

Effetti immunitari da esposizione a basse dosi di mercurio inorganico

L. SOLEO, C. COLOSIO*, R. ALINOVII**, D. GUARNERI***, A. RUSSO, P. LOVREGGIO, L. VIMERCATI, S. BIRINDELLI**, I. CORTESI****, C. FLORE*****, P. CARTA*****, A. COLOMBI*****, G. PARRINELLO*****, L. AMBROSI*****

Dipartimento di Medicina Interna e Medicina Pubblica, Sezione di Medicina del Lavoro, Bari

* International Centre for Pesticide Safety, Busto Garolfo, Milano

** Dipartimento di Clinica Medica, Nefrologia e Scienze della Prevenzione, Sezione di Medicina del Lavoro e Laboratorio di Tossicologia Industriale - Università di Parma

*** Azienda Ospedaliera Istituti Clinici di Perfezionamento, Milano

**** Dipartimento di Medicina Sperimentale e Applicata - Cattedra di Medicina del Lavoro, Università di Brescia

***** Dipartimento di Sanità Pubblica, Sezione di Medicina del Lavoro, Università di Cagliari

***** Dipartimento di Medicina del Lavoro, Università di Milano

***** Dipartimento di Scienze Biomediche, Sezione di Statistica Medica, Università di Brescia

***** Cattedra di Medicina del Lavoro, Università di Foggia

KEY WORDS

Inorganic mercury; very low doses; immune system; IL-8

SUMMARY

«Immune effects due to exposure to low doses of inorganic mercury». Objective: *The immune system is a target for the toxic effects of inorganic mercury, both in humans and animals. In humans it has been observed that occupational and environmental exposure to inorganic mercury may cause both clinical (autoimmunity, hypersensitivity) and subclinical effects (cellular and humoral immunologic variable modifications). To obtain a better definition of these effects with respect to the exposure levels, a multicentre study was performed on 117 workers exposed to very low doses of inorganic mercury and 172 subjects from the general population of the same geographical area with environmental exposure to mercury from dental amalgams and dietary fish intake.* Results: *The white blood cell count was included in the normality range for all subjects and there was no difference between exposed and non exposed subjects. The immunologic variables studied showed an increase of the CD4⁺ and CD8⁺ number in exposed workers compared to non-exposed subjects, with a statistically significance only for CD4⁺, while no difference was observed regarding CD4⁺, CD8⁺, NK⁺ percentage and CD4⁺/CD8⁺ ratio. A significative decrease of serum IL-8 and an inverse correlation between serum levels of this cytokine and HgU were observed in exposed workers compared to non exposed subjects. No association between immunologic variables and both dental amalgams and dietary fish intake was found in subjects not occupationally exposed to inorganic mercury.* Discussion: *The decrease in IL-8 serum levels observed in exposed workers might suggest an immunosuppressive effect of occupational exposure to very low doses of inorganic mercury. This result suggests the need to revise of current HgU BEI after further definition of its prognostic significance.*

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Corrispondenza: Prof. Leonardo Soleo, Dipartimento di Medicina Interna e Medicina Pubblica, Servizio di Medicina del Lavoro, Policlinico, P.zza G. Cesare 11, 70124 Bari