Weight loss in Alzheimer’s disease patient and the Zarit score of their caregiver.

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INTRODUCTION

• In Tunisia Alzheimer's disease are one of the most compelling problems of social and public health.

• It usually leads to a marked decrease in the cognitive, mental and also physical skills of the affected person, who, over time requires an increased amount of care, aid and support.
• Age represents the most important risk factor; with progressive aging of the Tunisian population (currently 9 % of population), the AD problem becomes even more dramatic.

• In Tunisia, more than 99 % Alzheimer's patients are living at home with their family.

• In our country the caregivers are usually relatives of the patient.
• Enduring the patient's changes in the levels of ability and behavior can be very stressful, thus exposing the caregiver to the risk of depression and physical vulnerability.

• This stress may arise where the patient has an eating disorder.
In our study we investigated the relationship between nutritional statute, weight loss patients, eating disorder patients and caregiver burden
Subjects and methods

• We followed, for two years, a group of 36 patient-caregiver pairs.
• All patients underwent a nutritional neuropsychological, and functional evaluation at base.
• Measurements are made at the beginning of the study and two years later.
• During these two years a lot of advice were provided to help solve nutritional problems.
• In patient, nutritional status is assessed by using Mini Nutritional Assessment (MNA) and nutritional disorder by Eating Behavior Scale (EBS)
• The Zarit scales were used to assess caregiver burden and caregiver reactions to the patients' behavioral and autonomic disorders.
The Mini Nutritional Assessment (MNA) provide a rapid assessment of nutritional status in elderly patients. It is composed of simple measurements and brief questions. The sum of the MNA score distinguishes between elderly patients with:

1) adequate nutritional status, MNA ≥ 24;
2) at risk of malnutrition, 17 < MNA 23.5.
3) malnutrition, MNA < 17;
• The Eating Behavior Scale (EBS) was developed to measure functional ability during meals.

• Patient with higher EBS scores, indicating greater independence in eating.

• The score ranges from zero when the dependence is total to 18 when the patient is independent.
• Caregiver burden was assessed using the Zarit scale, which has 22 questions about the impact of the disorders of elderly on the quality of life of their caregivers.

• The score of each response ranged from 0 (never) to 4 (always). (Never=0; Rarely=1; Sometimes=2; Quite frequently=3; Nearly always=4)

• After the total score was calculated.

• The total score ranges from 0 to 88. A high score correlates with higher level of burden.
**Patients**

Age: 74 ± 22 (55 to 98 years)

EBS = 16 ± 2
EBS 2 years later = 11 ± 6

First MNA = 21.7 ± 3.2
MNA 2 years later = 14.0 ± 4.5

First MMS = 24 ± 2
MMS 2 years later = 14 ± 5

Age: 80 ± 7 (63 to 94 years)

EBS = 15 ± 2
EBS 2 years later = 9 ± 8

First MNA = 22.0 ± 4.9
MNA 2 years later = 14.7 ± 4.9

First MMS = 25 ± 3
MMS 2 years later = 14 ± 5
MNA evolution

- At baseline
- After 2 years

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• Therefore, the malnutrition status presented a seriousness cognitive alteration (evaluated by MMSE), an increase of the caregiver’s burden (Zarit) and more frequent and serious other disorders (agitation, more dependence, bedsores).
RELATION BETWEEN MNA AND ZARIT

$y = -2.226x + 79.91$

$R^2 = 0.272 \ (p < 0.001)$
RELATION BETWEEN EBS AND ZARIT

\[ y = -1.076x + 57.68 \]

\[ R^2 = 0.155 \ (p<0.05) \]
CAREGIVER

AGE: 46 ± 9 (43 – 51)

WOMEN 85%

MEN 15%

AGE: 49 ± 9 (25 – 66 years)

ZARIT BEFORE: 29 ± 2
ZARIT 2 YEARS AGO: 40 ± 23

ZARIT BEFORE: 38 ± 15
ZARIT 2 YEARS AGO: 46 ± 19
Who is caregiver?

patient is a man

- wife: 33%
- daughter: 34%
- son: 25%
- daughter-in-law: 8%
Who is caregiver?

- daughter (86%)
- daughter-in-law (7%)
- son (7%)

Patient is a woman.
DISCUSSION

• In the present study, the number of malnutritioned patients is between 13 % at baseline and 43 % after two years.

• When we compare the evolution of the different scores for the studied population (by MNA group between 0 and 2 years), we notice a progressive alteration of the cognitive functions and of the nutritional disturb for every group (EBS decreased)
• The degradation of that nutritional status is multifactorial (cognitive decline, functional capacities alteration...)
• This alteration rise the caregiver burden
• We have the biggest Zarit score compare to other country (Turkish 28, Brazil 37, China 31)
• Family caregivers may be motivated to provide care for several reasons: a sense of love or reciprocity, spiritual fulfillment, a sense of duty, social pressures and cultural norms.

• This type of caregivers are more likely to resent their role and suffer greater psychological distress.
• According to the results of some studies, approximately 77.0% of caregivers are women, while this rate was 85% in our study (95% in Negiria).

• In general, women in developing countries, like Tunisia, undertake the task of providing care. She must respond at other demands, including child rearing, career, and relationships.

• The results demonstrate that the change in the caregiver's lifestyle coincided with the time of the AD patient's need of care and particularly when there is nutritional disturbs.
• The burden of responsibility significantly increases in relationship to the complexity of the disease
• Our study, in accordance with international scientific literature, clearly confirms that the depressive state of the caregiver depends on the severity of the AD
• It has been well established that AD is a disease that involves not only the patient, but also affects the whole family.

• The caregiver burden increase when AD patient’s develop the nutritional disturbs and malnutrition.

• The main complaint of caregivers is the lack of support from the Public Health Service and sometimes from family.
• The planning and putting into practice of support interventions, guidance and aid to families could be a valid solution to the loneliness and the consequent care burden experienced by the family and the caregiver
THANK YOU