P3-004 EFFECTS OF MULTI-TASK EXERCISE PROGRAM ON COGNITIVE AND PHYSICAL FUNCTION IN PATIENTS WITH MILD COGNITIVE IMPAIRMENT: A RANDOMIZED CONTROLLED TRIAL

Kyung Won Park[1,2], Jong-Hwan Park[2], Hyuntae Park[2,3], Seung Ho Choi[4], Min-Ki Jeong[2], *[1]Dong -A University College of Medicine, Busan, The Republic of Korea; [2]Institute of Convergence Bio-Health, Dong-A University, Busan, The Republic of Korea; [3]Department of Health Care and Science, Dong-A University, Busan, South Korea; [4]Department of Neurology, Dong Kang Hospital, Ulsan, The Republic of Korea. Contact e-mail: neuropark@dau.ac.kr*

Background: Several randomized controlled trials have been conducted to investigate the effects of exercise or physical activity on cognitive function in patients with mild cognitive impairment (MCI). However, the causal effect of an exercise intervention on cognitive performance in community-dwelling older adults is unclear because of insufficient evidence. Recent studies suggested that multicomponent exercise program interventions improved attention and working memory to a greater extent than aerobic exercise alone. Our aim was to evaluate efficacy of multi-task exercise on cognition and physical function in older adults with MCI. **Methods:** Subjects with MCI were randomized into either a multi-task exercise (n = 13) or a control group (n = 13) according to the Petersen's clinical diagnostic criteria in a memory clinic of university hospital. The exercise program consisted of multi-task exercise program 90 min/session, 2 days each week for 12 weeks. The cognitive function measured by the Korean version of mini-mental state examination (K-MMSE), Geriatric depression scale-short form (SGDS-K), Alzheimer's disease assessment scale-cognitive (ADAS-cog), trail-making test (TMT), digit symbol substitution test (DSST) at baseline and after 3 month follow-up. **Results:** A repeated-measures ANOVA revealed that no group × time interactions on the body composition in MCI patients. A sub-analysis of MCI patients for group × time interactions revealed that the multi-task exercise group exhibited significantly improvement on SGDS-K ($p < 0.05$), TMT-A ($p < 0.05$), TMT-B ($p < 0.05$) and, DSST ($p < 0.05$) compared to the control group. Moreover, improvements of physical fitness following dual-task exercise group were superior at treatment end (group × time interactions for the Timed up & go ($p < 0.05$), one legged standing time ($p < 0.05$)). K-MMSE, and ADAS-cog showed main effects of time, although there were no group × time interactions. **Conclusions:** These findings suggest that multi-task exercise program may represent an effective intervention strategy for improving cognitive function and physical fitness in MCI patients.

P3-005 EFFECTS OF AEROBIC, RESISTANCE, OR COMBINED TRAINING ON COGNITIVE FUNCTION IN OLDER ADULTS: A RANDOMIZED CONTROLLED TRIAL

Taeko Makino[1], Hiroyuki Umegaki[1], Xian Wu Cheng[1], Yasuko Yoshida[1], Hiroyuki Shimada[2], Hiroko H. Dodge[3,4], Masafumi Kuzuya[1], *[1]Nagoya University, Nagoya, Japan; [2]National Center for Geriatrics and Gerontology, Obu, Japan; [3]Oregon Health & Science University, Portland, OR, USA; [4]University of Michigan, Ann Arbor, MI, USA. Contact e-mail: tmakino@med.nagoya-u.ac.jp*

Background: Although physical exercise is thought to prevent cognitive decline in older people, the comparative efficacy of different exercise modalities is unclear. In the "TOyota Prevention Intervention for Cognitive decline and Sarcopenia (TOPICS)", we used a RCT design to investigate differential effects of exercise modalities on cognitive function among community-dwelling older adults in Japan. **Methods:** A total of 415 subjects aged 65–85 years with subjective cognitive impairment and who met other inclusion and exclusion criteria were randomly assigned to one of the following 6-month, twice-per-week programs: (1) aerobic training (AT), (2) resistance training (RT), (3) combined training (CT), or the control group. We assessed cognitive function via a neuropsychological test battery focusing on the cognitive domains of memory, attention, working memory, verbal fluency, processing speed, and executive function. The study spans two phases: 26-week intervention and 26-week follow-up period. Our primary outcome was memory function (the Logical Memory II delayed recall scores). We used a repeated-measures analysis of variance (ANOVA) to evaluate the effect of the interventions. **Results:** The repeated-measures ANOVA revealed a main effect of time, and indicated an improvement in Logical Memory II performance compared with baseline after the intervention. However, we did not find any significant interactions for group × time with respect to Logical Memory II score. A sub-analysis of participants by the amnesia status defined by the Japanese-ADNI criteria showed that among those without amnesia (n=225) there was a significant group × time interaction for Logical Memory II score ($F(3, 221)=3.58$, $p=.015$): Specifically, Logical Memory II score significantly improved in the AT group compared to the control group. In those with amnesia (n=153), we observed no significant group interactions with Logical Memory II score. **Conclusions:** Aerobic exercise interventions may improve memory function among community-dwelling older adults without amnesia.

P3-006 RACIAL DIFFERENCES IN WILLINGNESS TO ENROLL IN PRECLINICAL ALZHEIMER'S DISEASE CLINICAL TRIALS

Yan Zhou[1], David Elashoff[2], Sarah Kremen[2], Edmond Teng[2,3], Jason Karlawish[4], **Joshua D. Grill**[5], *[1]American Board of Anesthesiology, Raleigh, NC, USA; [2]University of California, Los Angeles, Los Angeles, CA, USA; [3]Veterans Greater Los Angeles Healthcare System, Los Angeles, CA, USA; [4]University of Pennsylvania, Philadelphia, PA, USA; [5]University of California, Irvine, Irvine, CA, USA. Contact e-mail: jgrill@uci.edu*

Background: Preclinical Alzheimer's disease (AD) trials face challenges to recruitment, particularly among minorities. **Methods:** We performed secondary analyses of an interview study of 132 cognitively normal participants that examined the impact on recruitment of requiring AD biomarker disclosure. We probed for responses of participants' willingness to enroll and factors that might affect this decision, including 6 potential incentives to enroll. The current analyses focus on data from 78 Caucasian and 47 African American participants. **Results:** Caucasians and African Americans were similar in age, education, gender, perceived risk for AD and Research Attitude Questionnaire (RAQ) scores. Caucasians scored higher on the AD Knowledge Scale (p=0.01) and self-rated health (p=0.02). Ordinal logistic regression models showed that African Americans were less willing to participate (OR=0.45, 95% CI=0.22-0.93) and that higher RAQ scores (OR=1.12, 95% CI=1.04-1.22) were associated with greater willingness to participate. Both groups rated study risks and the requirement of a study partner as most important in the decision whether to enroll. African Americans gave higher importance ratings than Caucasians on five out of seven factors, including study location, study partner