Androgens Exert Neuroprotection On Targeted Overexpression Of Androgen Receptor In Mice Brain From Ischemia And In PC12 From Oxidative Stress And Apoptosis

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Introduction: Male sex is a known risk factor in human stroke. Further, previous work suggests that androgens may have deleterious or beneficial effects on stroke outcome.

Aims: 1) To evaluate the role of AR overexpression in neuroprotection in mice and in vitro, 2) To compare the neuroprotection provided by androgens in male mice with that provided by androgens in female mice.

Methods: Male and female mice were treated with androgens and subjected to ischemia or oxidative stress. In vitro, PC12 cells were transfected with AR and subjected to oxidative stress.

Results: AR overexpression protected male mice after ischemia. AR expression also protected PC12 cells from oxidative stress.

Conclusion: Androgens exert neuroprotection on targeted overexpression of androgen receptor in mice brain from ischemia and in PC12 from oxidative stress and apoptosis.