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Conference Abstract

The monitoring of elderly people with dementia: a "primary care" model of the Local Authority for Health of Modena

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Abstract

Introduction: In the province of Modena an agreement between the Local Authority for Health (Azienda Sanitaria Locale, ASL) of Modena and the General Practitioners (GPs) is in force since 2002. It consists of a protocol for integrated care of people with dementia (PWD) and their families between GPs and the Specialist centres for cognitive disorders, divided into two stages: 1) Taking charge of the patient by the GP (module A) ; 2) Follow-up care management, with annual reporting by the GP to the ASL by means of a pre-set paper module (module B) containing besides patients' demographic characteristics, clinical and therapeutic data. The objective of this project is to monitor the condition of both the patient and the family in order to promptly alert the social services and the network of integrated health and social services in the attempt to delay and/or prevent hospitalisations and/or inappropriate institutionalisation of PWD.

Aim: To verify the appropriateness of the 2013 compilation of Modules B by GPs in the Health District of Mirandola relative to some variables considered important not only for more epidemiological reasons (prevalence of three levels of cognitive impairment: "mild cognitive impairment" [MCI]; "definite cognitive decline" [DCD]; "cognitive decline with depression" [CDDep+]), but also for the care solutions to be offered to the families on the basis of the progression of dementia (improved-stable-worsened) and the families' endurance in taking care for PWD at home (satisfactory-difficult-unmanageable).

Methods: In addition to a descriptive analysis of data of patients, we computed the frequency of the three types of diagnosis of cognitive impairment and the three levels of GPs' judgement on their clients' disease progression and on the family's endurance in home care. Mean MMSE, IADL and BADL scores were calculated. Categorisation of these scores was done as follows: grading of dementia severity with MMSE: absent (≥ 27); mild (26-21), moderate (20-15); moderate-to-severe (14-10); severe (9-3); very severe (2-0); functional disability was considered absent-to-mild for an IADL scale score between 8-5 for females and between 5-4 for males; and for a BADL score between 4-6, moderate disability: IADL score between 4-1 for females, and between 3-1 for males; BADL: score between 3-1; severe disability: for both IADL and BADL: a score of zero points. Data were analysed with SPSS (version Windows 21) and values of $p < 0.05$ were considered statistically significant.

Results: The mean age (\pm SD) of 722 registered patients is 84 (± 6.9) years (range: 41-101), of which 505 are females (69.9%) who are significantly 2.35 years older compared to male patients ($F(1,720) = 15.54, p < 0.0001$). In 10 cases (1.4%) a diagnosis of cognitive impairment is missing. The prevalence of MCI, DCD and CDDep+ is equal to 27% ($n = 195$), 51.7% ($n = 372$) and 20.1% ($n = 145$), respectively. The mean scores (\pm SD) MMSE obtained by these three subgroups are clinically compatible with their diagnosis: MCI: 21.69 (± 3.78); DCD: 12.71 (± 6.55); CDDep+: 21.19 (± 3.81). However, the categorisation of dementia severity based on the MMSE scores highlights some inconsistency. For example, 35.6% of the patients with MCI show a MMSE score < 20 . This inconsistency is also apparent from a MANCOVA with the MMSE as the dependent variable and the presence or absence of MCI and six levels of severity of cognitive impairment as independent variables, adjusted for age and sex, where only the grading of dementia was significant ($F(1.5) = 755.15, p < 0.0001$), regardless of the presence or absence of MCI ($F(1,4) = 2.02, p = 0.090$). While taking into account the finding that patients' loss of autonomy in daily activities not only depends on dementia-related cognitive decline, a similar profile also appears from a comparison of the categorised IADL and BADL scores within the MCI subgroup. For example, only 47.8% of female and 54.9% of male patients with MCI show preserved or only slight impaired daily skills. Again, a MANCOVA confirms that the differences in mean IADL and BADL scores depend more on the degree of cognitive impairment measured with MMSE (IADL: $F(1,5) = 7.839, p < 0.0001$; BADL: $F(1,5) = 10.777, p < 0.0001$) than the presence or absence of a MCI per se (IADL: $F(1,4) = 1.595, p = 0.175$; ADL: $F(1,4) = 0.529, p = 0.714$). In 19 cases (2.6%) a GP's opinion on the course of the disease and in 59 cases (8.3%) on the family's sustainability are missing. Only 29 patients (4.1%) are defined as "improved", 281 patients as "worsened" (40%) and 393 patients as "stable" (55.9%). The families' endurance in home care is considered "satisfactory" in 663 cases (88.1%), "difficult" in 59 cases (8.9%) and "unmanageable" in 20 families (3%). These judgments appear reliable in light of statistically significant differences of three indicators of disease severity (MMSE, IADL, ADL) among the three subgroups of patients classified in function of the disease progression and their families' endurance in taking care for them at home. For example, a MANCOVA with MMSE, ADL and IADL scores as dependent variables and the three types of the GPs' judgement on the disease progression, adjusted for age, sex, and treatment with cholinesterase inhibitors (ChEIs) or Memantine, antipsychotics and antidepressants, shows a highly significant inter-group difference both globally ($F(6,898) = 7.621, p < 0.0001$) and singularly (MMSE: $F(1,7) = 19.37, p < 0.0001$; IADL: $F(1,7) = 12.567, p < 0.0001$; BADL: $F(1,7) = 14.293, p < 0.0001$) with age and use of antipsychotics as significant co-variables (data not shown). Indeed, 51.5% of the patients taking antipsychotics belong to the "worsened" subgroup. An identical result is obtained for the family's sustainability in home care where this time also the use of ChEIs or Memantine is a significant co-variate, but only for the MMSE ($F(1,7) = 9.3, p = 0.002$). The latter result is in accordance with the finding that 90% of the patients treated with ChEIs or Memantine belong to the subgroup whose family's endurance is considered "satisfactory."

Conclusions: Modules B provide valuable data either for epidemiological reasons or for programming different care intervention tailored to the needs of patients and their families. When asked, however, to GPs to express a clinical and more technical opinion on the stage of their clients' dementia, a substantial number of PWD is classified as "mild" while their clinical picture clearly favours a "definite" stage of disease as indexed by the MMSE and IADL/BADL functional scales. However, these errors in dementia grading are offset by a more reliable judgment on the disease progression and on the family's resistance in maintaining the patient at home which,

though being more general and thus less technical, are important and effective indicators in guiding the GP in his choice of interventions to support the family and the patient.

Keywords

dementia; primary care; integrated care model

PowerPoint presentation

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