Available online: https://e-journal.unair.ac.id/jps

Case Report

Early Onset Dementia and Non Pharmalogical Treatment: A Case Report

Susana Anggar Kusuma[1,4], Yulia Fatima Bessing[2], Erikavitri Yulianti[3,4]

[1]General Practitioner, Psychiatry Resident, Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia
[2]Psychiatrist (Consultant), Psychogeriatrric consultant, Dr. Radjiman Wediodiningrat Mental Hospital, Lawang, Indonesia
[3]Psychiatrist (Consultant), Lecturer at the Department of Psychiatry, Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia
[4]Department Psychiatry, Dr. Soetomo General Hospital, Surabaya, Indonesia

Submitted : February 24, 2025
Revised : May 22, 2025
Accepted : July 3, 2025
Published : August 20, 2025

You are free to:
Share — copy and redistribute the material in any medium or format

Adapt — remix, transform, and build upon the material for any purpose, even commercially.

The licensor cannot revoke these freedoms as long as you follow the license terms.

Correspondence Author:
Email: aditpawitan@ymail.com

Abstracts

Introduction: Early-onset dementia (EOD), defined as dementia occurring before the age of 65, leads to progressive cognitive and functional decline that disrupts patients' productivity, family roles, and social well-being. With limited pharmacological efficacy, non-pharmacological approaches are increasingly recognized as essential to improve patients' quality of life. **Methods:** This report describes a 59-year-old female presenting with severe cognitive impairment and daily functional decline. Clinical evaluation involved psychiatric interviews, physical examinations, and standardized cognitive assessments, including the Mini-Mental State Examination (MMSE), Clinical Dementia Rating (CDR), and Barthel Index. Written consent was obtained from the family. **Results:** The patient displayed severe memory loss, disorientation, and inability to perform basic activities. Cognitive testing confirmed MMSE: 0, CDR: 18, and Barthel Index: 40, indicating severe dementia with high dependence. No prior psychiatric or neurological illness was reported. Non-pharmacological interventions, such as cognitive rehabilitation, stimulation, and training, were identified as effective in maintaining residual abilities, delaying progression, and improving well-being. **Conclusion:** EOD requires early recognition and comprehensive management due to its profound personal and social impact. Although curative options are unavailable, non-pharmacological therapies offer meaningful benefits by enhancing cognitive function, supporting independence, and improving quality of life for patients and families.

Keywords: Anxiety, Procrastination, Self-Efficacy, Self-Control, Mental disorder

Cite this as: Kusuma. S. A, Bessing. Y. F. Yulianti. E, "Early Onset Dementia and Non Pharmalogical Treatment: A Case Report". Jurnal Psikiatri Surabaya, vol. 14, no. 2, pp.275-282, 2025. doi: 10.20473/jps.v14i2.44374

INTRODUCTIONS

Early-onset dementia, a debilitating neurological condition affecting younger individuals, has garnered increasing attention in recent years due to its significant impact on patients, families, and society as a whole. While dementia is often associated with the elderly, early-onset dementia poses unique challenges for patients who are diagnosed in their 40s or 50s, as they are typically in the prime of their careers and may have young families to care for [1]

The symptoms of early-onset dementia, which can include memory loss, difficulty with language and communication, changes in mood or behavior, and a decline in cognitive abilities, can have a devastating effect on both the individual and their loved ones. In addition to the emotional toll, early-onset dementia can also have significant financial implications due to the loss of income and increased healthcare costs. It is essential that healthcare providers, policymakers, and researchers collaborate to improve early detection methods, develop effective treatments, and provide support services tailored specifically to the unique needs of early-onset dementia patients and their families. This growing issue demands attention and resources in order to address the complex medical, social, and economic challenges that arise from early-onset dementia. As such, raising public awareness and fostering a deeper understanding of early-onset dementia is crucial to enhancing the quality of life for affected individuals and ensuring they receive the appropriate care and support they so desperately need [2], [3]

Early-onset dementia is a pressing concern that requires collaborative efforts from healthcare professionals, researchers, and policymakers to ensure those affected receive the necessary resources, support, and attention. Overall, it is important to recognize the significant impact of early-onset dementia on individuals and society as a whole. By recognizing the importance of early-onset dementia, we can work towards a more inclusive and compassionate society that prioritizes the well-being of all its members, regardless of age or cognitive ability. Raising awareness and fostering a deeper understanding of early-onset dementia is crucial to enhancing the quality of life for affected individuals and ensuring they receive the appropriate care, support, and interventions tailored to their specific needs [3]–[5].

Efforts to combat this debilitating disease must be a top priority for healthcare professionals, policymakers, and researchers alike. We must work towards a society that recognizes the importance of early-onset dementia and prioritizes the resources necessary to address this issue. In summary, early-onset dementia is a complex issue that requires comprehensive solutions to address the medical, social, and economic challenges it poses. Together, we can make a meaningful difference in the lives of those affected and build a brighter future for everyone impacted by this challenging condition. In order to achieve this goal, it is essential for us to collaborate across sectors and disciplines, pooling our collective knowledge and expertise in pursuit of innovative approaches to prevention, diagnosis, and treatment of early-onset dementia. We must continue to prioritize research, advocacy, and funding in order to address this pressing issue. By working together, we can ensure that individuals with early-onset dementia receive the necessary care and support to maintain their quality of life [3]–[5].

METHODS

This report is a case report from a patient who has been given an explanation and received consent regarding a psychiatric interview, physical examination and support, interventions, case discussion presentations, and the confidentiality of all patient personal information.

CASE

Mrs. S, 59 years old, was admitted to the Kenanga Room at Lawang Mental Hospital on 06/03/2023. When greeted and asked a

question, the patient responded with a flat, expressionless face and said "yes" without looking towards the examiner. The patient was able to mention her name as Mrs. S but then appeared to want to say something and remained silent. The examiner had to repeat the same question several times before the patient said, "I forgot," when asked about her age, place, and date of birth. The patient also did not know the location of the person accompanying her. The patient also forgot how to perform daily activities such as eating, drinking, bathing, etc. Several times seen standing and walking back and forth aimlessly.

The patient only remembered the name of a rice scoop. According to the family, the patient has been experiencing memory problems for about 3 years, but they cannot remember exactly when this change occurred. Initially, the patient would forget where she put things, but over time, she began to forget how to perform activities and became difficult to communicate with.

Mrs. S did not have a history of mental illness before and never received antipsychotics or any psychopharmacotherapy before. Meanwhile, from his family, no history of diabetes mellitus, high blood pressure, stroke, or previous head injury was found. There is no family history of dementia. The patient regularly consumes one cup of coffee per day. Mrs. S's last education was elementary school, and she has been a housewife since she married. From her personality, she is quiet, reserved, and tends to keep problems to herself.

With the results of the MMSE supporting examination: 0 (Severe Cognitive Impairment), CDR: 18 (Severe Dementia), Barthel Index: 40 (Severe Dependencies)

Dementia is a condition in which a person experiences a significant decline in cognitive abilities, such as memory, language, abstract thinking, and reasoning. Early onset dementia (EOD) is a condition in which a person experiences a decline in cognitive abilities before the age of 65.

The causes of EOD may vary depending on the type but generally involve damage to brain cells that disrupts communication between neurons. Some risk factors that can increase the likelihood of someone experiencing EOD include:

Genetics: Some types of EOD are caused by specific genetic mutations inherited from parents. Examples include familial Alzheimer's disease and Huntington's disease.

Metabolic disorders: Some medical conditions, such as thyroid disease, diabetes, or kidney disorders

Head trauma: Serious head injuries can damage brain cells and increase the risk of EOD.

Alcohol abuse: Excessive alcohol consumption can damage brain cells and increase the risk of EOD.

Brain disorders: Some types of brain disorders, such as Parkinson's disease, Huntington's disease, or Creutzfeldt-Jakob disease, can cause EOD.

The symptoms of EOD vary depending on the type but can include difficulty remembering new information, difficulty speaking or writing, loss of interest in previously enjoyed activities, difficulty performing daily tasks, and changes in mood or behavior.

Prevalence

The prevalence of early-onset dementia is relatively low compared to dementia that occurs in old age. According to data from the Alzheimer's Association, about 5-10% of all dementia cases occur in people under the age of 65. However, the exact prevalence of early-onset dementia can vary depending on factors such as population, definition, and diagnostic methods used.

Some studies also indicate differences in prevalence between types of early-onset dementia, such as Alzheimer's disease and frontotemporal dementia (FTD). For example, a study in the Netherlands found that the prevalence of FTD in people under 65 years of age was higher than the prevalence of Alzheimer's disease in the

same age group. However, further research is needed to confirm these findings.

DISCUSSIONS

DSM-5 does not classify "early onset dementia" as a separate category in the neurocognitive disorder section. Instead, DSM-5 uses the term "major neurocognitive disorder" and does not differentiate between early or late onset. The diagnostic criteria for major neurocognitive disorder in DSM-5 require the presence of significant cognitive impairment that interferes with daily activities.

Dementia classified as a major neurocognitive disorder with the following criteria:[6]

• There is a notable reduction in cognitive function when compared to earlier stages of functioning. This decline occurs in one or more cognitive areas (complex attention, executive function, learning ability, memory, language, motor perception, and social cognition).

• The decline in cognitive function can be confirmed through a history taken from the patient, family members, caregivers, or other reliable sources who report a significant decline in cognitive function. Additionally, cognitive decline can be assessed through standard neuropsychological tests, such as the MMSE, or other appropriate examinations/tests. The cognitive deficits interfere with daily activities, such as paying bills, requiring the patient to need assistance.

• The cognitive deficits do not only occur during episodes of delirium.

• The cognitive deficits are not caused by other mental disorders, such as schizophrenia and major depression.

Classification

Early onset dementia, also known as dementia that occurs before the age of 65, typically affects younger individuals. However, there is no exact age limit for the occurrence of early-onset dementia, and some definitions may include individuals under the age of 60 or even 55. Certain types of dementia tend to be more common in younger individuals, such as Alzheimer's and frontotemporal dementia (FTD), compared to vascular dementia or Lewy body dementia.

Risk Factor

Other risk factors associated with early-onset dementia include genetics, history of head injury, alcohol or drug abuse, exposure to toxic chemicals, and chronic health conditions such as heart disease or diabetes. However, it is important to remember that anyone experiencing cognitive impairment and a decline in daily function should be evaluated by a medical professional to determine the underlying cause and develop an appropriate treatment plan [7].

	Alzheimer's disease	Frontotemporal dementia	Vascular dementia	Dementia with lewy bodies
History	Memory loss, spatial disorientation, language failure	Early personality change stereotyped behaviour	Mental and physical decline	Confusion, physical slowness
Neurology	Myoclonus akinesia, rigidity (late)	Early primitive reflexes occasional akinesia, rigidity	Pyramidal weakness, ataxia, pseudobulbar palsy	Akinesia, rigidity, myoclonus
Memory	Severe amnesia	Variable loss	Variable loss	Variable amnesia loss/
Language	aphasia	Adynamic speech, mutism	dysarthria	Incoherent, rambling
Visuo-spatial function	Spatial disorientation	preserved	preserved	Spatial disorientation
Perception	Primary recognition failure	preserved	Preserved	Misperceptions
Conduct	Appopriate concern	Inapproriate unconcern	Appopriate concern	Appropriate concern
Mental effort	high	low	Slow	Slow
Motor skills	Impaired spatial configuration	Impaired sequencing	Impaired sequencing	Impaired sequencing/ spatial configuration
CT/MRI	Hippocampal atrophy	Severe atrophy anterior	Prominent white matter change/ lacune	Atrophy
SPECT	posterior	anterior	Patchy	Posterior
EEG	Slow	Normal	Slow	Grossly slow

Figure 1.

Treatment

There is no pharmacological or non-pharmacological intervention treatment modality that can cure or stop the progression of dementia. Cholinesterase inhibitors are the most common pharmacological intervention for dementia, although there is little evidence to support their efficacy [2].

Non-pharmacological interventions that can help patients with early onset dementia: [6], [9].

1. Physical activity and cognitive exercise therapy: Regular physical exercise and cognitive exercises can help slow the progression of early onset dementia and improve cognitive function.
2. Occupational therapy: Occupational therapy can help patients with early onset dementia maintain their skills and functional abilities.
3. Reminiscence therapy: Reminiscence therapy involves engaging patients in conversations about their past experiences, which can increase a sense of connection and happiness.
4. Music therapy: Music therapy can help improve mood, increase cognitive function, and enhance social relationships.
5. Art therapy: Art therapy can help reduce stress and increase self-expression in patients with early onset dementia.
6. Psychosocial support: Psychosocial support such as individual or group counseling can help patients and their families cope with challenges related to early onset dementia.

Cognitive rehabilitation [10] is a popular non-pharmacological intervention to help improve cognitive function in patients with early onset dementia. Cognitive rehabilitation aims to help patients maintain existing skills and develop new ones. Some common techniques used in cognitive rehabilitation for early onset dementia include:

1. Restorative technique: This technique aims to improve impaired cognitive function by using specific cognitive exercises and techniques.
2. Adaptive technique: This technique aims to teach patients how to cope with cognitive difficulties by developing replacement strategies and modifying behavior.
3. Compensatory technique: This technique aims to help patients overcome cognitive weaknesses by adapting their environment.

Several studies have shown that cognitive rehabilitation can help improve cognitive function in patients with early onset dementia. Studies also show that cognitive rehabilitation can improve patients' quality of life and delay disease progression. However, the long-term effects of cognitive rehabilitation are still unclear, and further research is needed.

Cognitive stimulation is one of the non-pharmacological interventions that can help slow the progression of early onset dementia and improve patients' quality of life. Cognitive stimulation involves exercises designed to stimulate the cognitive functions that are impaired in patients, such as memory, problem-solving, and concentration.

Some techniques commonly used in cognitive stimulation for early onset dementia include:

1. Memory training: This training aims to improve patients' ability to remember new information and recall old information.
2. Problem-solving training: This training aims to improve patients' ability to solve problems and make decisions.
3. Attention training: This training aims to improve patients' ability to focus and sustain attention on given tasks.
4. Language training: This training aims to improve patients' ability to communicate and understand language.

Here are some steps on how to conduct CST: [11]–[13].

1. Assessment: Conduct a comprehensive assessment of the patient's cognitive abilities, including their strengths and

weaknesses. This will help in designing an appropriate CST program that targets their specific needs.
2. Set goals: Work with the patient and their caregiver to set realistic goals for the CST program. Goals should be specific, measurable, achievable, relevant, and time-bound.
3. Plan activities: Design activities that are tailored to the patient's individual needs and goals. Activities can include memory exercises, problem-solving tasks, attention and concentration exercises, and language exercises. Use a variety of techniques and materials, such as puzzles, games, music, and pictures, to keep the patient engaged and interested.
4. Implement the program: Schedule regular CST sessions, either individually or in a group setting. Sessions can be conducted in a hospital, rehabilitation center, or at the patient's home, depending on their preferences and capabilities. During the sessions, the therapist should provide guidance, support, and feedback to the patient.
5. Monitor progress: Regularly evaluate the patient's progress towards their goals and adjust the CST program as needed. This can be done through formal assessments, informal observations, and feedback from the patient and their caregiver.

CST is a program that engages participants in discussions about daily activities or tasks in an attempt to stimulate mental activity. Indicated for mild cognitive impairment (MCI). The CST program consists of 14 structured sessions. Each session is 45 to 60 minutes long in a small group of 5-8 subjects. Each session must be continuous. Therefore, the facilitator must provide the same activities for each session, for example, with warm-up activities, reality orientation boards (RO), which contain information from the group, and orientation (date, time, and weather). Activities are themed on current events, word associations, and money. The intervention does not aim to test factual answers but to encourage participants to give their opinions and thereby to actively stimulate and engage them in an optimal learning environment, usually with the social benefit of a group. Interventions can be carried out by individuals trained to work with people with dementia with the help of CST manuals or CST training. Interventions can take place in residential homes, nursing homes, day care centers, and memory clinics. Long-term or maintenance CST (mCST) is also available after short CST. In addition to a brief CST, which is usually carried out in groups by trained CST [14].

Several studies have shown that cognitive stimulation can help improve cognitive function in patients with early-onset dementia. Studies also indicate that cognitive stimulation can improve patients' quality of life and delay disease progression. However, the long-term effects of cognitive stimulation are still unclear, and further research is needed. [7], [12], [15].

Cognitive training 1,10,29 for early-onset dementia is a non-pharmacological intervention aimed at improving or maintaining cognitive function in patients. Cognitive training involves exercises designed to improve cognitive function that is impaired in patients, such as memory, problem-solving, and concentration. Cognitive training can be done individually or in a group and can be done regularly or as needed.

Some common techniques used in cognitive training for early onset dementia include:

1. Memory exercises: These exercises aim to improve the patient's ability to remember new information and recall old information.
2. Problem-solving exercises: These exercises aim to improve the patient's ability to solve problems and make decisions.
3. Attention exercises: These exercises aim to improve the patient's ability to focus and maintain attention on given tasks.
4. Language exercises: These exercises

aim to improve the patient's ability to communicate and understand language.

Cognitive training can be conducted by trained medical personnel or therapists who can help patients with early-onset dementia. Training can be conducted in hospitals, rehabilitation centers, or at the patient's home using available cognitive training aids. Several studies have shown that cognitive training can improve cognitive function in patients with early-onset dementia. Studies also show that cognitive training can improve the quality of life of patients and delay disease progression. However, the long-term effects of cognitive training are still unclear, and further research is needed.

CONCLUSIONS

Early-onset dementia is caused by many factors, thus requiring proficient clinical skills to recognize the disease. With good management, it is hoped that dementia patients can live a better life. Non-psychopharmacological therapies such as cognitive rehabilitation, cognitive stimulation, and cognitive training have also been proven to have a positive impact on patients with dementia 's quality of life.

ACKNOWLEDGMENTS

The authors thank the patients and families who have agreed to provide data and consent for publication.

CONFLICT OF INTEREST

The author declares that there is no conflict of interest in the writing and publication of this case report.

FUNDING

Nil

REFERENCES

[1] G. Livingston et al., "Dementia prevention, intervention, and care: 2020 report of the Lancet Commission," Lancet, vol. 396, no. 10248, pp. 413–446, Aug. 2020, doi: 10.1016/S0140-6736(20)30367-6.

[2] N. T. Sharew, "The Effect of Multimodal Non-pharmacological Interventions on Cognitive Function Improvement for People With Dementia: A Systematic Review," Front. Public Heal., vol. 10, Jul. 2022, doi: 10.3389/fpubh.2022.894930.

[3] A. McMurtray, D. G. Clark, D. Christine, and M. F. Mendez, "Early-Onset Dementia: Frequency and Causes Compared to Late-Onset Dementia," Dement. Geriatr. Cogn. Disord., vol. 21, no. 2, pp. 59–64, 2006, doi: 10.1159/000089546.

[4] G. Livingston et al., "Dementia prevention, intervention, and care," Lancet, vol. 390, no. 10113, pp. 2673–2734, Dec. 2017, doi: 10.1016/S0140-6736(17)31363-6.

[5] V. Moro, M. T. Condoleo, F. Sala, S. Pernigo, G. Moretto, and G. Gambina, "Cognitive Stimulation in a-MCI," Am. J. Alzheimer's Dis. Other Dementias®, vol. 27, no. 2, pp. 121–130, Mar. 2012, doi: 10.1177/1533317512441386.

[6] PERDOSSI, Panduan Praktik Klinik: Diagnosis dan Penatalaksanaan Demensia. PERDOSSI, 2015.

[7] B. C. Riedel, P. M. Thompson, and R. D. Brinton, "Age, APOE and sex: Triad of risk of Alzheimer's disease," J. Steroid Biochem. Mol. Biol., vol. 160, pp. 134–147, Jun. 2016, doi: 10.1016/j.jsbmb.2016.03.012.

[8] S. S. Shaik and A. R. Varma, "Differentiating the dementias: a neurological approach," Prog. Neurol. Psychiatry, vol. 16, no. 1, pp. 11–18, Jan. 2012, doi: 10.1002/pnp.224.

[9] J.-H. Choi et al., "Characteristics of Cognitive Function Changes and Related Factors in Individuals With Cognitive Impairment During the Pandemic of COVID-19: A Retrospective Chart Review Study," Psychiatry Investig., vol. 20, no. 2, pp. 109–119, Feb. 2023, doi: 10.30773/pi.2022.0223.

[10] A. Bahar-Fuchs, L. Clare, and B. Woods, "Cognitive training and cognitive rehabilitation for persons with mild to moderate dementia of the Alzheimer's or vascular type: a review," Alzheimers. Res. Ther., vol. 5, no. 4, p. 35, 2013, doi: 10.1186/alzrt189.

[11] U. Widding, B. Hägglöf, and A.

Farooqi, "Parents of preterm children narrate constructive aspects of their experiences," J. Clin. Nurs., vol. 28, no. 21–22, pp. 4110–4118, Nov. 2019, doi: 10.1111/jocn.14948.
[12] O. Bousiges et al., "Differential diagnostic value of total alpha-synuclein assay in the cerebrospinal fluid between Alzheimer's disease and dementia with Lewy bodies from the prodromal stage," Alzheimers. Res. Ther., vol. 12, no. 1, p. 120, Dec. 2020, doi: 10.1186/s13195-020-00684-5.
[13] K. A. Chew et al., "SINgapore GERiatric intervention study to reduce physical frailty and cognitive decline (SINGER)–pilot: A feasibility study," Alzheimer's Dement. Transl. Res. Clin. Interv., vol. 7, no. 1, Jan. 2021, doi: 10.1002/trc2.12141.
[14] P. N'Gouemo, "Pathogenesis and Targeted Therapy of Epilepsy," Biomedicines, vol. 10, no. 12, p. 3134, Dec. 2022, doi: 10.3390/biomedicines10123134.
[15] L. Clare and R. T. Woods, "Cognitive training and cognitive rehabilitation for people with early-stage Alzheimer's disease: A review," Neuropsychol. Rehabil., vol. 14, no. 4, pp. 385–401, Sep. 2004, doi: 10.1080/09602010443000074.