AB0519

IMPACT OF HIGHER BODY MASS INDEX (BMI) IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Systemic lupus erythematosus (SLE) patients may have nutritional changes triggered by disease itself or by treatment with possible implication for patients prognosis.

Objectives: The main focus of the study was to evaluate nutritional status and its impact in a SLE cohort with disease duration of at least 1 year.

Methods: 105 SLE patients admitted in Sf. Maria Clinical Hospital in 2017 were enrolled. Inclusion criteria were represented by disease evolution of at least 1 year. All patients agreed to participate in this observational study. Data about demographic, clinical or serological characteristics, but also activity (SLEDAI), damage accrual (SLICC damage index SDI) and treatment or complications (osteoporosis, cataract, glaucoma, etc) were collected. Nutritional status was evaluated by calculating Body Mass Index (BMI) for each patient. A descriptive and analytical statistics was performed with SPSS.

Results: 99 females and 6 males were enrolled. Mean age at SLE diagnosis was 34.39, SD 11.34. BMI was calculated as ratio of body weight to squared height (kg/m²). According to BMI, 5% of patients were underweight (BMI <18.5), 56% had normal weight (BMI 18.5–25), 25% were overweight (BMI 25–30) and 14% were obese (BMI >30). Increased BMI was correlated with longer disease duration (p 0.0001, r 0.30) and older age (p 0.0001, r 0.35), but these correlation loose the strength for patients older than 40 years (p 0.04, r 0.15), suggesting a more pronounced weight gain at the beginning of the disease. Quality of sleep was significantly altered in patients with abnormal BMI (p 0.005, r 0.35). As expected, overweight and obese patients had a sedentary life style (p<0.01). Higher BMI was correlated also with higher SDI score (p 0.026, r 0.35) and higher number of complications related to chorticotherapy per patient (p 0.0001, r 0.45).

Conclusions: SLE patients have an increased risk for higher BMI, especially patients younger than 40 years, in the first years after diagnosis. Optimising weight in our SLE patients should be in our focus in order to limit number of complications, damage accrual and lifestyle patterns that negatively impact their life.

REFERENCES:

- [1] Zhu LW, Zhang T, Pan HF. BMI, disease activity and health-related quality of life in systemic lupus erythematosus. *Clin Rheumatol* 2010;29:1413.
- [2] Rizk A, Gheita TA, et al. The impact of obesity in SLE on disease parameters, quality of life, functional capacity and the risk of atherosclerosis. *Int J Rheum Dis* 2012;15:261–267.

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AB0520

ASSESSMENT OF ANTI-MÜLLERIAN HORMONE LEVELS IN SYSTEMIC LUPUS ERYTHEMATOSUS TREATED WITH IMMUNOSUPPRESSOR

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Background: Systemic lupus erythematosus (SLE) is a chronic immune-mediated inflammatory disease that affects predominantly females during childbearing age. Fertility in SLE patients is considered to be normal but several factors, such as disease activity, renal involvement and treatment with immunosuppressor may negatively influence fertility.

Objectives: To investigate the ovarian reserve of patients with SLE by measuring anti-müllerian hormone (AMH) levels, and compare the AMH levels before and after treatment with immunosuppressor.

Methods: This was a self-control study performed on newly diagnosed premenopausal female SLE patients fulfilled the 1997 American College of Rheumatology (ACR) criteria. Serum concentrations of AMH in peripheral venous blood were measured using a human AMH ELISA kit (MSKBIO, Wuhan, China) before and after treatment with 6 month immunosuppressor.

Results: 45 patients were recruited. AMH serum levels reduced after treatment in the cyclophosphamide (CTX) group (n=6) and leflunomide (LEF) group (n=7), P<0.05. AMH serum levels did not differ before and after treatment in the mycophenolate (MMF) group (n=11), tacrolimus group (n=8) and methotrexate (MTX) combined with cyclosporin A (CsA) group (n=13), p≥0.05.

Conclusions: In this self-control study, the AMH serum levels reduced after 6 month treatment of CTX or LEF, indicating CTX and LEF might negatively influence ovarian reserve function. AMH serum levels did not differ after 6 month treatment of MMF, tacrolimus or combined use of MTX and CsA, indicating these immunosuppressor might be relatively safe for ovarian reserve function.

REFERENCES:

- [1] Lateef A, Petri M. Managing lupus patients during pregnancy. *Best Pract Res Clin Rheumatol*. 2013;27(3):435–47.
- [2] Oktom O, Guzel Y, Aksoy S, et al. Ovarian function and reproductive outcomes of female patients with systemic lupus erythematosus and the strategies to preserve their fertility. *Obstet Gynecol Surv* 2015;70(3):196–210.
- [3] Martins NFE, Seixas MI, Pereira JP, et al. Anti-müllerian hormone and ovarian reserve in systemic lupus erythematosus. *Clin Rheumatol* 2017;36(12):2853–2854.
- [4] Gasparin AA, Souza L, Siebert M, et al. Assessment of anti-Müllerian hormone levels in premenopausal patients with systemic lupus erythematosus. *Lupus* 2016;25(3):227–32.

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AB0521

SAFETY, PHARMACOKINETICS, AND PHARMACODYNAMICS OF SINGLE DOSES OF A BISPECIFIC ICOSL AND BAFF INHIBITOR, AMG 570, IN HEALTHY SUBJECTS

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Background: Autoimmune diseases, including systemic lupus erythematosus (SLE), are associated with dysregulation in both T cell and B cell responses. Targeting the activity of both cell types simultaneously holds promise as a treatment for autoimmune disease. AMG 570 is a bispecific molecule targeting both T cell and B cell activity through neutralisation of the inducible costimulator ligand (ICOSL) and the B cell activating factor (BAFF).

Objectives: To investigate the safety, tolerability, pharmacokinetics, and pharmacodynamics of AMG 570 in healthy subjects after single subcutaneous doses.

Methods: This ongoing, double-blind, randomised, placebo-controlled trial has enrolled healthy subjects (age ≥18 years) into escalating single-dose cohorts. Eight participants were enrolled into each cohort and were randomised 3:1 to receive either AMG 570 or placebo across six cohorts of increased dose level. The primary endpoint of the study was treatment-emergent adverse events (AEs). Secondary endpoints included pharmacokinetics and pharmacodynamics (eg, receptor occupancy of ICOSL, changes in B cell subpopulations, and serum immunoglobulin levels).

Results: As of an ad hoc interim analysis on October 5, 2017, 48 participants were enrolled and received one dose of investigational product (either AMG 570 or placebo). 73 AEs were reported; all were mild (n=56) to moderate (n=14) in severity (3 injury AEs had no grade reported). Upper respiratory tract infection and injection site erythema were the most commonly reported AEs. No drug-related serious adverse events were reported. No severe, life-threatening, or fatal AEs were reported. AMG 570 demonstrated nonlinear pharmacokinetics consistent with cell surface target (ICOSL) interaction. In the highest dose tested, AMG 570 achieved greater than 90% mean ICOSL receptor occupancy on circulating B cells 8 days after dosing, and high levels (>85% mean ICOSL receptor occupancy) were observed 29 days after dosing. AMG 570 led to a reduction in circulating naïve B cells and an increase in circulating memory B cells. No apparent changes were observed in serum IgM or IgG.

Conclusions: Overall, AMG 570 was safe and well tolerated by healthy subjects. AMG 570 demonstrated pharmacodynamic activity consistent with ICOSL and BAFF neutralisation.

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