Acupuncture Benefits Alzheimer Disease Patients

Published by HealthCMi on 11 June 2015

Acupuncture improves drug effectiveness for the treatment of Alzheimer disease (AD). Researchers conducted a meta-analysis of randomized controlled studies and found that acupuncture plus the drug donepezil is more effective than using only donepezil as a standalone treatment. In a surprising finding, six randomized controlled trials in the meta-analysis found acupuncture more effective than drug therapy. No severe adverse events occurred. As a result, the researchers conclude that acupuncture is a safe treatment modality for Alzheimer disease patients.

Donepezil is a cholinesterase inhibitor used in the treatment Alzheimer disease related dementia including cognitive impairment, personality changes, and memory disorders. Taking orally, it is used for improving memory, focus, communication, functional activities, and mental clarity. Six out of ten randomized controlled trials found acupuncture combined with donepezil more effective than only donepezil. The Mini Mental State Examination (MMSE) scores improved significantly when adding acupuncture to the drug treatment regime.

The MMSE helps to diagnose dementia and assess both progression and severity. The exam tests cognitive abilities including memory, attention, and use of language. It is a short exam consisting a basic questions. Patients are asked the year, month, ability to identify a simple object, copy a simple pattern, follow a simple command, repeat a statement, etc…. A poor score on this exam indicates cognitive impairment. Acupuncture improved MMSE scores for patients taking donepezil.

Ten randomized controlled trials consisting of 585 patients met the meta-analysis inclusion criteria. This was sorted from a total of 1,324 studies that included 77 randomized controlled trials. Three of the accepted studies used electroacupuncture and seven used manual acupuncture. The period of treatment duration was from four to twenty-four weeks across the accepted studies.

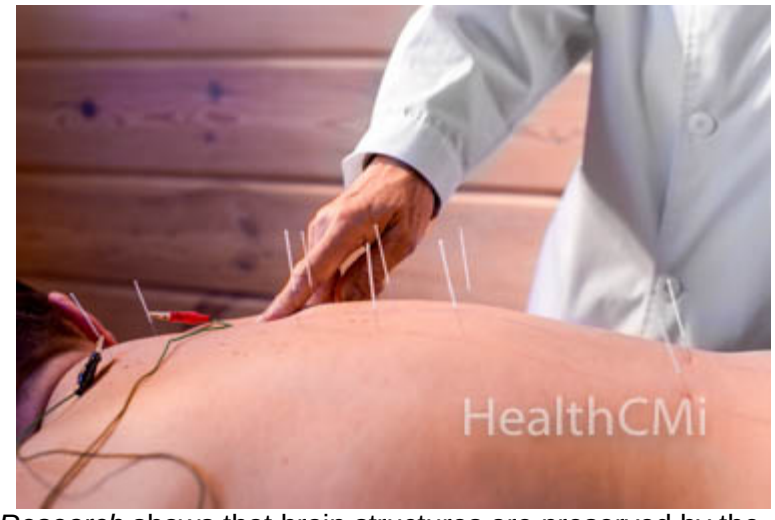
Two acupuncture points were the most common in the studies: **DU20 (Baihui)** and **ST36 (Zusanli)**. **SP10 (Xuehai)** and **Sishencong (EX1)** were also frequently administered although not as frequently as DU20 and ST36.

Other acupoints and zones used in the studies included:

- **Taixi (KI3)**
- **Dazhui (GV14),**
- **Danzhong (CV17)**
- **Zhongwan (CV12)**
- **Qihai (CV6)**
- **Waiguan (TE5)**
- **Xuanzhong (GB39)**
- **Neiguan (PC6)**
- **Shenshu (BL23)**
- **Yintang (GV29)**
- **Sanyinjiao (SP6)**
- **Dazhong (KI4)**
- **Scalp acupuncture**
- **Xiu Sanzhen**
- **Si Shenzhen**

The researchers note that “the treatment of AD with acupuncture was clinically meaningful with respect to improving cognitive function.” Drugs evaluated in the meta-analysis included donepezil, almitrine, raubasine, dihydroergotoxine, nimodipine, and piracetam. Four of the randomized controlled trials found acupuncture “superior to drugs.” The researchers add that the results are “meaningful for clinical practice” and the data indicates “that acupuncture may be better than drugs and may enhance the effect of donepezil in term(s) of improving the cognitive function of AD patients.”

The researchers note that “the results of the meta-analysis indicate that acupuncture may be more effective than drugs, and may also enhance the effect of donepezil in improving the cognitive function of patients with AD.” In addition they note, “Acupuncture might also be more effective than drugs in improving the ability of daily living of patients with AD. Moreover, acupuncture is safe for treating patients with AD.” The results are promising and indicate that future research is warranted to confirm the findings. The researchers suggest rigorous randomized controlled trials with large sample sizes and reporting of hippocampal volume.



There is no known cure for Alzheimer disease. The findings indicate that adding acupuncture to drug therapy improves cognitive functioning for AD patients. The results are hopeful in the fight against this trying and difficult illness.

Laboratory results indicate that acupuncture benefits the brain and protects it from Alzheimer disease pathogenesis. A study published in *Neural Regeneration Research* shows that brain structures are preserved by the

application of electroacupuncture and moxibustion. Acupuncture was applied to acupoints DU20 (Baihui) and BL23 (Shenshu) on laboratory rats with induced AD. Electron microscopy revealed that the rats treated with electroacupuncture had a preserved structure of the brain, the hippocampus. The researchers note that “neuronal cell injury was markedly reduced” as a result of acupuncture. The control group that received no acupuncture or moxibustion showed severe damage to the hippocampus. In addition, electroacupuncture and moxibustion successfully downregulated axin protein expression and upregulated beta-catenin protein expression.

Scientific human investigations confirm the results. MRI imaging demonstrates that acupuncture enhances brain activity in Alzheimer disease patients. Researchers investigated the effects of two important acupuncture points on the human brains of Alzheimer disease patients using fMRI imaging. The researchers discovered that acupuncture “can enhance the hippocampal connectivity in AD patients.” The MRI scans demonstrate that acupuncture “increased connectivity” in the hippocampus in patients with AD. After acupuncture, MRI imaging revealed that AD patients had significant improvements in connectivity for both frontal and lateral temporal regions of the hippocampus. The researchers note, “Due to the cognitive impairment associated with AD, acupuncture on specific acupoints can modulate the cerebral blood flow and strengthen the hippocampal connectivity in AD patients.”

References:

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