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# Intraperitoneal administration of low dose aluminium in the rat: How good is it to produce a model for Alzheimer disease

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Since neurotoxicity of aluminium (Al) resembles the progressive neurodegeneration observed in Alzheimer Disease (AD), Al administration in several ways has been used to produce AD model. Intraperitoneal low dose Al injection in rats for long periods is the preferred method by some researchers. We evaluated the efficiency of this method in producing an AD model. Aluminium (4.2 mg/kg/day AlCl3) was administered intraperitoneally to female Wistar albino rats for 15 weeks. We looked at the neuropathology of Al and the characteristic lesions (amyloid plaques and neurofibrillary tangles) of AD by histological and immunohistochemical techniques and measured oxidative stress markers (thiol level, xanthine oxidase activity, total antioxidant status and total oxidant status) . We also evaluated spatial learning and memory function by the Morris water maze test. At the end of the study,there was no pathologic changes. According to the findings of the present study, intraperitoneal administration of low dose aluminium in rats is not sufficient to produce a good AD model. Higher doses (≥10 mg/kg) should be used.

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