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Abstracts

STIMULATION OF THE PHAGOCYTIC ACTIVITY IN IN VITRO; IN VIVO AND IN THE CLINIC BY UKRAIN

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Ukrain, a semisynthetic compound from alkaloids of Chelidonium majus L. and thiophosphoric acid triaziridide is known to exert immunostimulating and tumoricidal effects. The transformation of different subsets of lymphocytes could be demonstrated in vitro by incubating them in Ukrain containing media (0.016 to 1.6 µg/ml). Lymphocytes of10 healthy humans and 10 healthy guinea pigs were used and compared to the stimulating effect of PHA. In all cases stimulation was dose depending and more effectfull than PHA except in one case. When YAC-1 cells are used as indicator for the NK-cell activity, incubation in 1µg/ml medium for 24 h increases the cytotoxic activity to 37 %. Rats, when treated with Ukrain showed a significant reticulocytosis. A highly significant and clearly dose-related increase in the monocytic leukocyte compartment in the order of +75% at 90 and of +475% ($p=C0.01$) at 150 mg/kg/bw was marked. Most of these cells showed a strong α-naphtyl-acetate esterase reaction and azurophilic granulae in the Giemsa staining, classifying them morphologically as LGL-cells, which are known to comprise the cells with NK-cell activity. Clinically, the activity of phagocytes and their index from with Ukrain as monotherapy treated colorectal patients were measured and compared to patients who were treated with 5-FU. In the Ukrain group the phag. activity was 98.8+/-0.4 after the first and 98.8+/-0.36 after the second therapy series, the phag. index (staphylococci)10.2+/-0.6 and 10.44+/-0.66 respectively. For the cytotoxic treated control group the values were 96.1+/-0.8 and 94.33+/-0.86 for the phag. activity and 95+/-0.4 and 96+/-0.67 for the phag. index respectively. The clinical course and the median survival time (3-18 months in 72,4% for Ukrain group and 3-18 months in 43.4% in the conventionally treated group) were better in the Ukrain group. Ukrain enhances phagocytizing activity in vitro and in vivo as in immunecomprimized oncological patients. In the clinic this may be correlated to tumor remissions.