time but with reduction and subsequent increase”; “Reduction without subsequent increase : efficacy >PASI response 75 over time with reduction but NO subsequent increase.

Response of secukinumab after 4-weeks loading dose was defined as “excellent: PASI response ≥90; Good: PASI response 75-90; Insufficient: PASI response < 75”

RESULTS

Patient characteristics:

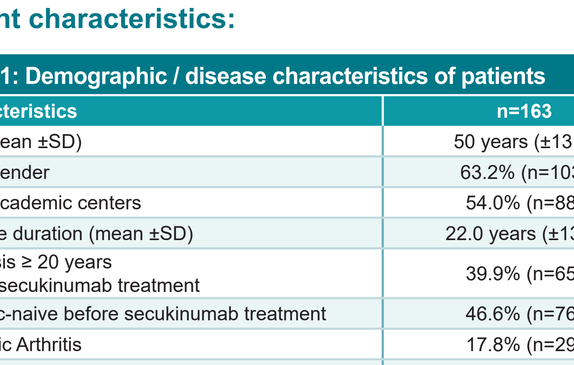
Table 1: Demographic / disease characteristics of patients

Characteristics	n=163
Age (mean ±SD)	50 years (±13.6)
Male Gender	63.2% (n=103)
From Academic centers	54.0% (n=88)
Disease duration (mean ±SD)	22.0 years (±13.8)
Psoriasis ≥ 20 years before secukinumab treatment	39.9% (n=65)
Biologic-naive before secukinumab treatment	46.6% (n=76)
Psoriatic Arthritis	17.8% (n=29)
Weight ≥ 90 kg	33.1% (n=54)
Alcohol addiction	19.0% (n=31)
Smokers	27.6% (n=45)
Depression	25.8% (n=42)

A total of 163 patients were included in the analysis (88 from academic centers and 75 from non-academic centers). The mean age was 50±13.6 years, the mean body weight was 84.8±19.2 kg. Most patients were male (63.2%) and the mean disease duration of this population was 22±13.8 years.

The majority of patients were either biologic-naive (n=76, 47%) before the start of secukinumab treatment or were prescribed secukinumab as a second line biologic (n=42, 26%); 15% (n=25) and 12% (n=20) received secukinumab as 3rd and ≥4th line, respectively. (Figure 1)

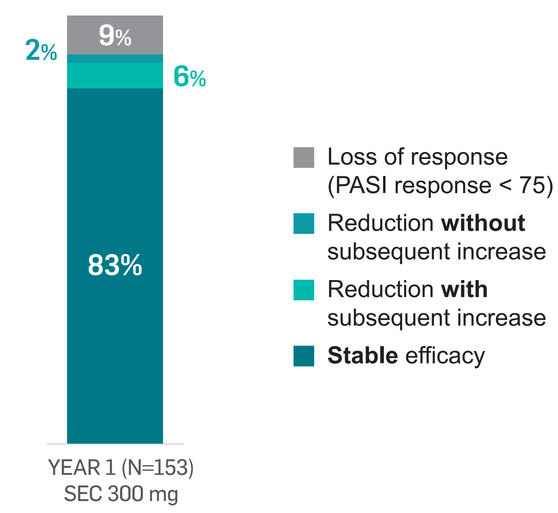
Figure 1: Patient treatment history with biologics. All patients (N=163)



Sustainability of response:

Throughout the first year of secukinumab treatment, the vast majority of patients (83%; n=127) maintained sustained efficacy overall; 6% (n=10) of patients experienced a reduction followed by a subsequent increase of efficacy; 2% (n=3) had a reduction without subsequent increase. Finally, 9% (n=15) lost response. (Figure 2)

Figure 2: Sustainability of response throughout the first year of treatment. Belgian patients.



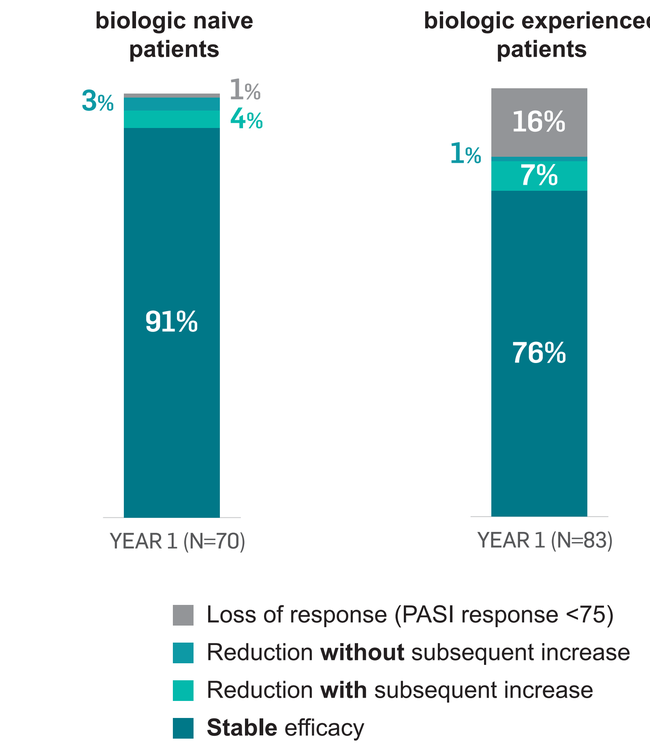
these data are missing for 10 patients

In the cohort of patients who were treated with secukinumab as first biologic (n=76), more patients maintained sustained efficacy over 1 year (91%). For patients pre-treated with biologics before secukinumab (n=87), 76% kept sustained response. (Figure 3)

In general, the share of patients with stable efficacy over 1 year is higher in non-academic treatment centers than in academic settings (89% versus 78% respectively). In the non-academic centers, more patients were biologic naive before secukinumab initiation compared to the academic centers (54% of patients versus 40% of patients).

Secukinumab treatment was continued up to 2 years in 67% of patients (n=109). In this subgroup, the number of patients with a stable sustained response after 1 year was higher than in the total population (87%) and decreased in the 2nd year (67%). Comparing patients in the non-academic treatment centers (n= 54) with the academic settings (n=55), the same trend is seen.

Figure 3: Sustainability of response by pre-treatment status



these data are missing for 10 patients

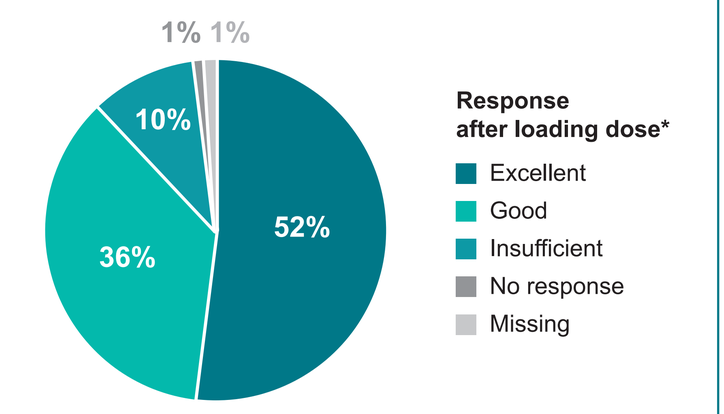
Secukinumab treatment response after the 4-weeks loading dose:

1 out of 2 patients (n=85; 52%) had an excellent effectiveness response (PASI response ≥ 90) and 1 out of 3 patients (n=59; 36%) had a good effectiveness response (PASI response 75-90) after the 4-weeks loading dose in the total population. (Figure 4)

In the sub-group of patients with this excellent response, 91% of patients maintained a stable response over 1 year. In the combined sub-group of patients with a good (PASI response 75-90), insufficient (PASI response <75) or no response, 74% maintained sustainability.

In patients who were biologic-naive before secukinumab treatment, more patients had an excellent response (67%; PASI response ≥ 90); 32% had a good response (PASI response 75-90). In the biologic pre-treated patients, this was only 39% and 40% respectively.

Figure 4: Response after loading dose. All patients (N=163)



* **Excellent** response defined as ≥ PASI response 90; **good** response: PASI response 75 - 90 and **insufficient** response: <PASI response 75

Disease duration:

The mean time from psoriasis symptom onset to the first secukinumab dosing was 19.7 (±13.7) years. Patients who received secukinumab as first biologic treatment suffered on average 17.7 (±12.6) years, those who were treated with biologics before secukinumab suffered longer (21.5 ±14.4 years).

Patients in non-academic centers were initiated sooner on secukinumab treatment than in academic centers (17.4 ±13.1 years and 21.8 ±13.9 years respectively) and more of them were biologic naive (54% versus 40%).

More patients with a shorter disease duration (less than 20 years), had an excellent response to secukinumab treatment (after the 4-weeks loading dose) than patients who suffered longer (64% versus 37%).

CONCLUSION

In this cohort, secukinumab demonstrated high effectiveness and sustainability in patients with moderate-to-severe psoriasis. Throughout the first year of secukinumab treatment, the vast majority of patients maintained sustained effectiveness. This is in line with published data from the secukinumab pivotal studies. Secukinumab effectiveness and sustainability are impacted by the use or non-use of previous biologics, the response after the loading dose, the disease duration, and the center type. Early and effective treatment is essential in improving patient outcomes.

REFERENCES

1. Bissonnette R, et al. *J Eur Acad Dermatol Venereol* 2018; 32(9):1507-1514
2. Deodhar et al. *Arthritis Research & Therapy* 2019; 21:111

DISCLOSURES

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