THE ACTIVITY OF y-AMILASE IN THE MUSCULAR TISSUE OF RATS AT THE TRANSPLANTATION

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Transplantation of embryonic mews or tissues is an alternative to transplantations of organs. They are less differential and practically do not contain the antigens of gistospecifity. The active search for markers of the untearing away of transplants is conducted.

The activity of y-amilase during transplantation is little studied in the modern literature. In this connection, the purpose of the research consisted in studying activity of y-amilase in the muscular tissue of rats during the experimental transplantation.

Tissue of stomach muscle and thigh of muscle of 21 - 22-day old rats and adult animal was the material for research. Animals were removed from an experiment on the 1st, the 3rd, the 7th day after transplantation. Activity of y-amilase by the method of Karaveya and contents of general albumin by the method of Lowry were determined in the supernatant. Statistical treatment of results was conducted with by non-parametric criterion of Mann-Whitney. Research showed that specific activity of y-amilase is higher in the muscle of stomach and in the muscle of thigh of fruit, compared with the date of intact adult animal. These results confirm the ability of activity of metabolism in the embryonic tissues. After transplantation, tissue specificity was registered in the muscular tissues of recipient. In the tissue of abdominal muscle specific activity of y-amilase increased on the 1st and the 3rd day after transplantation, in the muscle of thigh specific activity of enzyme decreased, as compared to data in the tissue of intact adult animal. On the 7th day after transplantation activity of y-amilase did not differ from activity of enzyme in intact adult animal. Activity of enzyme of abdominal muscle was twice as high, as in the tissue of intact animal. The similar tendency was fixed in the tissue of transplant of thigh muscle and of the stomach muscle. At the first stages after transplantation the feed of transplant was made by the work of diffusion and osmosis and the power providing was made by the internal tissue supplies. Its thickness and area of the operative field are important for providing viability of transplant. On the 7th day after transplantation the circulation of blood and trophism of transplant normalized. Primary capillaries appeared in every special case; biosynthesis was restored in the transplant.

Conclusions: 1. Specific activity of y-amilase in the tissue of intact fruit was higher, than specific activity of enzyme in the tissue of adult intact animal. 2. After transplantation specific activity of y-amilase changed in the thigh tissue of muscle of recipient, but it was lower, than in the tissue of adult intact animal.3. After transplantation specific activity of y-amilase changed in the tissue of stomach muscle of recipient, but it was higher, than in the tissue of adult intact animal. 4. Activity of y-amilase in the tissue of thigh muscle and stomach muscle of transplant was maximal on the 3rd day after transplantation.