Are medically unexplained symptoms and functional disorders predictive for the illness course?
A two-year follow-up on patients' health and health care utilisation

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ABSTRACT

Objective: To investigate whether the general practitioners' (GP) diagnosis of medically unexplained symptoms (MUS) and/or the diagnosis functional disorders (FD) can predict the patients' 2-year outcome in relation to physical and mental health and health care utilisation. Furthermore, to identify relevant clinical factors which may help the GP predict the patient's outcome.
Method: The study included 38 GPs and 1785 consecutive patients who presented a new health problem. The GPs completed a questionnaire on diagnosis for each patient. Patients completed the Common Mental Disorder Questionnaire (CMDQ) and the SF-36 questionnaire at baseline and after 24 months. A stratified sample of 701 patients was diagnosed with a psychiatric research interview. Data on health cost was obtained from national registers.
Results: A FD diagnosis following the research interview was associated with a decline in physical health (OR 3.27(95%CI 1.84–5.81)), but this was not the case with MUS diagnosed by the GP. MUS was associated with a poor outcome on mental health (OR 2.16 (95%CI 1.07–4.31)). More than 4 symptoms were associated with a poor outcome on physical health (OR 5.35 (95%CI 2.28–12.56)) and on mental health (OR 2.17(95%CI 1.02–4.59)). Neither FD nor MUS were associated with higher total health care use. However, FD (OR 2.31 (95%CI 1.24–4.31)) and MUS (OR 1.98(95%CI 1.04–3.75)) was associated with increased cost in primary care.
Conclusion: Our current diagnoses of MUS show limitations in their prediction of the patients' illness course. Although, the ICD-10 diagnoses of functional disorders was not developed for the primary care setting, our results indicate that some of its elements would be useful to bring in when rethinking the diagnosis for MUS in primary care, elements that are easily obtainable for the GP in a normal consultation. Our results may contribute to the construction of a more useful diagnostic for these patients in primary care.

Introduction

Many patients experience physical symptoms without any demonstrable pathology and not explained by any conventionally defined disease. We name such symptoms medically unexplained symptoms (MUS). Primary care sees a high prevalence of MUS (about 10% of all consultations) [1–3] and provides care for the majority of patients with MUS (about 96%) [4]. Failure to recognise and treat these conditions may have serious consequences for the patients.

The concept of MUS is very broad and covers symptoms from mild cases, hard to distinguish from normal reactions, to the very ill and disabled patients. Therefore MUS is best seen as a spectrum of severity from self-limiting to chronic conditions [5].

The present classification of MUS is ambiguous and controversial [6]. At the moment there are no diagnostic criteria for MUS in primary care [7], and a large group of patients encountered in primary care is not included in the current diagnostic framework.

In the ICD-10 the definition of somatoform disorders (F.45) is based on number of symptoms, duration, number of organ systems, and the exclusion of organic disease. The diagnosis only includes illness of at least 6 months duration. In primary care this duration and thus the diagnosis implies chronicity and does not include the large number of acute or moderate conditions seen here.

The illness course for patients with MUS is poorly investigated. Studies of the illness course and self-reported health of patients with MUS mainly focus on patients at the more severe end of the spectrum, usually chronic patients with symptoms lasting more than two years. 30–50% of patients with somatoform disorders will still have persisting symptoms after 2 years [8–11]. A study of

multisomatoform disorders showed, that 25% still fulfil the criteria after 5 years [12]. Patients with functional disorders report lower physical and mental health than patients with chronic physical illnesses and the general population [5,9,12,13]. Furthermore, somatising patients are high users of the health care system [14–18]. Possible factors that may predict the outcome for patients with functional disorders have not been investigated in detail. A study by Schilte et al. showed, that low social support and persisting problems, such as unemployment, family problems etc., were associated with a poor outcome after one year, with regard to physical and mental health, medication, and sick leave [19]. Carson et al. found, that a low score on the physical subscale (PF) of the SF-36 was associated with a poor recovery [20].

Comparing the GP's diagnosis of MUS with the psychiatric diagnosis of functional disorder (FD), and extracting some of the most important information from the diagnosis of FD could bring us closer to a diagnostic framework for MUS in primary care.

In this article the term functional disorders (FD) is used for the diagnoses based on the ICD-10 criteria covering F.44–48 according to a standardised psychiatric research interview, and the term MUS is used for the GP's diagnosis.

The primary objective of this study is to investigate whether MUS and/or the ICD-10 diagnosis of FD can predict the 2-year outcome with respect to self-rated physical and mental health and health care utilisation. Furthermore, we aimed to identify clinical relevant factors that can aid the GP's prediction of patient outcome.

Methods

The methodological approach is a 24-months follow-up study with questionnaires and register data on 1785 consecutive patients in primary care.

Participants

The study was performed in Århus County, Denmark. Århus County has a population of approximately 600,000 people living in a mixed rural and metropolitan area. The county is served by 431 GPs working in 271 practices. All GPs in Århus County were invited to participate in a randomised trial on recognition and treatment of functional disorders in primary care that evaluated an educational programme and diagnostic feedback (the FIP-study) [3,20]. Thirty-eight GPs (8.8%) working in 28 practices accepted [3] (Fig. 1).

The GPs included consecutive patients aged 18–65 years, who consulted for new health problems during a 3-week period (Spring 2000). Only patients enrolled in the National Health Care Programme, which covers more than 98% of the Danish population, were included. Patients who did not speak or read Danish, as well as patients too ill or demented to read and fill in questionnaires were excluded.

Baseline measures

Before the consultation the patients filled in questionnaires including SF-36 [21] assessing health status and disability and the Common Mental Disorder Questionnaire (CMDQ), including the Symptom Check List (SCL-8) for mental disorders, the SCL Somatisation Subscale (SCL-SOM) for somatic symptoms, the Whitely index (Whitely-7) for illness worry and CAGE for alcohol abuse and dependency [20]. After the consultation, patients answered questionnaires on socio-demographics.

The psychiatric research interview

A stratified sample including every ninth eligible patient and all patients with a high score on the CMDQ was selected for a semi-structured standardised psychiatric interview (SCAN) [22]. High score

was defined as the number of dichotomised sum scores on SCL-SOM>3, or Whitely-7>1, or SCL-8>1, or CAGE>1. Each item was dichotomised between 'a little' and 'moderately'. Six trained physicians, certified at the Copenhagen WHO-SCAN Training Centre, conducted the interviews. The interviewers were free to extract information from all hospital and outpatients admissions, but they were blinded to the GPs' records and the patients' and GPs' responses to questionnaires.

From the SCAN-interviews we generated ICD-10 diagnoses. The ICD-10 diagnosis of somatoform disorders (F45) and related disorders (F44 and F48.0) were categorised as *FD*.

The GP's rating

The GP filled in a questionnaire immediately after each consultation with an included patient. The questionnaire included diagnostic and prognostic information for the problem presented in the consultation, duration ($+/-6$ months) and information about any chronic diseases, physical or mental ($+/-12$ months). The questionnaire had been tested in a pilot study. The GP was asked to rate the patients primary complaint in the consultation as either "*well-defined physical disease*" (n=1009), "*probably well-defined physical disease*" (n=395), "*medically unexplained symptoms*" (n=229), "*mental disorder with physical symptoms*" (n=95) or "*no physical symptoms*" (n=39). The group with "*No physical symptoms*" were excluded and the remainder were dichotomised into *physical disease* (well-defined physical disease and probably well-defined physical disease) and *Medically Unexplained Symptoms* (medically unexplained symptoms and mental disorders with physical symptoms).

Follow-up measures

We followed the patients 24 months after the index consultation. The patients received questionnaires by mail after 3, 12 and 24 months and we obtained register data on health care cost during the 24 months follow up in addition to a three-year period before inclusion.

Self rated health

From the SF-36 we used the Physical Component Scale (PCS) and the Mental Component Scale (MCS) [24]. Poor outcome was set in proportion to the Danish mean norm data. A poor outcome on the SF-36 after 24 months was defined as patients with PCS/MCS-score 1.96 standard errors of measurement under the Danish mean norm data, adjusted for age and gender.

Health care utilisation

Denmark has a public health care system, which covers 98% of the Danish population, it is tax financed and most medical care is free. The patients are listed with one practice only and the GP acts as a gatekeeper to the secondary health care system. Each person has a personal registration number used for all contacts with the health care system. Data were obtained from the Danish Public Health Register by use of this number. We obtained data on health care cost in Danish Kroners (DDK), for a period of two years after and three years before the inclusion. The National Health Service registers in Aarhus County provided information about the expenses to reimbursement of GPs, primary care specialists and medicine. Cost of hospital admissions were calculated by DRG (Diagnose Related Group) pricing office of the Danish National Board of Health. Prices were fixed in 2004 prices. Psychiatric hospital prices were calculated from average 2004 fixed prices for hospital bed days and outpatient contacts with aid from the economic administration of Psychiatric Hospitals in Aarhus, as DRG prices were not available.