Infection and autoimmunity: antibodies against *Legionella pneumophila* in the serum of patients with autoimmune rheumatic disorders

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Bacteria of the genus *Legionella* were first described almost 40 years ago. Currently, 58 species of the genus *Legionella* are identified within 3 subspecies. More than half of them can be a human pathogen and cause lower respiratory tract infections known as Legionnaires disease, that is, the pneumonic form of legionellosis or Pontiac fever, a rather mild influenza-like syndrome. The incidence of Legionnaires disease is known only partially, and the disease is believed to be underdiagnosed and underreported. The second question is more complex. There have been several suggestions that viral infection can trigger or exacerbate the course of systemic lupus erythematosus. The role of infection in the development of other autoimmune rheumatic disease remains unknown, although, historically, this hypothesis was a stimulus for the discovery of such medications as gold salts and sulfasalazine. Host defense against infectious agents is based on the ability of the immune system to distinguish “nonself” from “self” antigens. Autoimmunity is associated with the lack of such ability. Such viruses as the Epstein–Barr virus, cytomegalovirus, or retrovirus have been proposed to play a role in the development of autoimmunity. Bacterial factors are a cause of comorbidity rather than the origin of autoimmunity in patients.
with autoimmune disorders. A decreased ability to react with bacteria may result from the disease owing to immune system disturbances, but most of the patients with autoimmune disorders become immunocompromised during therapy. Medication with glucocorticosteroids and cytotoxic drugs is generally accepted as a significant risk factor for infection.

The main results of the study by Sikora et al are of high clinical interest. The risk of legionellosis in patients with autoimmune rheumatic diseases is not higher than that in the general population despite profound alterations in the immune system of these patients. On the other hand, a physician treating patients with impaired immunity must always keep in mind their enhanced sensitivity to infection and a possible altered presentation and course of infectious comorbidity. In the case of legionellosis, such presentations of the disease as lung abscess have been reported in patients with a defective immune status.6,7

REFERENCES