

COMPARATIVE STUDY BETWEEN IMMUNITY PRODUCED BY HEAT KILLED *CANDIDA ALBICANS* AND *CANDIDA ALBICANS* CELL WALL

MANNOPROTEINS ANTIGENS IN MICE

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Abstract

A comparative study was conducted to focus on some immunologic parameters in mice immunized with heat killed *Candida albicans* and cell wall mannoproteins. This experiment was carried out in animal Farm of National Centre of Drug Control and Research from March 2011 to June 2012. A total number 120 male and female mice, mice were divided into equal 3 groups, the first group (control) received with distilled water, the second experimental group was vaccinated with cell wall mannoproteins vaccine of *Candida albicans*, and the third group was vaccinated with heat killed *Candida albicans* cells vaccine. Vaccine efficiency was evaluated according to phagocytic activity, delayed type hypersensitivity reaction and anti-*Candida* antibodies titer in vaccinated mice serum. All treatments were carried out on day 1. Then the mice were scarified and tested at different periods: day 10, oxidative burst reaction by Nitro Blue Tetrazolium test (NBT) was done, at days 14 tests for delayed type reaction of skin, and at day 21 and 28 performed the test for anti-*Candida albicans* level in mice serum by Indirect Immunofluorescent assay. Results revealed that second group recorded significantly ($P \leq 0.01$) higher values in their peripheral blood phagocytic activity by nitro blue tetrazolium test measured by ELISA and anti-*Candida* antibodies titer level in mice serum at 21 and 28 days by Indirect Immunofluorescent assay as compared with the control group. Third group results revealed significantly ($P \leq 0.05$)

increase in phagocytic activity index of peripheral blood by nitro blue tetrazolium test and the anti-Candida antibodies titer level in mice serum at 21 and 28 days assessed by indirect Immunofluorescent test. In delayed-type hypersensitivity reaction, the index was significantly increased ($P \leq 0.01$) in Mannoproteins- vaccinated mice in comparison with control and second groups, the best results was observed after 24 hours post-Candida protein injection.

Key words: heat killed *Candida albicans* immunization in rat, *Candida* cell wall mannoproteins immunization in rat