PIDOTIMOD ACTIVITY ON TNF-α AND IL-2 GENE EXPRESSION IN OLD RATS INFECTED WITH E.coli.

Santambrogio D., Arosio B., Uslenghi C.*, Girardello R.*, Coppi G.* and Annoni G.
Inst. of Inter.Med., Univ. of Milan; * Poli Research Center, Milan, Italy

Older individuals are more susceptible to the infectious agents than the young and this is in relation with the disrepair of immune defense mechanism associated with the advancing age. In this paper we evaluated the activity of a new biological response modifier, Pidotimod, in relation of some cytokine's gene expression. We utilized 22 months old Sprague Dawley rats (Iffa Credo, Lyon) at random divided in three groups: controls (not treated and not infected), infected (i.p. injection of E.coli CH 198) and Pidotimod (200 mg/Kg i.p. x 10 days) + infection. Messanger RNA purified from the spleens of the animals, sacrificied 24-48 hours after the infection, was probed with TNF-α, IL-2, and GAPDH cDNA clones. Northern analysis showed an increase in TNF-α steady state mRNA levels in the group of infected animals (24-48 hours), whilst only a slight signal was evident in the infected + Pidotimod group, 48 hours after the E.coli injection. On the contrary the IL-2 mRNA levels were higher in the infected + Pidotimod group than in the infected group. The results account for an activity of the drug on the immune system.

EFFECT OF DIFFERENT IMMUNOSUPPRESSANT TREATMENTS ON THYMIC IMMUNOREACTIVE OXYTOCIN

Maria Rosaria Melis, Roberto Stancampiano & Antonio Argiolas
B.B. Brodie Dept. Neuroscience, Via Porcell 4, University of Cagliari, Cagliari (Italy).

The effect of hypothalamic lesions, hypophysectomy, corticosteroids, antithyroid drugs and chronic morphine on thymic oxytocin immunoreactivity was studied in male rats. Thymic oxytocin concentration (0.55 ± 0.06 pg/mg prot.) was not modified by hypophysectomy or by low doses of corticosterone (1 mg/kg i.m. for 7 days), that failed to modify thymic weight. In contrast, oxytocin content was significantly increased by about 90%, 220%, 220% and 62% above control values, respectively, by hypothalamic paraventricular nucleus electrolytic lesions, by high doses of corticosterone (10 mg/kg i.m. for 7 days) and dexamethasone (10 μg/kg i.m. for 7 days) or by chronic morphine (increasing amounts twice a day until the dose of 200 mg/kg i.p. per day was reached in 15 days and continuing this dose an additional 15 days), that reduced significantly thymic weight. Our findings show that treatments well known for their immunosuppressant effects, influence differentially thymic weight and oxytocin concentration and raise the possibility that oxytocin is involved in the control of the immune response.