

# EFFICACY AND SAFETY OF AZATHIOPRINE, LEFLUNOMIDE AND METHOTREXATE IN PULMONARY SARCOIDOSIS PATIENTS WITH CONTRAINDICATIONS FOR USE AND ADVERSE EFFECTS OF GLUCOCORTICOSTEROIDS

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## *Abstract*

Contraindications for use of glucocorticosteroids (GCS) in patients with pulmonary sarcoidosis are observed in general in 12 % of patients, serious adverse effects of GCS — in 3 %, resistance to GCS — in 17 %. This necessitates the development of alternative therapies, using immunosuppressive drugs.

The *aim* of the study was to evaluate the efficacy and the rate of adverse effects of azathioprine, leflunomide and methotrexate in patients with contraindications for use or side effects of GCS.

*Material and methods.* We examined 40 patients with stage II pulmonary sarcoidosis — 32 women and 8 men, aged 31–69 years. In 29 patients an immunosuppressive therapy was started initially because of evident contraindications for use of GCS. In 11 cases immunosuppressive drug was prescribed due to serious adverse effect of previously used GCS therapy.

*Results.* Use of azathioprine (50 mg/day with further escalation of dose by 25 mg/day after two weeks of therapy until maximum daily dose reached) was not effective in majority of patients. A regression of lung lesions after 3 months was observed in 2 of 10 patients. In 6 patients a progression of the disease was registered. Leflunomide (20 mg/day) in comparison with azathioprine was more effective. The regression rate after 3 months of therapy (4 out of 11 cases) was equal to the rate of progression. Stable disease was registered in 2 patients. In contrast to azathioprine and leflunomide a methotrexate (10 mg/week) was effective in majority of patients — 14 (73,7 %); stable disease was observed in 4 patients; progression — in 1 patient. Unlike its comparators, methotrexate had more favorable safety profile. Serious adverse effects, causing discontinuation of therapy, were registered in 2 patients, treated with azathioprine and in 1 patient on leflunomide. There were no serious side effects in methotrexate group.

*Conclusion.* The results of the study give reasons to consider methotrexate a drug of choice in pulmonary sarcoidosis patients with contraindications for use or side effects of GCS.

**Key words:** pulmonary sarcoidosis, immunosuppressive therapy, azathioprine, leflunomide, methotrexate.

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