

PRELIMINARY COMMUNICATION

EFFECT OF PHYSIOLOGICAL AND PHARMACOLOGICALLY INDUCED THYMUS INVOLUTION ON THE IMMUNOREACTIVITY IN C57BL MICE

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Effect of physiological and pharmacologically induced thymus involution on the immunoreactivity in C57BL mice. A. BASTA-KAIM, M. KUBERA, B. BUDZISZEWSKA, A. ROMAN, A. SKOWRON-CENDRZAK. Pol. J. Pharmacol., 2001, 53, 403–407.

The effect of physiological and pharmacologically induced thymus involution was studied in 12-week-old female C57BL mice. Thymus involution was estimated by measurement of the thymus weight and the ability of thymocytes to induce a graft-versus-host (GvH) reaction at 48 h after delivery or drug administration in comparison with control (virgin, saline-treated) mice.

The thymus weight and immunoreactivity of thymocytes after delivery were reduced in a statistically significant manner by ca. 80 and 75%, respectively. On the other hand, hydrocortisone administration decreased the thymus weight (by ca. 60%), but did not change the ability of thymocytes to induce a GvH reaction. Cyclophosphamide administration significantly reduced both the thymus weight and the reactivity of thymocytes.

The present study suggests that the transient thymus involution observed after delivery, connected with a loss of the ability of thymocytes to induce a GvH reaction, cannot be explained merely by elimination of a steroid-sensitive cortical cell population, since the GvH reactivity of thymocytes was preserved in hydrocortisone-treated mice.

Key words: *thymus involution, graft-versus-host (GvH) reactivity of thymocytes, pregnancy, hydrocortisone, cyclophosphamide*

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