

Ganglion cell loss is the Major hispathological changes on APP/PS1 transgenic mice

Yan Lu

Department of Ophthalmology, Xuan Wu Hospital, Capital Medical University, Beijing 100053, China

Ganglion cell loss is the Major hispathological changes on Alzheimer's disease It has been shown that Alzheimer's disease (AD) patients expressed visual disorders, involved visual acuity, stereopsis, colour vision, spatial contrast sensitivity, kinesthesia and ocular motility and etc. All of those were attributed to the nerve degeneration of visual cortex as reported previously. In addition, retina and optic nerve degeneration may also contribute to such disorders' development in AD patients because the retina ganglion cells and their axons lost was clearly be found in the AD patients at the postmortem stage. Clinical reports show that RNFL thickness is thinner AD patients than that of controls, but there is no experimental evidence.

We studied the retinal histopathological changes by labeling populations of retinal ganglion cells (RGCs) with horseradish peroxidase and HE staining on APP/PS1 transgenic mice aged 10 month. It was found that the cells in retinal ganglion layer in model group are significantly reduced ($p < 0.01$), cells have not obviously decreased in Inner and outer nuclear layer ($p > 0.05$) on APP/PS1 transgenic mice. Our results imply that ganglion cell loss is the Major hispathological changes on APP/PS1 transgenic mice. It comply with the clinical studies about AD.

Biography

Dr. Yan Lu is the professor in the Department of Ophthalmology, Xuan Wu Hospital, Capital Medical University. She has completed her MD. at the age of 23 years from Tongji Medical University and Ph.D at the age of 29 years from Beijing Medical University. Her professional research includes glaucoma and neuro-ophthalmology. She completed her observership in glaucoma at The New York Eye and Ear Infirmary in 2002. She has published more than 30 papers in reputed journals.