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Nonpharmacological Treatment for Behavioral and Psychological Symptoms of Demntia in Alzheimer's Disease

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Opinion

We are studying the Behavioral and Psychological Symptoms of Dementia (BPSD) in Alzheimer's disease (AD). Firstly we investigated the effects of aging or disease progression on BPSD. According to patient age at the time of the test, the 79 AD patient group (n=79, whole AD group was divided into two groups: a relative Older Group (OG) and a relative younger group (YG). The diurnal rhythm was significantly higher in the OG than in the YG (Student's t-test: $P<0.05$). Factor analysis showed that in OG the psychotic symptoms were connected by anxieties and phobias [1]. Then the AD patients were divided into a group with higher performance (n=40, HP group) and a group with lower performance (n=39, LP group). The disturbance of activity and disturbance of diurnal rhythm were negatively correlated with cognitive function, while affective disturbance was positively correlated with cognitive function. Factor analysis showed that a mood cluster (affective disturbance plus anxieties and phobias) was associated with a psychiatric cluster (paranoid and delusional ideation plus hallucinations) and with aggressiveness in the LP group. We call the results as "implicit depression and explicit psychosis". Moreover, the time of onset and test were not different between HP and LP. From these results, there may be two different causes of BPSD in AD patients. We speculate that two main mechanisms may induce BPSD in AD patients, with one causing behavioral symptoms accompanied by rapid cognitive decline and the other causing psychotic symptoms along with slow cognitive decline [2]. Then, we evaluated the relationships between BPSD in AD and bipolarity (BT) [3]. There was a positive relation between BT and BPSD in AD and among those with BT lower educational level was related with BPSD. We concluded that some kinds of BPSD were related with brain reserve (BR) and cognitive reserve (CR) and that there is a possibility that heightening CR might prevent BPSD. These results are consist with other reports [4,5] and from these results we speculated two pattern of BPSD in AD. One might be occurred by that information processing system was deteriorated by the AD pathology. The other might be occurred by that on the behavioral pattern might be somewhat eccentric in person with low BR (i.e., BT) and low CR. The eccentric behaviors might be more exaggerated when the low BR might become lower if the AD was added in this person [3]. We already commented the pharmacotherapy for BPSD based on the two sub categories of these symptoms [6,7]. Therefore, we comment the concepts of nonpharmacotherapy for BPSD in this article. First, we comment as for BPSD that information processing system was deteriorated by the AD pathology. Because the information processing system was deteriorated by the AD pathology, the behaviors those caused by information processing system this are not surprisingly deteriorated.

Therefore, we should care or assist the behaviors those they can't accomplish exactly. Second, as for BPSD that is related with BT low BR and low CR. Because highlighting the BR is difficult, we should the highlighting the CR. CR is related with educational level, general intelligence, and occupational activity, but also such as leisure activity, and enriched environment [8].

Therefore, we should afford leisure activity and enriched environment. We should scrutinize behaviors in the patients. If the apathy or wandering are main, we should consider the behaviors are related with AD pathology and care or assist the behaviors. If the delusion, hallucination, or aggressive are main, we should consider the behaviors are related with BT and care or assist the behaviors.

Conflict of Interest

Koji Hori received lecture fees from Eisai Co. Ltd., Pfizer Japan Inc., Novartis Pharma KK, Daiichi Sankyo Inc., Ono Pharmaceutical Co. Ltd., Janssen Pharmaceutical KK, Yoshitomi Yakuhin Co. Meiji Seika Pharma Co. Ltd. However, the sponsors had no role in study design, data collection and analysis including our before presented articles, decision to publish, or preparation of this manuscript.

Disclosure Statement

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Author Contribution

Koji Hori coordinated the study about the relationships between BPSD and BP. Kimiko Konishi, and Michiho Sodenaga gave idea about this relation in demented patients. Konishi Kimiko and Michiho Sodenaga also checked the manuscript.

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