IMPACT OF COGNITIVE IMPAIRMENT AND NEUROPSYCHIATRIC SYMPTOMS IN PATIENTS WITH DEMENTIA ON CAREGIVER DISTRESS

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ABSTRACT

Introduction In the assessment and follow-up of patients with dementia, attention is usually focused on cognitive impairment, followed by progressive disability and loss of independence. The prolonged cohabitation and care for demented patients at their homes, especially in later stages, when neuropsychiatric symptoms are significant, may provoke distress in their relatives/caregivers. **Purpose** The purpose of the present study was to assess factors associated with caregiver distress in dementia, emphasizing the role of certain neuropsychiatric symptoms and cognitive impairment. **Patients and methods** Thirty-two patients with dementia, 14 men and 18 women, hospitalized and diagnosed at the 1st Clinic of Neurology, MHAT "Sveta Marina" – Varna, were assessed by MMSE, while NPI, including the distress scale, was administered to their caregivers. **Results and discussion** MMSE showed a mean value of 18.9 ± 4.0 points. Of all 32 patients, 31 had neuropsychiatric symptoms. NPI showed a mean value of 3.9 ± 2.6 points. With the lowering of MMSE score, NPI score was found to increase. Caregiver distress caused by neuropsychiatric symptoms showed a mean value of 2.9 ± 1.9 points. The most frequent neuropsychiatric symptoms in the examined cohort were apathy, anxiety, depression, agitation. The heaviest caregiver distress was caused by agitation, anxiety and apathy. Our results are consistent with data available in the literature. **Conclusion** Neuropsychiatric symptoms are among the leading cause for distress in caregivers and relatives living with demented patients. The importance and the frequency of these symptoms, as well as the availability of adequate therapeutic options, underline the necessity for focused assessment in patients with cognitive disturbances and dementia, aiming at optimization of care for these patients and their caregivers' quality of life.

INTRODUCTION

In the assessment and follow-up of patients with dementia, attention is usually focused on cognitive impairment, followed by progressive disability and loss of independence. Neuropsychiatric symptoms also represent a common and important manifestation of Alzheimer's disease and other dementias. (1) They could have a serious impact on patients and caregivers, leading to behavioral changes, and frequently imposing institutionalization of patients. (1,3,5) The prolonged cohabitation and care for demented patients at their homes, especially in later stages, when neuropsychiatric symptoms are significant, may provoke the emergence of complaints in their relatives/caregivers, including "distress". (5)

PURPOSE

In a cohort of patients and their relatives. Secondary purposes were to point out the most frequent neuropsychiatric

symptoms in the examined cohort; to study the relation between cognitive decline and neuropsychiatric symptoms severity; to determine the relation between neuropsychiatric symptoms severity and distress.

PATIENTS

Thirty-two patients with dementia, 14 men and 18 women, were included in the study. They have all been hospitalized and diagnosed at the 1st Clinic of Neurology, MHAT "Sveta Marina" – Varna. Mean age of patients was 73.7 ± 6.2 years, education was 8 or more years. All patients had relatives, who were in fact their caregivers, spending at least 3 hours every day caring for patients.

All patients had mild or moderate dementia, according to MMSE score.

The distribution of patients according to dementia type was as follows (Fig. 1):

- Probable Alzheimer's disease according to NINCDS-ADRDA criteria: 24 (75%)

- Probable vascular dementia according to NINDS-AIREN criteria: 5 (15.6%)
- “Mixed” dementia (Alzheimer’s disease+cerebrovascular disease): 3 (9.4%)

Fig.1. Distribution of patients according to dementia type.

METHODS

Mini-Mental Status Examination (MMSE), a widely accepted neuropsychological test commonly used in dementia studies, was used to assess cognition and to categorize patients according to cognitive impairment severity. (4) MMSE score from 11 to 26 was regarded as inclusion criterion. Patients scoring 19 to 26 were placed in the mild dementia subgroup, while those scoring 11 to 18 were classified as having moderate dementia.

Neuropsychiatric symptoms and distress were assessed by the Neuropsychiatric inventory (NPI), a questionnaire filled in according to a caregiver interview. NPI assesses 12 domains of symptoms: delusions, hallucinations, agitation, depression, anxiety, elation, apathy, disinhibition, irritability, aberrant motor behavior, night-time behavior, appetite/eating changes. Frequency and severity of each symptom are assessed. A score is obtained for each of the 12 domains, as well as a total score for the test. A separate scale is used to assess caregiver distress caused by each symptom, and a total distress score is available. (3)

RESULTS

MMSE showed a mean value of 18.9 ± 4.0 points. Mean score of the mild dementia subgroup was 21.4 ± 1.9 , while the moderate dementia subgroup obtained a lower mean score of 14.3 ± 2.4 points.

Of all 32 patients, 31 had neuropsychiatric symptoms. Eight patients (25.8%) had only one symptom, 12 (38.7%) had 2 symptoms, and 11 (35.5%) had 3 or more symptoms. NPI showed a mean value of 3.9 ± 2.6 points. Mean score of the mild dementia subgroup was 3.1 ± 1.8 , while the moderate dementia subgroup obtained a mean score of 5.6 ± 3.0 points. With the lowering of MMSE score, NPI score was found to increase. A moderate correlation was established ($r = -0.57$).

Caregiver distress caused by neuropsychiatric symptoms showed a mean value of 2.9 ± 1.9 points. Mean score of the mild dementia subgroup was 2.5 ± 1.7 , while the moderate dementia subgroup obtained a mean score of 3.8 ± 1.9 points.

There was a positive correlation between distress and NPI score ($r = 0.8$).

No significant differences were observed regarding MMSE, NPI and distress between men and women.

The most frequent neuropsychiatric symptoms in the examined cohort were apathy, anxiety, depression, agitation. (Fig. 2).

Fig.2. Distribution of neuropsychiatric symptoms in patients

The heaviest caregiver distress was caused by agitation, anxiety and apathy.

DISCUSSION

Our results for frequency and severity of neuropsychiatric symptoms in Alzheimer’s disease, vascular dementia and mixed dementia are consistent with data available in the literature. A similar conformity was observed in the tendency for positive correlations between dementia severity and NPI score, as well as between NPI score and distress score in caregivers of patients with dementia. (1,2,5,6)

Literature data suggesting the existence of characteristic patterns of neuropsychiatric symptoms in different dementias cannot be discussed at this stage because of the insufficient relative share of patients with other dementias, compared to those with Alzheimer’s disease in the present study.

CONCLUSION

Neuropsychiatric symptoms are complex phenomena, due to neurobiological alterations in specific areas of the central nervous system, whose appearance is probably favored by genetic susceptibility and influenced by external factors. Though they are not specific for dementias, they are common and may have a major impact on disease course and prognosis.

Neuropsychiatric symptoms often displace cognitive disturbances as a leading cause for distress in caregivers and relatives living with demented patients. They play an important role when time comes to take the decision whether to institutionalize the patient or not.

The importance and the frequency of neuropsychiatric symptoms, as well as the availability of adequate therapeutic options, underline the necessity for focused assessment in patients with cognitive disturbances and dementia, aiming at optimization of care for these patients and their caregivers' quality of life.

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