

Action observation (AO) has been proved to be of benefit in several neurological conditions, but no study has previously been conducted on idiopathic normal pressure hydrocephalus (iNPH).

A single-group pretest-posttest design was conducted in twenty-seven iNPH patients. Gait and mobility parameters were assessed using the 2D gait measurement in the timed up and go (TUG) test for two trials before and after immediate AO training. The outcomes included step length and time, stride length and time, cadence, gait speed, sit-to-stand time, 3-m walking time, turning time and step, and TUG. In addition, early step length and time were measured. AO consisted of 7.5 min of watching gait videos demonstrated by a healthy older person. Parameters were measured twice for the baseline to determine reproducibility using the intraclass correlation coefficient (ICC3,1). Data between before and after immediately applying AO were compared using the paired t-test.

All outcomes showed moderate to excellent test-retest reliability (ICC3,1=0.51 0.99, $p<0.05$), except for the step time (ICC3,1=0.19, $p=0.302$), which showed poor reliability. There were significant improvements ($p<0.05$) in step time, early step time, gait speed, sit-to-stand time, and turning time after applying AO. Yet, the rest of the outcomes showed no significant change.

A single session of AO is feasible to provide benefits for gait and mobility parameters. Therapists may modify this method in the training program to improve gait and mobility performances for iNPH patients ¹⁾

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