recommended. Comorbidities and ADL play important roles in determining the need for urgent RRT in older adult patients with AKI.

Acknowledgements

The authors received no specific funding for this work.

Disclosure statement

The authors declare no conflict of interest.

Data Availability Statement

Data sharing not applicable to this article as no datasets were generated or analysed during the current study

Naoki Yamamoto, Akihiro Dejima and Kenkou Hasatani
Department of Internal Medicine, Suzu General Hospital, Suzu, Japan

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How to cite this article: Yamamoto N, Dejima A, Hasatani K. Urgent renal replacement therapy and pacemaker implantation in a 98-year-old man. Geriatr. Gerontol. Int. 2022;22:83–84. https://doi.org/10.1111/ggi.14321

RESEARCH STUDIES

Social networks including contactless interaction and reversion in patients with mild cognitive impairment even in the era of COVID-19

Dear Editor,

Since the end of 2019, the global pandemic of coronavirus disease 2019 (COVID-19) has changed our daily life as well as our patterns of patient management. Although vaccinations and possible herd immunity have generated hope for overcoming COVID-19, social isolation including social distancing, quarantine and lockdowns will continue until therapeutics for COVID-19 are available.

Good social relationships, however, were found to have a positive effect on cardiovascular disease, psychological disease, as well as cognitive dysfunction. Although social isolation was associated with reduced COVID-19 transmission, it can affect the poor prognosis for patients with various underlying diseases, and social isolation increases the risk of deterioration of physical function and cognitive dysfunction.[1–4]

Mild cognitive impairment (MCI), which is known as a predementia stage, can often be reverted to normal cognition. Estimates of improvement or reversion from MCI back to normal cognition have been quite varied, ranging from 6% to 53%, depending in part on diagnostic criteria or duration of follow-up.[5,6] Clinically, the identification of factors associated with reversion from MCI to normal cognition is very important. These factors include better baseline cognitive function, more mental activities, better physical condition, less brain atrophy, some MCI features and less informant-based memory complaints.[6]

Although social relationships have been restricted in many ways during the COVID-19 pandemic, substitutive contactless interactions are available. Thus, we evaluated the association of reversion from MCI with social networks including online and technology-assisted communications. Of the total 292 participants who were diagnosed with MCI at baseline from November 2019, we retrospectively evaluated 258 participants (43% male) aged 70.5 ± 9.7 years who were subsequently classified with either normal cognition ($n = 44$) or repeat diagnosis of MCI ($n = 214$) after about 18.0 ± 0.6 months (34 participants who progressed from MCI to dementia were excluded). The associations with reversion were investigated for baseline factors that included demographics (age, sex and education), patient-based cognitive and psychological factors (Montreal Cognitive Assessment [MoCA], Global Deterioration Scale, Geriatric Depression Scale and instrumental activities of daily living), informant-based information (Informant Questionnaire on Cognitive Decline in the Elderly [IQCODE] and Neuropsychiatric Inventory), and MCI features (amnestic MCI vs. non-amnestic MCI or multi-domain MCI vs. single-domain MCI), and longitudinal changes between baseline and follow-up in social networks were measured by the modified Berkman–Syme Social Network Index (SNI),[4] a composite measure of various types of social connections including online and technology-assisted in-person or group communication or activities, with a higher score indicating a greater network. The study was approved by the Institutional Ethical Review Board (2021AS0131).

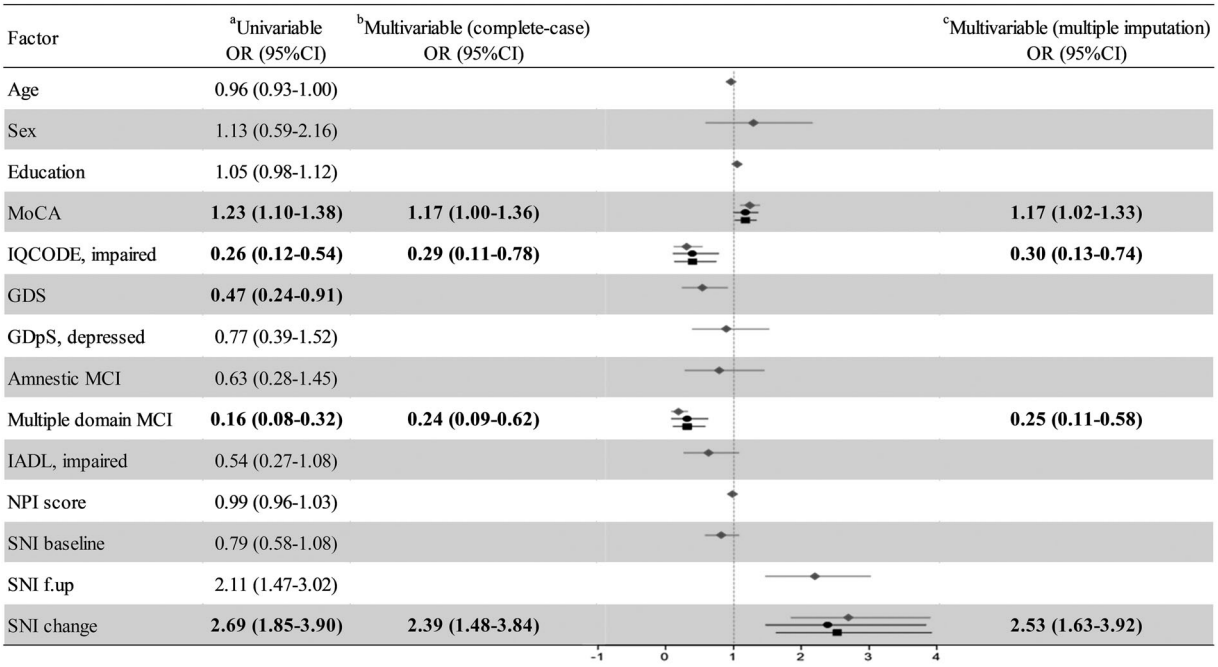

Figure 1 Three logistic regression models for odds of reversion from MCI to normal cognition. CI, confidence interval; f.up, follow-up; GDpS, Geriatric Depression Scale; GDS, global deterioration scale; IADL, instrumental activities of daily living; IQCODE, Informant Questionnaire on Cognitive Decline in the Elderly; MCI, mild cognitive impairment; MoCA, Montreal Cognitive Assessment; NPI, neuropsychiatric inventory; OR, odds ratio; SNI, social network index. Bold numbers indicate statistical significance ($P < 0.05$). [a]Gray rhombus and line in plot were represented as OR and 95% CI in univariable regression analysis. Because there were some missing variables, numbers of available data in univariable analysis were 251 in IQCODE, 247 in GDpS, 208 in NPI, 252 in SNI baseline, 257 in SNI f.up, and 252 in SNI change, but the number of the other variables was 10 complete datasets. [b]Black circle and line in plot represent OR and 95% CI in multivariable regression analysis with backward-elimination methods with probability for removal of variables with $P < 0.20$, which was evaluated on the complete dataset ($n = 174$). [c]Black square and line in plot represent OR and 95% CI in multivariable regression analysis on the multiple imputation process ($n = 258$, 10 complete datasets).

The results of the logistic regression analyses are presented in the Fig. 1. To increase the power to detect associations and to anticipate the likely possibility from using the partial information available, we generated 10 imputed values for each participant with missing data, yielding 10 complete datasets. With complete-case and multiple imputation, both analyses revealed more likely in participants with the higher MoCA score and increased SNI score and less likely in participants with impaired IQCODE result and multiple-domain MCI.

Our results should be interpreted with caution given the disadvantages associated with retrospective analyses with a relatively small sample size. However, when social factors are considered, which is a modifiable factor, an increased social network was consistently associated with aspects of reversion from MCI as well as better baseline cognitive function, less informant-based memory complaints and less multiple impaired domains of cognition.

In conclusion, an increased social network may play important roles in reversion from MCI to normal cognition. The many limitations in social networking during the era of the COVID-19 pandemic cause decreased interactions with neighbors, relatives and acquaintances.[1] However, one of the practical recommendations for the management of cognitive dysfunction during the COVID-19 pandemics includes promotion of social networks should be continued through online and technology-assisted methods.[1,2] A social network is one of the important potential modifiable factors for the prognosis of MCI, suggesting that continuous social networking should be considered for patients with cognitive dysfunction.

Disclosure statement

The author declares no conflict of interest.

Data Availability Statement

Anonymized data related to the current article are available and will be shared by request from any qualified investigator. Persons interested in obtaining access to the data should contact the corresponding author (M.H.P.).

Moon Ho Park
Department of Neurology, Korea University Ansan Hospital, Ansan, South Korea

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How to cite this article: Park MH. Social networks including contactless interaction and reversion in patients with mild cognitive impairment even in the era of COVID-19. Geriatr. Gerontol. Int. 2022;22:84–86. https://doi.org/10.1111/ggi.14309

Investigating home modification areas and falls in post-discharge home assessments

Dear Editor,

The number of home modifications has increased in recent years, as revealed by long-term care insurance information, as a great proportion of elderly individuals requiring long-term care are living at home, owing to the advent of super-aged societies. Several individuals experience falls in the toilet, hallway and bedroom[1] at home, and falling in the toilet often leads to hospitalization due to fractures.[2] Some studies have reported on the areas of home modifications and their level of utilization.[3,4] Home visits by experts and modifications based on their assessments can prevent falls among older high-risk individuals.[5] However, to the best of our knowledge, no study has investigated falls and home modification areas based on expert recommendations in elderly individuals. In the present study, we reported the effectiveness of expert intervention by investigating falls in modified home areas of patients who underwent assessment of their residential space.

The participants included 28 patients (mean age ± SD, 76.8 ± 11.2 years; 11 men and 17 women) who were discharged to their homes after participating in a pre-discharge home assessment while they were admitted as in-patients at the convalescent phase of rehabilitation (hereafter referred to as recovery rehabilitation) ward at our center. The distribution of the underlying diseases was as follows: 16 patients had cerebrovascular disease and 12 had musculoskeletal disease. The mode of mobility inside the home was a wheelchair for 10 patients and ambulation for 18 patients. Pre-discharge home assessment is an initiative wherein a team of healthcare professionals, including the patient's attending physicians, physiotherapists, occupational therapists, care managers and social workers, visits the home of the patients. Suggestions for home modifications were provided to ease the patient's life after discharge based on the information gathered during the home assessment visits. In this study, a therapist conducted a follow-up survey of patients who participated in the pre-discharge home assessment 3 months after being discharged from the hospital to determine the actual home modification areas and investigate the incidence of falls. This study defined a fall as an unintentional fall on to a wall or ground based on Gibson's concept.[6] We interviewed the participants and their caregivers using a questionnaire for the survey on falls.

Table 1 shows the areas of modifications in participants' homes, number of falls and frequency of falls with respect to mobility. Toilets were the most frequently modified area in the home (20 cases), and the installation of handrails (22 locations) the most common modification. The frequency of falls was the highest in the bedroom (wheelchair-bound: five, ambulatory: four), followed by the living room (wheelchair-bound: none, ambulatory: six). Falls did not occur in the toilet or hallway. Aging, chronic diseases and falls are among the factors that contribute to functional decline in elderly individuals.[7,8] It is extremely important to improve the living environment if elderly people are to continue living at home safely while maintaining the ability to perform activities of daily living. This study targeted elderly patients who were provided suggestions for home modification based on home assessments made pre-discharge and 3 months after discharge, and investigated the areas of home modifications and the incidence or absence of falls. The results showed that the installation of handrails in toilets was the most common home modification, and that no falls were reported in the toilets. Previous studies[1,2] found that falls commonly occurred in the bedroom, living room and toilet. The results of the present study differed from those of previous studies. This could be because the experts conducted home assessments and suggested appropriate changes to the residential area that accounted for the participants' physical abilities. Studies have shown that most falls in the elderly are influenced by environmental factors,[9] which can be prevented by modifying the environment based on expert recommendation.[5] The recovery rehabilitation ward at our center conducts a pre-discharge home assessment visit by a multidisciplinary team to consider the home environment of patients and create a home modification plan. The results of the present study revealed that the appropriate home modifications made based on these initiatives, which were well-suited to the patients' physical abilities resulted in the prevention of falls. This study did not investigate the specific circumstances of the falls. Verifying the tendency of falls with respect to mobility is an issue that should be taken into account for elderly individuals living at home. We endeavor to investigate the setting or scenario of the fall by classifying patients according to various levels of mobility in future studies.