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Systemic lupus erythematosus in Slovakia – survey results*

Toczeń rumieniowaty układowy w populacji słowackiej – wyniki badania ankietowego

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Key words: systemic lupus erythematosus, Slovak population, incidence, clinical activity, treatment.

Słowa kluczowe: toczeń rumieniowaty układowy, populacja słowacka, zapadalność, aktywność kliniczna, leczenie.

Summary

Systemic lupus erythematosus (SLE) is a chronic autoimmune disease with diverse clinical presentation and variable clinical course. Epidemiological data reported in the literature have a relatively wide range. The incidence of SLE in the Slovak population has not been exactly mapped. In this article we present the first comprehensive data on the incidence, clinical activity and treatment of SLE in Slovakia.

Streszczenie

Toczeń rumieniowaty układowy (TRU) jest przewlekłą chorobą autoimmunologiczną o zróżnicowanym obrazie klinicznym i zmiennym przebiegu. Dane epidemiologiczne dostępne w literaturze się różnią. Częstość występowania TRU w populacji słowackiej dotychczas nie była oceniana. W artykule zostały po raz pierwszy przedstawione zbiorcze dane dotyczące częstości występowania, aktywności klinicznej oraz leczenia u chorych na TRU na Słowacji.

Introduction

Systemic lupus erythematosus (SLE) is a severe autoimmune disease with diverse clinical picture, changeable clinical and serological manifestations and usually variable course with waning (periods of remission) and waxing (periods of relapses or flares) of symptoms. The disease usually affects women in fertile age. Epidemiological data reported in the literature are relatively wide ranging (the prevalence ranges from 20 to 90 cases per 100 000 population, the incidence ranges from 2–5 cases per 100 000 population) and the incidence of SLE in Slovakia has not been exactly mapped. The objective of this paper was to determine the incidence of SLE in Slovakia.

Material and methods

We decided to collect the data on SLE incidence in Slovakia using a quantitative survey methodology. The additional result of the survey was to gain a detailed impression of our SLE patients. The survey was carried out by GfK Slovakia during the period between June and August 2011.

The survey involved 37 out-patient rheumatologists in the Slovak Republic. The data were collected by completing a questionnaire and so-called patient cards including the data on clinical symptoms of SLE, diagnosis, activity evaluation, the incidence of flares, long-term maintenance therapy and treatment of flares as well as the number of patients in the active phase of the disease.

The whole group consisted of 162 SLE patients, of whom 87% were women and 13% were men. This corresponds with the female to male ratio of 9 : 1 indicated in the literature (Fig. 1).

Results and discussion

After recalculating the data, the following facts on SLE incidence and prevalence in Slovakia were identified: the

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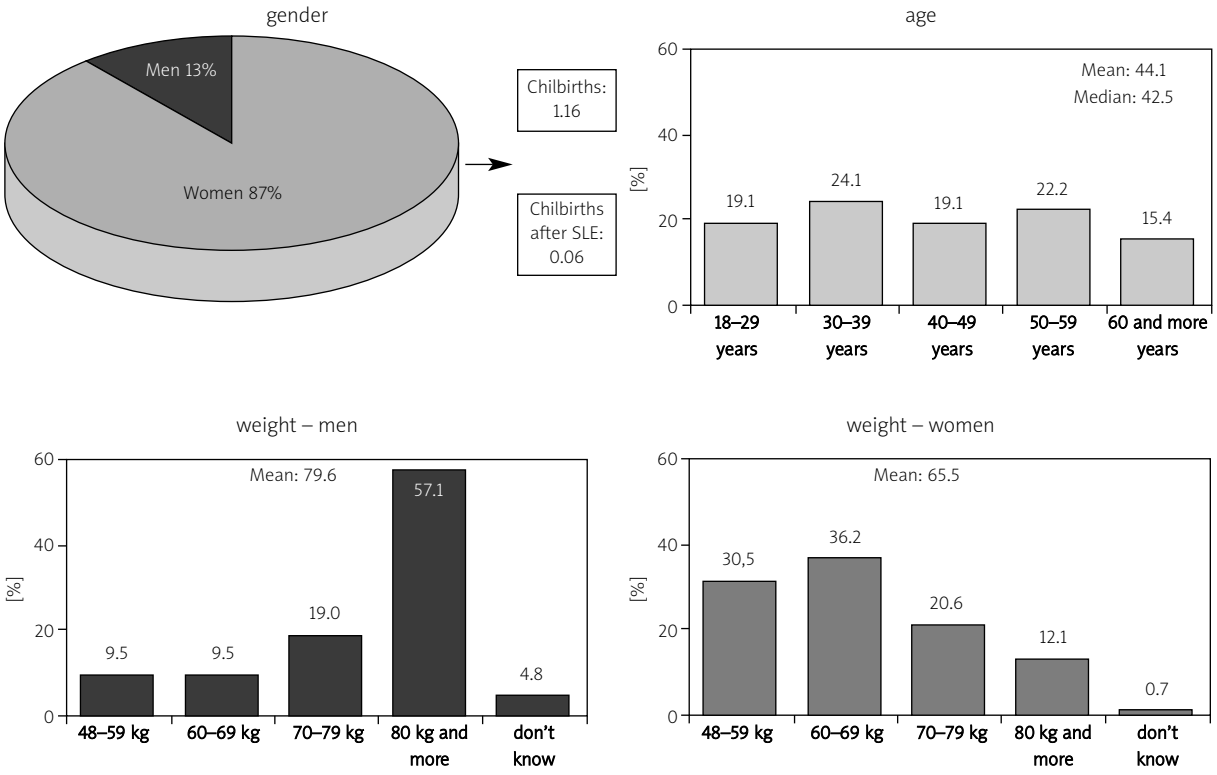

Fig. 1. Basic demographic data

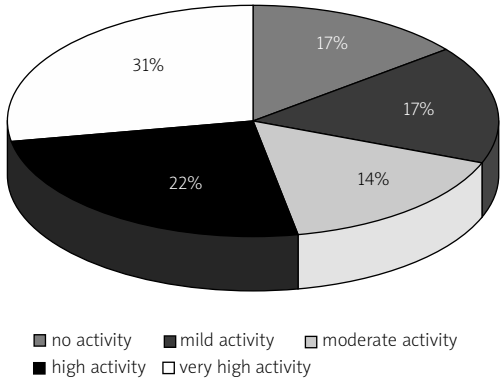

Fig. 2. Disease activity according to SELENA-SLEDAI

incidence was 3.27/100 000 population per year and the prevalence was 26.18/100 000 population, corresponding with 1424 patients in the SLE dispensary. Taking into account the number of newly detected SLE cases and the incidence of SLE deaths per year, the annual increase of SLE patients was 0.2%.

The average time from onset of first symptoms to definite diagnosis was 10.5 months. At the time of diagnosis, the most common clinical symptoms of the disease

Table I. Average drug doses in maintenance therapy and drug doses administered in relapses

Drug	Maintenance dose (total dose in mg)	Relaps (total dose in mg)
prednisone	11.2	50.8
hydrochloroquine	174.6	202.4
chloroquine	232.0	236.4
azathioprine	53.9	55.6
methylprednisolone	7.0	515.9
cyclosporine	112.6	154.8
cyclophosphamid	51.1	369.9
flurbiprofen	110.0	183.3
aceclophenac	166.7	200.0
diclophenac	113.3	150.0
meloxicam	15.0	26.7
methotrexate	3.9	5.0
ibuprofen	533.3	1000.0
NSAID	172.5	N/A
acetylsalicylic acid	100.0	N/A
mycophenolate mofetil	1016.0	2333.3

NSAID – nonsteroidal anti-inflammatory drugs

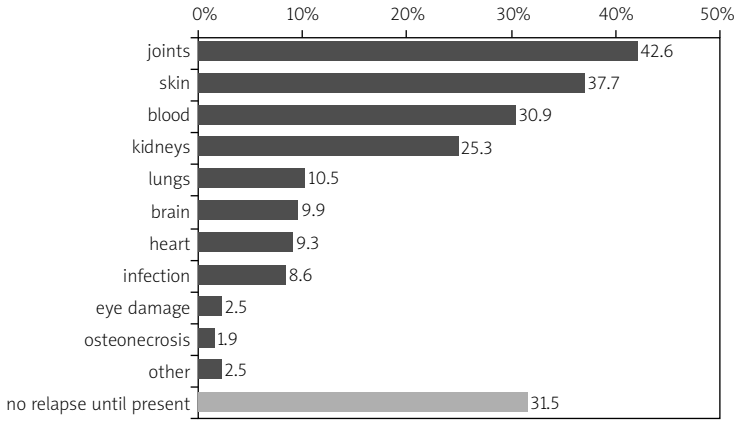

Fig. 3. SLE organ manifestations

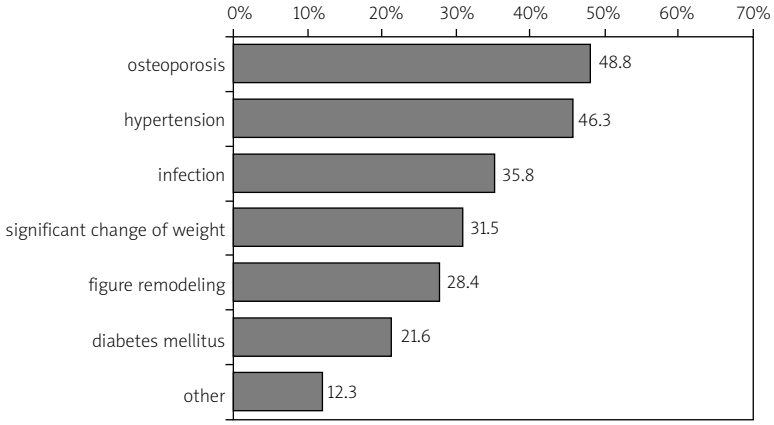

Fig. 4. Incidence of most common complications

were blood count pathology, lupus rash, photosensitivity, kidney involvement and positive anti-nuclear antibodies. More than half of patients (52%) presented with lupus nephritis either initially or later during the course of the disease, while in 18% the condition was evaluated as deteriorating or non-stabilized with repeated waning (periods of remissions) and waxing (periods of relapses or flares) of symptoms.

At the time of data collection, more than 50% of patients were found to have the clinical activity of their disease increased according to the SLEDAI score. Very high clinical activity was found in 31% of patients, high activity was found in 22% of patients, and moderate activity was found in 14% of patients (Fig. 2).

Patients with increasing clinical activity according to the SLEDAI score were found to have higher anti-dsDNA antibody levels and more frequent low complement levels. The degree of organ damage was associated with the disease activity. While patients with very high disease activity presented with up to 7 organ complications on average, patients with mild and moderate activity were found to have 2 organ complications on average. When calculated per 1424 patients in the SLE dispensary, the proportion of patients with active disease was 83.4% (i.e. 1187 patients) of whom 30.3% (360 patients) presented with positive anti-dsDNA antibodies and low complement levels.

The therapy involved mostly corticosteroids – both initially and during the course of the disease. The survey revealed that 89% of patients were on long-term corticosteroid therapy. The average daily dose was 10 mg which had significantly increased during periods of flares. The long-term therapy also included anti-malarial medications, NSAID and immunosuppressive agents, primarily azathioprine. The average daily doses of drugs in long-term treatment of SLE patients from this survey are presented in Table I.

The disease is characterized by waning (periods of remission) and waxing (periods of relapses or flares) of symptoms. Of 162 patients in the survey, 34% experienced flares during the past 3 years and 22% experienced flares during the past 12 months. The most common waxing symptoms included involvement of peripheral joints, skin disorder, blood abnormalities and reactivation of nephritis (Fig. 3).

The risk of developing a relapse increased with the disease activity.

The treatment of relapses included increased doses of corticosteroids, intravenous administration of immunoglobulins, cyclophosphamide in pulse therapy, and rituximab in isolated cases.

The SLE treatment is accompanied by a number of side effects. With administration of corticosteroids the adverse events emerge relatively soon – osteoporosis was diagnosed in 49% of patients within 4 years of treatment, hypertension was diagnosed in 46% of patients within 2 years of treatment, and diabetes mellitus was diagnosed in 21% of patients within 6 years of treatment. Other complications have emerged within 5–8 years of treatment such as infections (36%), significant weight change (32%) and figure remodeling (28%). Figure 4 presents the most common complications of SLE treatment.

Conclusions

The survey has brought the first comprehensive data on SLE incidence, clinical activity and treatment in Slovakia. These local data have also confirmed that systemic lupus erythematosus is a severe disease which in spite of effective therapy significantly affects the quality of the patient's life and still remains a big challenge.

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