Concentration of IL-2 in Organs of Rats with Various Ways of Injection

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**Background**
It is well known that endogenous cytokines realize their immunomodulating effect at high concentrations directly in the inflammatory focus and in organs that have a significant amount of resident macrophages.

**Aim of study**
To estimate the content of IL-2 in the organs of rats with various ways of administration.

**Method**
18 Wistar rats weighing 160.0-200.0 g were used. The animals are divided into 3 groups of 6 in each. In group 1, the normal level of IL-2 concentration in tissues was determined. In group 2, IL-2 was examined in tissues in 16 hours after i/v injection of 50,000 units of Roncoleukin. In group 3, IL-2 was examined in 16 hours after the injection of Roncoleukin as part of erythrocyte membranes. Roncoleukin was included in erythrocyte membranes by the method of hypo-osmotic hemolysis. The concentration of IL-2 was determined by ELISA.

**Results**
At 16 hours after intravenous injection of Roncoleukin, the cytokine content in the blood serum is unreliable on average 35% higher than normal. In the other tissues studied, it does not differ from normal values.
In the third group of animals, 16 hours later, the average concentration in the liver was 3.2 times higher than normal and 3 times greater than that in intravenous administration. There were no statistically significant differences in other organs with the study groups.

**Conclusion**
The obtained results substantiate the possibility of creating transport systems for delivery of Roncoleukin to the liver in the prevention and treatment of hepatic insufficiency syndrome in patients with abdominal sepsis.