

# Function MRI of amblyopia before and after levodopa

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摘要

## Abstract

Functional magnetic resonance imaging (fMRI) was applied to five older amblyopes with monocular amblyopia before and after levodopa treatment. During the experiment, images were acquired in two runs with visual stimulation delivered through the sound and the amblyopic eyes, respectively. The experiment was performed on each of the subjects, before and after their oral administration of levodopa/carbidopa (0.5/0.12 mg/kg) three times per day for 7 weeks. Our study demonstrated that there was no effect on the spatial extent of the visual cortical activation during the sound eye stimulation ( $P=0.17$ ), but some improvement during the amblyopic eye stimulation ( $P=0.06$ ). The volume ratio between the amblyopic and sound eye stimulation significantly increased after the treatment ( $P<0.05$ ). This finding supports the previous studies of levodopa effect on amblyopia at the visual cortical level, and suggests that fMRI can be a useful tool in assessing changes of visual cortical activity after the treatment