In vivo evaluation of leucocyte dynamics in cremaster muscle in rats after exposure to cigarette smoke

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摘要

Abstract

This experiment was designed to examine the effects of chronic cigarette smoking on the microcirculation immediately after exposure to smoke for two, four, and six weeks and after withholding smoke for two weeks from those previously exposed for four weeks. The mean (SD) rolling leucocytes at two, four, and six weeks were 11.10 (1.8), 23.7 (2.3), 40.2 (3.9) ($p < 0.001$). The rolling leucocytes after smoking for four weeks and then having smoke withheld for two weeks was 9.6 (1.4). The mean adherent leucocytes were 5.0 (0.7), 7.5 (1.1), 12.6 (1.8) ($p < 0.001$). The adherent leucocytes after smoking for four weeks and then having smoke withheld for two weeks was 3.5 (0.5). Our results confirm those of many previous studies of the adverse effects of cigarette smoking, and also that those deleterious effects are time-dependent. The reversibility of the deleterious effect of cigarette smoking after cessation of cigarette smoking before face-lift or flap reconstruction is at least two weeks. This information is also important for clinical management of patients who smoke and who are scheduled for face-lift and flap reconstruction. Two weeks without cigarettes is a necessary period for successful elective plastic surgery.