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Abstract

[NASSAR, Carlos Augusto](#) et al. Biochemical evaluation of glycemic levels of long-term tacrolimus therapy in rats. *Braz. oral res.* [online]. 2007, vol.21, n.4, pp. 293-297. ISSN 1806-8324. doi: 10.1590/S1806-83242007000400002.

One of the more serious complications following transplantation is the development of post-transplantation diabetes *mellitus* (PTDM), which has a major impact on the quality of life, with effects ranging from the control of glycemia times to increased susceptibility to infections and cardiovascular complications. It has been suggested that immunosuppressive therapy, mainly tacrolimus therapy, may be an important factor in the development of PTDM. There is a lack of studies that explore the effects of long-term tacrolimus on PTDM in animal protocols. The objective of this study was therefore to evaluate the effects of long-term therapy with tacrolimus in rats. One group was treated with tacrolimus, injected subcutaneously, in a daily dose of 1 mg/kg of body weight. The chosen dose was sufficient to achieve therapeutic tacrolimus serum levels. The experimental periods were 60, 120, 180 and 240 days. One group was used as control and received daily subcutaneous injections of saline solution during all periods. A tendency towards increased glycemia levels during the initial periods (60 and 120 days) was observed. However, at 180 and 240 days, the glycemia levels were not statistically different from that of the control group of the same period. It may thus be concluded that the deleterious effects of tacrolimus therapy on glycemia may be a time-related side effect.

Keywords : Tacrolimus [adverse effects]; Glycemic index; Diabetes *mellitus*; Rats.

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