

Double-blind Randomized Control Trial of Acupuncture for Autistic Spectrum Disorder

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Objective: To study the efficacy, safety, and compliance of short-term electro-acupuncture (EA) for children with autism spectrum disorder (ASD).

Methods: This was a randomised, double-blind, sham-controlled, clinical trial. Children with ASD were randomly assigned to EA group (n=30) or sham electro-acupuncture (SEA) group (n=25) matched by age and severity of autism. The EA group received EA for selected acupoints while SEA group received sham EA to sham acupoints. A total of 12 acupuncture sessions over 4 weeks were given. Primary outcome measures included WeeFIM, Pediatric Evaluation of Disability Inventory (PEDI), Leiter International Performance Scale–Revised (Leiter-R), Clinical Global Impression–Improvement (CGI-I) scale. Secondary outcome measures consisted of Aberrant Behavior Checklist (ABC), Ritvo-Freeman Real Life Scale (RFRLS), Reynell Developmental Language Scale (RDLS), and standardised parental report. Data were analysed by Mann-Whitney test.

Results: There was significant improvement in language comprehension domain of WeeFIM (P=0.02), self-care caregiver assistant domain of PEDI (P=0.028), and CGI-I (P=0.003) in the EA than SEA group. As for parental report, the EA group also showed significantly better social initiation (P=0.01), receptive language (P=0.006), motor skill (P=0.034), coordination (P=0.07), and attention span (P=0.003). More than 70% children with ASD adapted acupuncture easily, while 8% had poor acupuncture compliance. Mild side-effect with minor superficial bleeding or irritability during acupuncture was found.

Conclusion: A short 4 weeks (12 sessions) course of EA is useful to improve the specific function in children with ASD, especially for language comprehension and self-care ability.

Evaluation of Perfusion Computed Tomography in Patients with Multiple Large Artery Atherosclerosis

FP 4

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Background: Perfusion computed tomography (PCT) is commonly used in hyperacute stroke for evaluation of penumbra in selection of patients for thrombolysis. Most data are from patients with cardioembolic stroke and single-vessel large artery atherosclerosis where a normal contralateral unaffected vascular territory is available for comparison of perfusion parameters. Scarce data regarding the use of PCT in patients with multiple large artery atherosclerosis are available. The aim of this prospective study was to evaluate the use of PCT in assessing perfusion deficit in patients with multiple large artery atherosclerosis in the late subacute phase of stroke.

Methods: A total of 49 consecutive patients admitted electively for digital subtractive angiography and stenting for symptomatic moderate-to-severe intra- or extra-cranial large artery atherosclerosis during February 2006 to March 2007 were recruited. Perfusion computed tomography was performed before and 1 month after procedure. Hypoperfusion was defined as area with prolonged mean transit time—cerebral blood volume mismatch by >20%.

Results: Atherosclerosis affected single vascular territory in 18 patients, and multiple vascular territories in 31 patients. Hypoperfusion was observed in 35 (71.4%) patients, up to 226 days post-stroke. Hypoperfusion occurred in territories with symptomatic stenosis in 33 (67.3%) patients. Among patients with stenosis affecting multiple vascular territories, hypoperfusion was observed in areas with asymptomatic stenosis in 9 (29.0%) patients. Forty-four patients underwent stenting. Post-stenting, 14 (43.8%) patients had complete resolution of hypoperfusion, nine (28.1%) patients had partial resolution.

Conclusion: Hypoperfusion is commonly observed in patients with symptomatic and asymptomatic severe large artery atherosclerosis weeks to months after stroke, and may be reversed with stenting. Caution should be taken when interpreting PCT in patients with severe stenosis affecting bilateral anterior circulation, where a normal contralateral counterpart is not available for comparison.