DIABETIC PATIENTS WITH MULTIMORBIDITY IN FAMILY PRACTICE

“Care for patient, not only for each disease”

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SUMMARY

Multimorbidity is usually defined as coexistence of two or more long-term chronic diseases in an individual. General practice office is a common place where patients with multimorbidity are received and treated. More than half of patients with diabetes mellitus are patients with multimorbidity. The strategy of family physician care for patients with multimorbidity insists on the specific process, which is patient oriented and not only towards one disease. Family physicians make decisions on the process of care for the patient with multimorbidity on the basis of records of the status of multimorbidity (all coexistent diseases), known comorbidity status (complications of diabetes), identification of acute episodes, diagnostic and therapeutic possibilities, and functional status.

Treatment of patients with diabetes and multimorbidity poses specific demands in prescribing medication (patients use a large number of drugs in several daily doses), giving advice about self-management and improving understanding of medications, and referrals and diagnostic procedures.

INTRODUCTION

Due to improvements in medical care and growing average age of the population, ever more patients have multiple chronic diseases. Multimorbidity is usually defined as coexistence of two or more long-term chronic diseases in an individual. However, the complexity of multimorbidity exceeds this simple definition.

General practice (GP) office is a common place where patients with multimorbidity are received and treated. It is the place where their problems are mainly solved, and also where further treatment is coordinated and integrated in the health care system (1-4). The complexity of multimorbidity in primary care practices is under-represented in the research literature (5-7).
More than half of patients with diabetes mellitus have two or more additional conditions (8-11). Papers from 2002 to 2012 both in Croatian and in English have been searched using the following key words: multimorbidity, family practice, diabetes mellitus, and consultations. After initial screening, most articles were excluded (papers in other languages, secondary publications, inappropriate methodology) and selected those meeting our inclusion criteria (family practice and chronic-chronic conditions, diabetes mellitus and multimorbidity, process of care of patients with diabetes mellitus in family practice). The evaluated articles were divided into three groups according to key areas of the research:

1) epidemiology, setting of care and impact of multimorbidity on health care systems: 24 articles;
2) clinical characteristics of patients with diabetes mellitus and multimorbidity: 13 articles; and
3) visits, process of care and improvement in supporting people with multimorbidity and diabetes mellitus: 15 articles.

CASE REPORT

This case report is presented to illustrate the complexity of care for diabetic patients with multimorbidity. Treating patients with multimorbidity demands competences in several areas:

- recognizing the problem,
- estimating the problem severity, and
- solving the problem.

A 55-year-old woman, single, high school, retired, presented to her GP office in the afternoon. She had 4 chronic diseases:

- Alcoholismus chronica with dementia psychoorganica
- Laesio hepatitis aethylica
- Diabetes mellitus with complications: retinopathy, polyneuropathia sensomotorica distalis diabetica and toxica
- Epilepsia

The patient used 5 different drugs in 2-3 daily doses, including insulin application 2 times per day. Diabetes mellitus type 2 detected 10 years before, in the past 5 years treated with insulin. Former smoker, body mass index 24; waist circumference 72; blood pressure 152/88 mm Hg. Latest laboratory results: HbA1c 7.8%; cholesterol 5.6; HDL 0.9; LDL 4.4; triglycerides 4.2; creatinine 102; ALT 74; alkaline phosphatase 88; total bilirubin 45; K 4.1; Na 139. She had retinopathy grade 3: flame-shaped hemorrhages and cotton wool exudates. The last laser therapy of retina was six months before.

The patient was at risk of developing esophageal hemorrhage, acute hyper/hypoglycemia, delirium, worsening of retinopathy, and of sustaining acute injuries. Predetermined aims of treatment included stopping alcohol abuse, better glycemic control, and intensive treatment of retinal damage. Life expectancy was reduced because of unfavorable lifestyle and therapy noncompliance (12-14).

The process of consultation for patients with multimorbidity should not be oriented to the patient presentation of problems or the problems that are the reason for patient visit. Which problems the doctor and the patient will solve on that consultation depends on several factors (5,7,17,19,20).

Reasons for encounter, presenting symptoms

The patient came with acute psychomotor agitation: “... you are not able to take care of me and my diabetes... my blood glucose is low now... and again becomes higher... I’ve been coughing for three weeks... with blood in sputum... you prescribed me the medicine, but it is not getting better... I need referral to an ophthalmologist and diabetologist... for glycemia check (she presents the documentation on glycemic check)... I have just remembered, I sleep poorly... If you can give me medicine... I feel tired... because of the warm weather... and because I put on eight kilos during the last year... look at my legs, my shins have edema... I know it’s because of the warm weather...”

Doctor: When did you take insulin, when did you eat?
Patient: I don’t remember...
Doctor: What color is the sputum?
Patient: It is normal, white...
Clinical examination

Blood glucose was 3.9 mmol/L, blood pressure 160/95 mm Hg. She had normal breath sound. Glycemic profile was poor in the last 4 weeks, with hypoglycemia and hyperglycemia. There were no regular peaks of hypo/hyperglycemia.

Processes of care in consultation

Family physicians make decisions on the process of care for the patient with multimorbidity on the basis of:

- history (records) of the status of multimorbidity (all coexistent diseases)
- known comorbidity status (complications of diabetes and ethylism)
- identification of acute episodes of chronic diseases (delirium)
- functional disorder (cognitive and functional impairment)
- possibility of consultations and hospitalization

We gave her infusion of glucose and benzodiazepine i.m. to correct her acute status of hypoglycemia and acute psychomotor agitation. Hypoglycemia responded to treatment and she was referred to psychiatric department with the working diagnoses:

- Aethylismus chr.
- Delirium
- Laesio hepatis

During hospitalization at psychiatry department, the patient received group cognitive behavioral therapy and medical detoxification therapy. Glycemia status was corrected by self-monitoring during hospital stay.

RESULTS AND DISCUSSION

The prevalence of multimorbidity ranges between 50% and 60% in general population aged 60 years and older. This percentage as well as the number of chronic conditions increase at the age of 70 and over. Furthermore, 25% of patients with multimorbidity have more than 6 chronic conditions (1-3). In 2010, 17.4% of the people in Europe were aged over 65 (17.2% in Croatia). The most frequent conditions which appeared in multimorbidity in the past decade were cardiovascular, musculoskeletal, malignant, psychologic and metabolic diseases. Not only does the number of chronic conditions increase with age, but so does the severity of clinical characteristics of total multimorbidity (2-4).

The primary care practice and the patient homes are central places where patients with multimorbidity are taken care of (6,10). However, a number of other health structures also participate in health care for these patients, i.e. primary, secondary and tertiary health care are also important factors in the overall management of these patients (6-8). Secondary care is not oriented to patients, but is focused on one disease (illness), on one organ or organ system (8,9). Also, most guidelines for treating chronic diseases are given for one disease and for its targets (5,7).

However, in family medicine, good care for patients with multimorbidity implies more than achieving the target of treatment (7-12). Treatment of each disease in patients with multimorbidity is specific (individual) for each patient. On the other hand, current reimbursement structures encourage separate measuring the outcomes for each disease (12,13). It is essential to point out that patients with diabetes mellitus are patients with multimorbidity.

Treatment of people with diabetes mellitus and other chronic conditions such as cardiovascular, malignant and/or musculoskeletal diseases, or patients with diabetes and depression, etc. is a complex situation commonly encountered in family practice (9,13).

Multimorbidity usually causes emotional and psychological distress, fear from social isolation and death and socioeconomic deprivation, which affects health-related quality of life (13,14). Patients with diabetes mellitus and coexisting diseases usually have somatic, functional and mental impairments like loss of vision, diabetic foot, diabetic polyneuropathy, and dementia. On the other hand, there are a lot of people with diabetes mellitus living well with multimorbidity without impairments and they do not require additional intervention (3,9,10,14).

Patients with multimorbidity and diabetes mellitus who are treated according to the guidelines use a large number of drugs in several daily doses. This number of
drugs increases the risk of adverse drug events, noncompliance with the prescribed medications, as well as diverse outcomes such as malnutrition or functional impairment. Therefore, treatment of patients with diabetes and multimorbidity needs specific concerns in prescribing medications (14,15). For example, application of insulin requires cognitive, visual, and motor competence of patients (9-14).

Recent studies have shown (qualitative researches) that in family medicine inadequate attention has been paid to “deprescribing medication” to patients with multimorbidity. The total number of prescribed medications to patients with multimorbidity is smaller than the sum of “single” therapies (16). Family doctors would welcome the guidelines for dealing with prescribing therapy for patients with multimorbidity.

“Deprescribing” preventive medication is seen as a difficult problem by family doctors because they are aware that these patients might not benefit from additional therapy (3,8,14,16). “Deprescribing” preventive medication and not giving advice on lifestyle modification is quite common for cardiovascular disease and diabetes mellitus in elderly people with multimorbidity (17,18).

A patient may receive lower quality treatment for one of the coexisting chronic diseases if the main disease (a disease which is the main reason for presenting to the doctor and for which diagnostic and therapeutic procedures are performed at that moment), according to clinical status and perception of the patient, is predominant (e.g., treatment of a malignant disease or/and psychosis in relation to diabetes mellitus) (10-13).

Patient with multimorbidity visits their doctor because of a “disease episode”. Disease episode is defined as a health problem from its first presentation by the patient to the doctor until the last encounter for it. A disease episode can be an acute complication of a chronic disease, e.g., hypoglycemia, hyperglycemia, or diabetic coma (19,20).

Treating disease episodes in patients with coexisting health problems is related to additional medical procedures (e.g., prescriptions, referrals and hospitalizations). Care of patients with multimorbidity demands specific approach by family physicians, which includes a predetermined plan of care in accordance with the national standard of care (diagnostic and therapeutic possibilities), and which is adapted to individual patients. Duration of consultations and processes of care are oriented to the patient clinical condition. Family physician follows and adjusts guidelines for different diseases (8).

Visits of patients with diabetes mellitus are similar to those of patients with other chronic diseases. However, in some ways the number of visits, their duration and contents (processes of care) are different. In order to achieve optimal standard of care, patients with diabetes are “frequent attenders” to family physicians, laboratory and specialists. In transitional medicine, the number of visits is growing to a deviant proportion (21). Also, these visits take the longest time for giving advice about self-management and improving understanding of medications. Most prescriptions, referrals and diagnostic procedures are performed as those for other chronic diseases. Telephone consultations about current problems are frequent. In these situations, patients do not request diagnostic or therapeutic procedures, but advice or information on the problems perceived (14,18).

Family physician treats diabetes with multimorbidity both at patient home and at some institution (old people’s homes). These are usually patients with physical impairment or severe clinical status (3).

Bayliss and Morris emphasize two key components for enhanced treating of patients with diabetes and other chronic diseases: communication between patients and clinicians, and continuity of care (6,10).

**CONCLUSION**

Patients with diabetes mellitus are patients with multimorbidity. The primary care practice and patient homes are central places where patients with multimorbidity are provided due care. In family medicine, there is a great need for promotion and improvement of the specific process of care for
patients with multimorbidity whose number is expected to grow. Priorities for improvement have been set:
- clear roles and tasks of family physicians,
- recording of medical documentation: health problems, episode of care, medication, reasons for encounter, diagnostic procedures,
- IT data transfer among all levels of health professionals (primary and secondary), and
- encouraging patients for self-care (5,17,19,22-26).

REFERENCES


12. Braithwaite RS, Fiellin D, Justice AC. The payoff time: a flexible framework to help clinicians decide when patients with comorbid disease are not likely to benefit from practice guidelines. Med Care 2009;47:610-617.


