Experience with Belimumab in Management of Active Systemic Lupus Erythematosus

Záriková M., Macejová Ž.

1st Department of Internal Medicine, Pavol Jozef Šafárik University in Košice, Faculty of Medicine and Universtiy Hospital of Louis Pasteur in Košice

| Background

Systemic lupus erythematosus (SLE) is an inflammatory autoimmune disease that can affect almost all organs of the body. Lupus is a non-curable disease and the treatment is based on symptom control by immunosuppressive and anti-inflammatory agents, and more recently belimumab is used. The disease itself as well as conventional treatment-related adverse events have a significant negative impact on patients' life expectancy and quality of life.

| The Aim of the Survey

- To evaluate the efficacy of belimumab in patients with active SLE.

| Patients and Methods

- The survey involved **53** patients with active SLE: **34** on belimumab, **19** on conventional therapy.
- Inclusion criteria: age 18-80 years, diagnosis of SLE based on 2019 EULAR/ACR criteria
- Results were evaluated retrospectively by assessment of the clinical and laboratory activity.
- **Assessed parameters:**
  - ECLAM score
  - autoantibodies ANA, dsDNA
  - dosage of corticosteroids (prednisone equivalent)
- Data collected at baseline and week 52 of treatment

| Demography

- Average age **42.6** years
- Male/female ratio = 7:46
- Mean disease duration: **9** years.

| Results

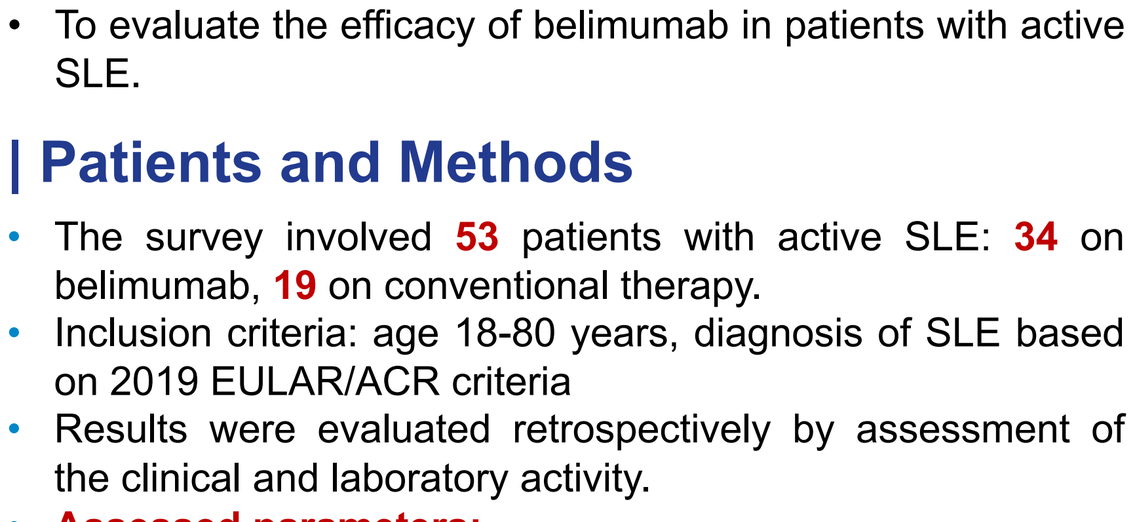

Figure 1 Change in levels and titer (strong positivity/positive/weak positivity/negative) of ANA and anti-dsDNA autoantibodies in SLE patients on belimumab in baseline and after 52 weeks of therapy.

A **significant decrease** in titers of both ANA and anti-dsDNA was observed in SLE patients treated with belimumab in week 52.

- Total decrease of ANA in **37.7%** of patients
- Total decrease of anti-dsDNA in **44.0%** of patients
- No significant decrease in autoantibody levels was observed in patients on conventional treatment.

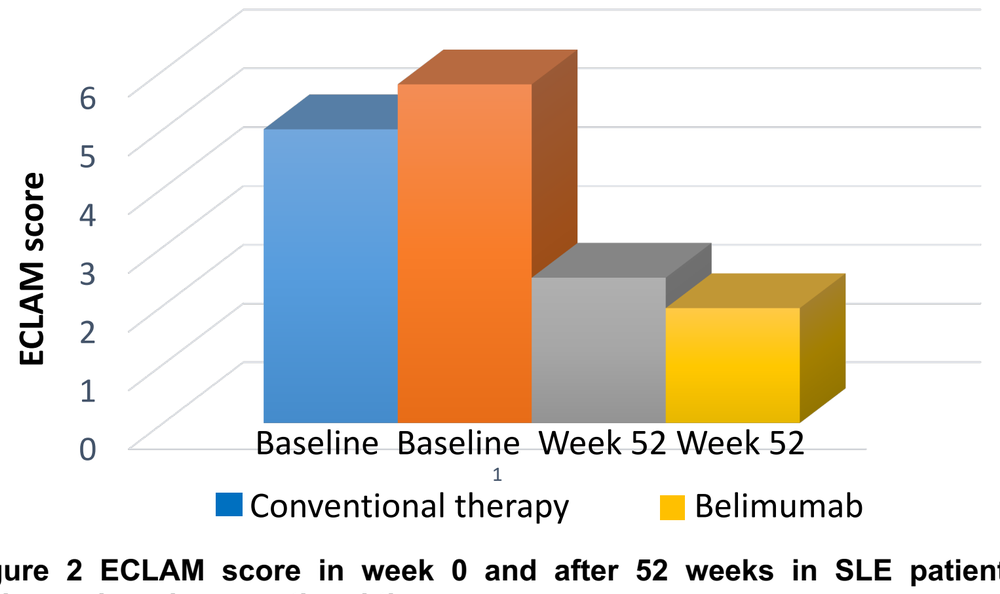

Figure 2 ECLAM score in week 0 and after 52 weeks in SLE patients on belimumab and conventional therapy.

- **decrease of the disease activity**
- average regression of ECLAM score from **5.49** to **2.14**
- decrease change **-3.35**

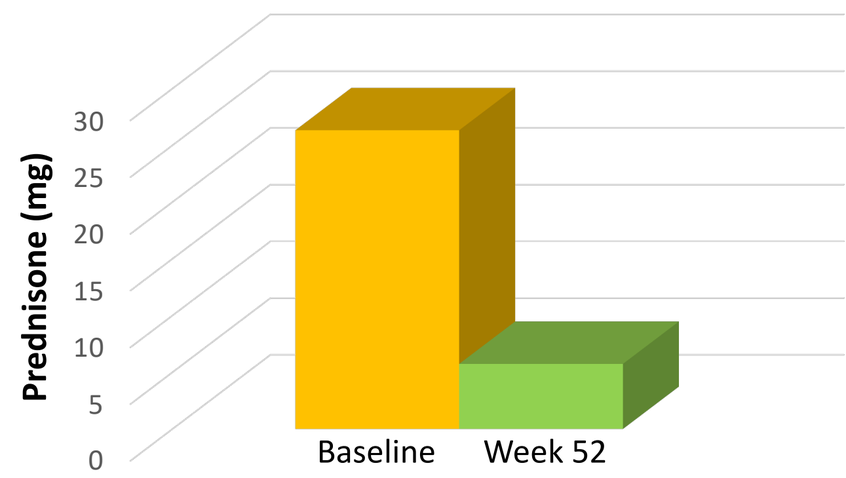

Figure 3 Dosage of prednisone at baseline and in week 52 in SLE patients on belimumab therapy

- Dosage of corticosteroids was reduced in all patients.
- Average decrease of dosage was **20.66 mg** of prednisone (from average 26.42 mg in the beginning to the current **5.76 mg**)

| Conclusions

In week 52 we noticed in all patients treated with belimumab **significant:**

- Improvement of autoantibody activity (decrease of ANA and anti-dsDNA levels)
- Improvement of ECLAM score (average regression -3.35)
- Decrease in corticosteroid dose (-14.9 mg in average)
- Improvement the complement levels
- Reduction of fatigue

Belimumab

- Is well tolerated
- Enables reduction of corticosteroid dose
- Reduces the possible occurrence of conventional treatment-related adverse events

We confirmed the safety and positive impact of biological therapy in patients with active SLE.