

The role of diabetes mellitus in association with pulmonary tuberculosis

Gamaniuc Marina, Anatolie Vișnevschi, Ana Veselovskaia

Author(s), affiliation

Universitatea de Stat de Medicină și Farmacie „Nicolae Testemițanu”, Catedra de medicină de laborator, Chișinău, Republica Moldova

Introduction:

Diabetes mellitus is a risk factor for lower respiratory infections including TB. Overall, approximately 15% of pulmonary TB cases are associated with diabetes mellitus. Patients with diabetes associated with pulmonary tuberculosis have changes in the adaptive immune response.

Purpose:

Analysis of specialty literature sources regarding the role of diabetes in association with pulmonary tuberculosis

Keywords:

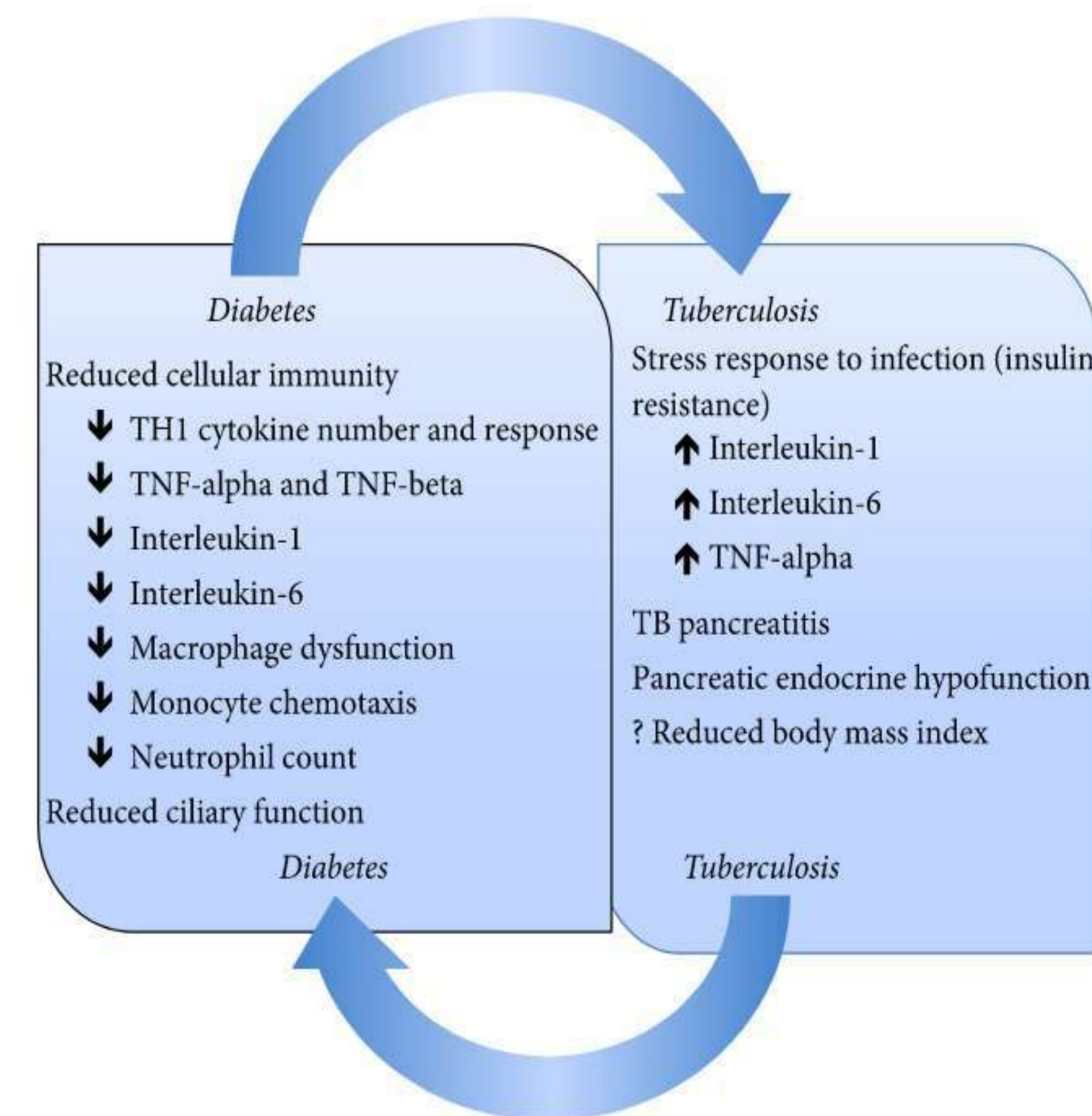
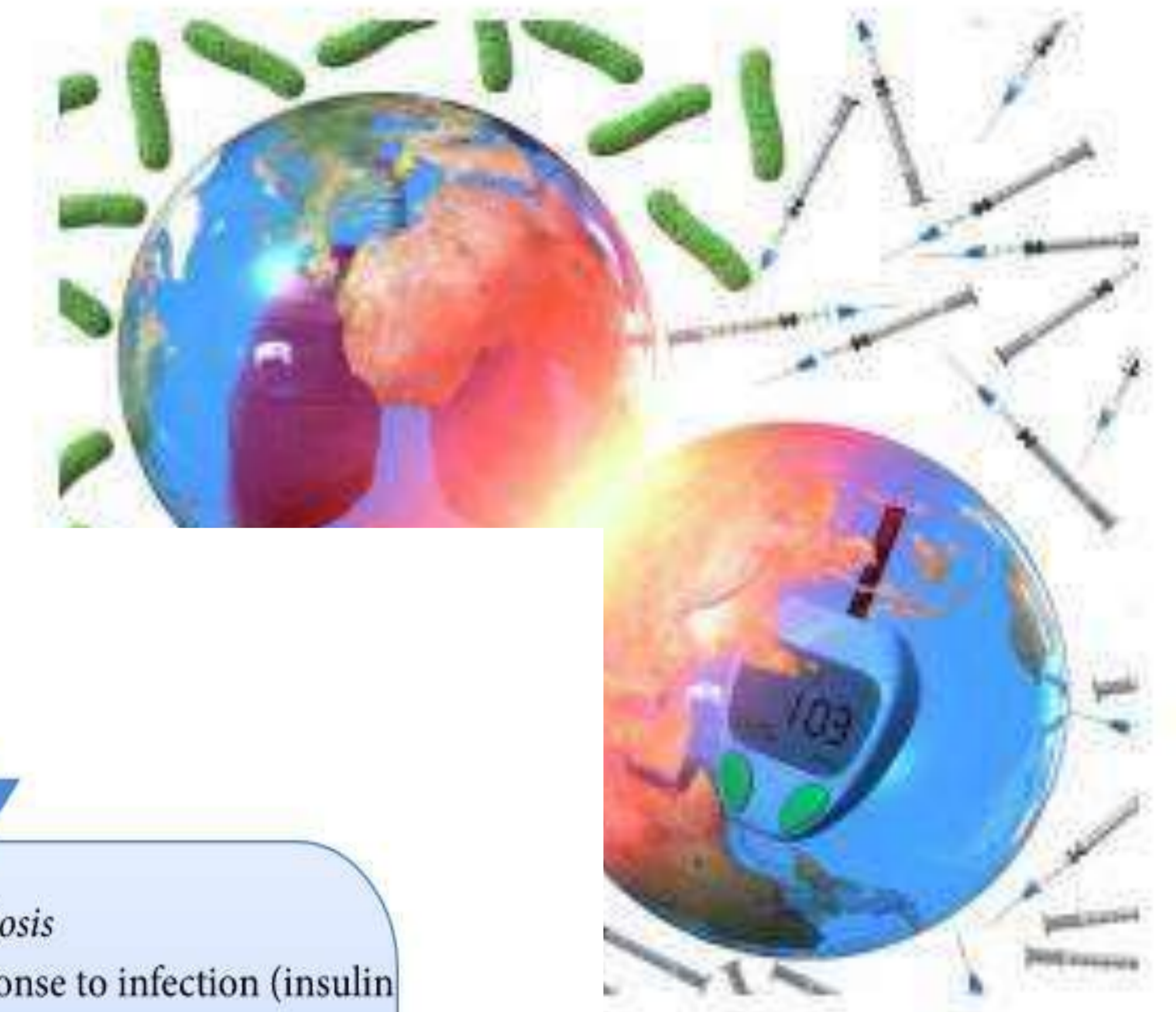
Diabetes mellitus, pulmonary tuberculosis, TB pulmonary

Material and methods:

Materials were analyzed using the Hinari, Google academic and Pub Med databases, with reference to diabetes, pulmonary tuberculosis, changes in the adaptive immune response.

Results:

Diabetes mellitus induces dysfunction of the adaptive immune response to infection with M.tuberculosis in the initial stages. Patients with diabetes mellitus associated with pulmonary tuberculosis, monocytes and macrophages have lower phagocytic and antimicrobial activity against M. tuberculosis and produce less cytokines. Several studies have suggested that Th1 and Th17 lymphocytes with cytokines IL-12, IL-17, IL-23, TNF-, are the best defense against M. tuberculosis infection, but in the case of diabetes associated with pulmonary tuberculosis the response immune of Th1 and Th17 is induced due to the immunosuppressive effect of diabetes, which in turn increases immune pathology.



Conclusions:

Diabetes increase the severity of the disease with pulmonary tuberculosis, create a significant negative impact on public health requires high control of both pathologies and profound study of the immune base.