

Non pharmacological Strategies in people suffering advanced dementia: Report of a case

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In the course of dementia, its advanced stage is characterized by severe cognitive and physical impairment, defining it as a stage including deep memory deficits, minimal verbal skills, inability to walk independently, need of assistance to perform any basic daily life activity and urinary and fecal incontinence. The aim of this report is to describe a case of an 89-year-old woman with advanced dementia who goes to neurological control along with her family, who request information on how to improve her quality of life, at this stage. We describe a palliative care proposal, specifically active therapeutic conception, as a guide that allows to observe the person not only from a mild dying perspective, but also including a proactive attitude for her well-being. This approach allows to facilitate pleasurable experiences, defined within the framework of non-pharmacological intervention, which have reported significant benefits in people suffering advanced dementia during the last decade. It allows the identification of intervention strategies at this stage of the disease.

Keywords: Dementia; non-pharmacological interventions; palliative care; quality of life; individualized intervention.

INTRODUCTION

Dementia is defined as a complex process starting with death of brain cells, thus interrupting functional networks underlying cognition, sensorimotor functions and conduct, affecting people's independence¹. In degenerative cause dementias this process is gradual in time. Usually, it has an initial focal impairment of a cognitive/conduct function. It further becomes a general progressive compromise of other cognitive functions. As this neuropathology progresses in the brain, it impairs functionality of daily life activities DLA. One of the

scales describing dementia stages is the Reisberg Global Deterioration Scale (GDS)², which classifies them into: early, intermediate and severe stages. Stadiums (GDS 6 and 7) deal with advanced dementia. It is defined as a stage that includes strong memory deficit, minimum verbal skills, incompetence to amble independently, need of assistance to perform any DLA and fecal and urinary incontinence². Regarding vital prognosis of people suffering advanced dementia, it varies according to age and comorbidities, ranging from a few months to two years³. Therefore, in advanced dementia the focus of care and attention provided is palliative, and is

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aimed to maximize comfort and quality of life, instead of focusing on a healing approach⁴.

All over the world, the number of people suffering dementia is rapidly increasing⁵. In Chile, prevalence of dementia today is equivalent, at least to 200,000 people. This figure should be three-fold by 2050⁶.

Next, you will briefly find the case of a person whose clinical picture of dementia started in 2012, Nearly, from 2019 she is at an advanced stage. This research was approved by the Committee of Ethics of the “Servicio Metropolitano Norte”.

CLINICAL CASE

An-86-year old woman goes, along with her family to a neurologic physician consultation, who refer full dependence in her DLA. Her life at home is performed with full assistance from a caretaker. Regarding her conduct, she does not report any significant disturbances. She is medicated with Escitalopram/10 mg. and has an excellent sleep-wake cycle managed with sleep hygiene, plus support with Quetiapine/25 mg. During control, she came in on a wheelchair. She was found vigil, quiet, and she follows simple directions with intermittent eye contact. In her examination, her mental condition is reported to have scarce verbal language and intention to communicate. She recognizes those people who live at home with her. Regarding motor functions, she presents rigidity and continuous flexion posture.

Her family reports that during the last year the user has remained stable, with mild dysphagia, low conduct disorders and a steady routine for her DLA. However, the main concern her family has to do with her quality of life. They feel puzzled regarding what are the best strategies to take into account regarding their mother at this stage of the disease, and what other therapeutic activities may be suggested, according to her interests and background, aimed to allow her to feel pleasure and improve her quality of life, apart from the prescribed pharmacological treatment (PT). Taking into account the final stage of this disease and the importance of palliative care, not only from a companionship point of view, at the end of her life, but also in terms of her welfare.

Therefore, the focus will be on approach, strategies and non pharmacological therapeutic activities for people suffering advanced dementia, in order to improve their quality of life.

DISCUSSION

Palliative care

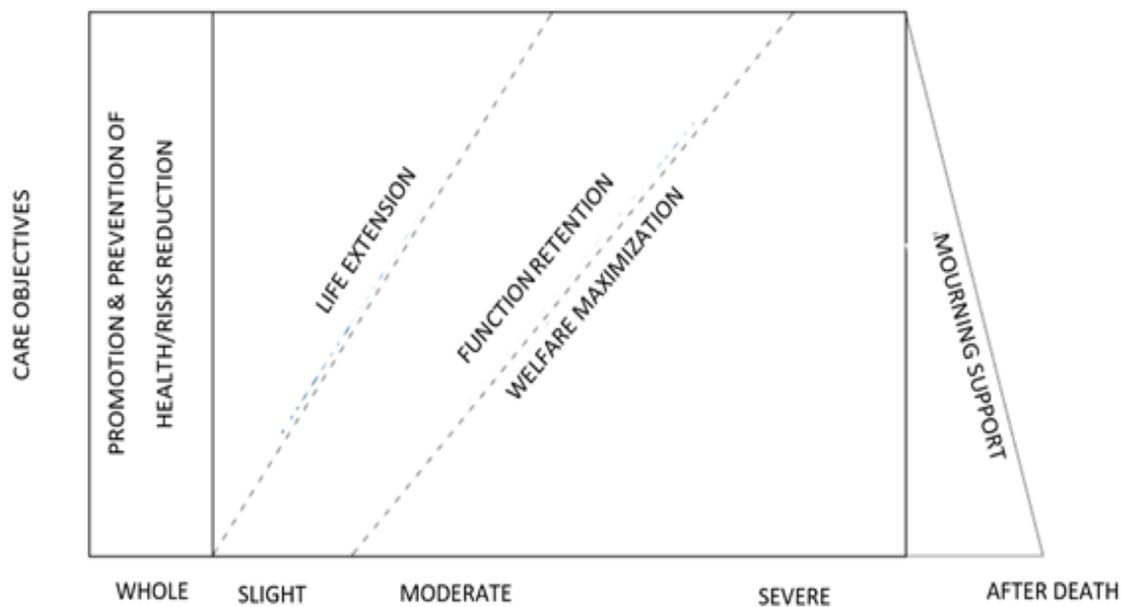
It is fundamental that the health team discusses with the patient and her family all decisions to be made during the course of her dementia and its final cut, including all potential complications (anticipated guidelines)⁷. Palliative care is a holistic approach, considering not only her advanced dementia as a disease in its final stage, but also inclusion of all the factors involved during this particular stage, in order to have as much as possible a better quality of life till death⁸; therefore, the focus is to maximize welfare instead of considering prognosis only.

Recent studies have suggested this approach may be beneficial for people suffering advanced dementia¹⁰. Considering quality of life as the main aspect within this scenario (Figure #1)⁸⁻¹⁰.

Having addressed the aforementioned, an approach allowing to consider quality of life is active therapeutic approach, forgetting about thinking “there is nothing else to do”¹¹, thus facilitating interaction of the patient in her environment, by means of meaningful activities aimed to provide well-being. Therefore, the intervention approach, unlike other stages of the dementia, is not related to providing functional independence any more, as it is at its initial stages, but rather finding welfare by means of non pharmacological treatment⁸⁻⁹.

Non Pharmacological Strategies

Bearing in mind a palliative care approach, specifically an active therapeutic approach, the holistic approach on people suffering dementia is based on the complementarity between PT and Non Pharmacological Strategies¹². The latter are defined as a non chemical intervention, based on a theory, focalized and replicable, performed on the patient and/or on the caretaker which is potentially capable to provide significant benefits¹³, which directly address unsatisfied needs of this population arising from symptoms related with dementia, including memory impairment, limitations in their DLA or the

Figure #1. Palliative Care Model for dementia (Adapted from Van der Steen J T et al, 2014)⁹

disability to perform a proper communication¹⁴. There are recent systematic reviews that have identified the effects of non pharmacological treatment in cognitive decline. However, most analysis made on these systematic reviews did not take into account the disease stadium the patient had. Except, Na et al (2019), who reviewed effectiveness of these on people suffering advanced dementia, confirming it had a beneficial effect on DLA quality of execution and depression in a group of people suffering moderate-advanced dementia¹⁵; therefore, there is evidence supporting the benefit of these interventions in such group.

In this scenario, non pharmacological treatment from an active therapeutical approach, reflect potential activities and recommended environments, thus providing joy, which is a quality of life indicator. Cohen-Mansfield et al (2012) performed an experimental study on people suffering advanced dementia about the impact of environmental/personal characteristics and type of joy stimulus expressed by patients. This was valued by means of the Lawton's Modified Behavior Stream Scale, which is aimed to see if the patient shows external happiness. This is quantified using a 5-point scale¹⁶. Such research selected one sample from 193 people who were provided with 25 stimuli of these categories. The analysis of the results reported that all types of social stimuli (live/

enacted stimuli, human/non-human stimuli), self-identity stimuli and music were correlated with significantly higher levels of placer than controlled conditions (See Table 1).

In our clinical case suggestions made to care takers about live social stimuli and music reported well-being in patients. This was expressed by means of facial expressions and interest, such as eye contact, smiles and laughter. Such results led to other health professionals to inform and clarify the final stage of this disease may be and must have an active therapeutical approach, including stimuli, such as non pharmacological strategies in care plans, so that well-being becomes a rule and not a random success¹⁷, thus becoming a crucial indicator of quality of life.

CONCLUSION

Dementia is a not linear process in time. It is characterized by various stages and sub stages during its development. In its advanced stadium, it is characterized by severe dependence for performing DLAs and by the impact of this disease in the life of patients and their care takers. That is why caretakers become an active agent aimed to facilitate participation of the patients in their surrounding environment, despite limitations, thus properly interacting in their daily life activities. According to the model ex-

Table 1. Non Pharmacological Strategies for people suffering advanced dementia.
(Adapted from Cohen-Mansfield J et al, 2012)¹⁷

Type of stimulus in therapeutical activity	Description
Human-social stimulus	Socialize among each other
Social enacted stimulus	Socialize with a toy or screen similar to a human or animal. For instance: doll, robotic animal and/or a recorded video.
Social unanimated stimulus	Socialize with a real animal.
Self-identity stimulus	Socialize with stimuli dealing with the identity and background of each person with regarding his/her occupation, pastimes or their prior interests, for instance, hobbies.
Musical stimulus	Listening to live music or music records.
Level of sound	Moderate sound is recommended, similar to a voice in a conversation with another person, in a closed area
Speech clarity	Clarity of speech provided with no environmental noises.
Social Environment	2-3 people are recommended.

posed by Gitlin & Rose (2014), there are factors associated with the willingness of caretakers to use non pharmacological strategies in people suffering dementia, as understanding caretakers should be trained plus the factors associated with change, may be deemed as significant considerations in this type of intervention¹⁷. In this specific case, the family is reported to be active, where a new conduct arises to be still modified in order to improve the patient's quality of life. The latter involves to trigger a proper environment which allows her to get them involved in activities aimed to favor pleasant experiences. This is a crucial step in environmental adaptation and quality of life. Therefore, it is adequate to use an active therapeutical approach, which includes the quality of life concept, at the end of her life, including non pharmacological treatment aimed to provide proper/personalized stimuli, as a way to improve her quality of life.

REFERENCES

1. Elahi F, Miller B. A clinicopathological approach to the diagnosis of dementia. *Nat Rev Neurol* 2017; 13:457–76. doi:10.1038/nrneurol.2017.96
2. Reisberg B, Ferris SH, de Leon MJ, Crook T. The Global Deterioration Scale for assessment of primary degenerative dementia. *Am J Psychiatry* 1982; 139: 1136-39. doi:10.1176/ajp.139.9.1136
3. Arriola E, Fernández C. Sociedad Española de Geriátría y Gerontología. Demencia severa, avanzada y cuidados paliativos [Internet]. 2012. disponible en: <https://www.segg.es/media/descargas/Demencia-severa-avanzada-y-cuidados-paliativos.pdf>.
4. Murphy E, Froggatt K, Connolly S, O'Shea E, Sampson E L, Casey D, Devane D. Palliative care interventions in advanced de-

- mentia. *Cochrane Database Syst Rev* 2016; 1-50. doi:10.1002/14651858.CD011513.pub2
5. WHO. Dementia [Internet]. 2019 May. Disponible en: <https://www.who.int/es/newsroom/fact-sheets/detail/dementia>.
 6. Coprad. ALZHEIMER PROPUESTO PARA PLAN AUJE POR COPRAD [Internet]. 2017. Disponible en: <http://www.coprad.cl/alzheimer-propuesto-plan-auge-coprad/>.
 7. Mitchell S. Clinical Practice. Advanced Dementia. *N Engl J Med*. 2015; 372: 2533-40. doi:10.1056/NEJMcp1412652
 8. Van der Steen J T, Radbruch L, Hertogh C M, De Boer M E, Hughes J C, Larkin P et al. White paper defining optimal palliative care in older people with dementia: A Delphi study and recommendations from the European Association for Palliative Care. *Palliat med: SAGE Journals* 2014; 28: 197-209. doi:10.1177/0269216313493685
 9. Mataqi M, Aslanpour Z. Factors influencing palliative care in advanced dementia: a systematic review. *BMJ Support Palliat Care*. 2020; 10:145-56. doi:10.1136/bmjspcare-2018-001692
 10. Ribot V, Leyva Y, Moncada C, Alfonso R. Calidad de vida y demencia. *AMC [Internet]*. 2016; 20: 77-86. Disponible en: <http://scielo.sld.cu/pdf/amc/v20n1/amc120116.pdf>
 11. Sociedad Española de Cuidados Paliativos. Guía de cuidados paliativos [Internet]. 2007. Disponible en: <http://www.secpal.com/Documentos/Paginas/guiacp.pdf>.
 12. Gajardo J, Aravena J. ¿Cómo aporta la terapia ocupacional en el tratamiento de las demencias?. *Rev Chil Neuropsiquiatr* 2016; 54: 239-49. 0717-9227. doi: 10.4067/S0717-92272016000300008
 13. Muñoz R, Olazarán J. Mapa de Terapias No Farmacológicas. Documento para Centro de Referencia Estatal de Atención a personas con enfermedad de Alzheimer y otras demencias [Internet]. 2009. Disponible en: <http://www.crealzheimer.es/InterPresent2/groups/imserso/documents/binario/mapayguainiciacintnfalzhpaparpr.pdf>.
 14. Cohen-Mansfield J. Non-pharmacological interventions for persons with dementia: what are they and how should they be studied?. *Int Psychogeriatr* 2018; 30: 281-83. doi:10.1017/S104161021800039X
 15. Na R, Yang J H, Yeom Y, Kim Y J, Byun S, Kim K et al. A Systematic Review and Meta-Analysis of Nonpharmacological. *Psychiatry Investig* 2019; 16, 325-35. doi:10.30773/pi.2019.02.11.2
 16. Cohen-Mansfield J, Marx MS, Freedman LS, Murad H, Thein K, Dakheel-Ali M. What affects pleasure in persons with advanced stage. *J Psychiatr* 2012; 46: 402-6. doi:10.1016/j.jpsychires.2011.12.003
 17. Gitlin L, Rose, K. Factors Associated with Caregiver Readiness to Use Nonpharmacologic Strategies to Manage Dementia-related Behavioral Symptoms. *International journal of geriatric psychiatry* 2014; 29: 93-102. doi: 10.1002/gps.3979

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