

Angiostrongylus cantonensis: Apoptosis of inflammatory cells induced by treatment with mebendazole or/and interleukin 12 in mice

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摘要

Abstract

Angiostrongylus cantonensis is the major cause of human eosinophilic meningoencephalitis. ICR mice were infected orally with 35 infective larvae and sacrificed at 4-14 days, 25 days or 32 days post infection (dpi) for pathological and immunocytochemical examinations. In the non-treated group, no apoptosis signal was found in the meninges or parenchyma of the brains (4-14 dpi). Only a few apoptotic cells were noticed at 25 dpi (3%) and 32 dpi (10%). In the groups, the animals were given a single dose of mebendazole(20 mg/kg, per os at various times) or injections of interleukin 12 (IL- 12) (10 ng/daily, intraperitoneally), all the animals were sacrificed at 14 dpi; the number of apoptotic cells was increased (17 -21%). In the group that received a single dose of mebendazole (4dpi) in combination with IL-12 injections (4-13dpi), mild meningitis was observed, and most of the infiltrated inflammatory cells were in the apoptotic program (55%). Taken together, apoptosis of the inflammatory cells (most were eosinophils) could be induced when the infected mice were treated with mebendazole or/and IL- 12. (c) 2006 Elsevier Inc. All rights reserved