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Abstract

This study has an objective to obtain experimental laboratory proof on the effect of laser at pishu point (BL-20) in order to increase the number of β pancreatic cells, enlarge the width of Langerhans’ islets and improve the function of β cells. The increase of β cell number and functions was examined using immunohistochemical method to insulin inside the cells. Normal insulin function in the cells was observed from fasting blood glucose. This was a laboratory experimental study using randomized the posttest-only control group design. This study was carried out in Experimental Animal Unit, Department of Biochemistry, Airlangga University School of Medicine. A number of 22 rats were divided into two groups. Control group comprised DM rats due to STZ induction, and treatment group comprised STZ-induced DM rats receiving laser at pishu point. Statistical analyses were independent t-test and Spearman's correlation test. It was found that the percentage of pancreatic β cells and the width of Langerhans’ islets were significantly higher in treatment group (p < 0.05), while fasting blood glucose level was significantly lower in experimental group (p < 0.05). Furthermore, a strong correlation (p < 0.5) was found between the increase of β cells count, the increased width of Langerhans’ islets and the reduction of fasting blood glucose level. It indicated that the effect of laser at pishu point in STZ-induced DM rats increase the number as well as the function of β cells.

Keyword : Laser, DM, STZ, ÂŶ, cells,
Clinical Acupuncture