

Case Report

Case Report of Multiple Physical Illnesses in Persons with Serious Mental Illness: Can't Recovery in Mental Health Pave the Way to Recovery in Physical Health and/or Conversely?

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Abstract

People with serious mental illness (SMI: schizophrenia, schizotypal disorder and delusional disorder, as defined in Chapter 5 of the International Classification of Diseases) have significantly higher medical comorbidities and a much lower life expectancy compared with the general population. In fact, an excess mortality rate due to a chronic physical illness (CPI), among these patients, is such that their life expectancy could be lessened by up to 20 years. Of great concern is that this inequitable risk of premature death has been increasing in recent decades, even in countries with universal healthcare systems like the UK or Canada. Studies have shown that even when accepted for the treatment of a CPI, patients with SMI are less likely to have comprehensive reviews. There is also a greater delay for medical and surgical interventions when compared to the general population. To address this problem, a pilot study was undertaken in East-end Montreal, Canada. This paper reports the combinations of CPIs among SMI patients (N=142). Managing CPIs is more complex when combined with mental illness, even more so when they are multiple. A range of health professionals who work with patients is needed to promote recovery-oriented self-care behaviors and provide therapeutic education. Although this may exceed psychiatric services per se, it is important for mental health practitioners to acknowledge and keep in mind an overview of CPI management and care pathways for SMI patients who may be particularly at risk of functional deficits and of not having easy access to primary care professionals.

ABBREVIATIONS

CPI: Chronic Physical Illness; IGMA: Interactive Guide for Medical Appointments; SMI: Serious mental illness

INTRODUCTION

Compared with the general population, patients with serious mental illness (SMI: schizophrenia, schizotypal disorder and delusional disorder, as defined in Chapter 5 of the International

Classification of Diseases) have significantly higher medical comorbidities [1]. Mortality from physical illnesses is over 70% higher in psychiatric patients in relation to that of the general population, even after adjusting for demographics, including socio-economic status. Excess mortality rates due to the complication of a chronic physical illness (CPI) in patients with SMI are two or three times higher, corresponding to a 10-25-year reduction in life expectancy [2]. Of great concern is that this inequitable risk of premature death has been increasing

rather than decreasing in recent decades, even in countries with universal healthcare systems like the UK or Canada and even though professionals know this is true.

Studies have shown that even when accepted for the treatment and management of a chronic physical condition, patients with SMI are less likely to have comprehensive reviews. There is also a greater delay for medical and surgical interventions when compared to the general population [3]. The possible explanations for this disparity include: unhealthy habits (i.e. smoking; lack of exercise); side-effects of psychotropic medication; delays in the detection or initial presentation of a symptom leading to a more advanced disease at diagnosis; and inequity of access to services partly due to a lack of thorough investigation and poor communication skills [4,5]. Indeed, difficult communication, social distance and the overall poor quality of interactions between health care providers and persons with a lower socioeconomic status have been identified as barriers to healthcare for disadvantaged populations in the province of Quebec, Canada [6] and elsewhere [7]. This often applies to people with SMI and is aggravated when the patient is agitated or uncooperative. It can then be difficult to obtain a reliable medical history and makes it harder to conduct a proper examination. Problems with attention and concentration can further harm understanding of the doctor's explanation and affect adherence to treatment. Also, there still is a stigma surrounding mental illness, often worsened when patients present with a psychotropic drug list, an extensive medical history, or are known to pay frequent visits to medical services or the emergency departments. The over attribution of symptoms to an underlying SMI condition, resulting in missed diagnoses and the improper management of conditions, is known as diagnostic overshadowing [8,9]. The term was introduced in 1982 by Heiss, Levithan and Szyszko [10] to refer to this tendency for clinicians to attribute symptoms or behaviours of a person with a learning disability to their underlying cognitive deficits and hence to under-diagnose the presence of co-morbid somatic pathology, resulting in more advanced pathologies when they become evident.

CASE PRESENTATION

To address the diagnostic overshadowing phenomenon, which is especially problematic among patients with SMI because they have higher rates of morbidity and shorter life spans than the general population, a pilot study was undertaken in East-end Montreal, Canada. This patient-driven strategy for patient-oriented research was developed in close partnership with a health and social services local authority responsible for the health of the population of a territory with about 100,000 inhabitants. This case report describes the physical health status of study participants with SMI, more precisely their SMI-CPIs comorbidities.

SMI affects around 0.3–0.7% of people at some point in their life [11]. Therefore, for a population of 100,000 inhabitants, approximately 500 persons could be affected by SMI at any time. As per the research protocol that was approved by the Institutional Review Board of *Institut universitaire en santé mentale de Montréal*, the Archives Department provided a list of 467 patients with SMI who live in the East-end Montreal sector covered by the local health and social services centre, according

to their postal codes. From those who were contacted by phone, 142 patients participated and completed the Interactive Guide for Medical Appointments (IGMA) between September 2014 and January 2015. This 30% participation rate was almost the same as for Mojtabai et al. for a study on a similar topic [12]. Among these participants, 34% were females and 66% were males. The mean age was 52.7 years old with a standard deviation of 14.8 years.

The IGMA was developed through a series of iterations, and field notes were taken to observe and document this patient-driven participatory R&D process [13]. A psychiatrist (one of the investigators) and a General Practitioner (member of the Advisory Board) were asked to independently select among 150 questions. These were gathered by a patient who is also a physician and scientific officer of the University of Recovery, which is a peer-run agency of service users who came together as a private non-profit organization to promote their experiential knowledge and lived experience for improving healthcare from a patients' and service users' perspective [14]. She used her combined patient-and-physician experience and went back to classic textbooks of medical education [15,16] for this wide range of clinical issues and questions that would ideally be recommended to cover for a comprehensive medical history of patients. From the initial 150 questions the psychiatrist and the General Practitioner independently identified those conditions that seemed to them to be the most important to be documented in an individual medical record of any patient with SMI. They selected about 50 questions each, of which 30 were common to both the psychiatrist and the General Practitioner. After discussion with the Advisory Board, 3 more questions were added. The 33-item electronic form produces an individualized profile of medical history which is printable on a single sheet to be shown by the patient at the time of the medical appointment with a primary care provider. The IGMA questions can be answered on a binary scale (yes-no questions). Yes-no questions are typically used by medical staff when they ask patients to fill out questionnaires in waiting rooms [17].

RESULTS

Table (1) presents the aggregated results ($N=142$) for seven CPIs covered by the IGMA in comparison with the overall population of Montreal, as reported by Statistics Canada (the other IGMA questions are about health behaviours, not diagnoses). Participants were asked if they had ever been diagnosed with each of those CPIs. The prevalence of a CPI for these SMI patients ranges from two-fold for asthma (1.9) to six-fold for diabetes (6.2). To add to this complex portrayal, as shown in Table (2), less than 1/3 of study participants declared that they had not been diagnosed with any CPI, meaning that, most of the time, SMI comes with a CPI, which is consistent with the literature. The underlying causes of this intricacy between SMI and CPI are not yet fully known nor always acknowledged and such a task might be further complicated with the fact that CPIs also come often in combination with other CPIs, as shown in Table (3).

DISCUSSION

Diabetes represents a significant medical illness among individuals with schizophrenia [18]. The prevalence of diabetes

Table 1: Chronic physical illnesses among patients with Serious Mental Illness compared to the general population of Montreal.

Diagnosis	A) East-end Montreal SMI Patients (X/142)	B) Montreal population	Ratio A / B
Asthma	18.3% (26)	9.7%	X 1.9
Bronchitis / emphysema	17.6% (25)	3.8%	X 4.6
Cancer	11.3% (16)	4.3%	X 2.6
Diabetes	35.9% (51)	5.8%	X 6.2
Heart disease	17.6% (25)	4.1%	X 4.3
High blood pressure	28.9% (41)	14.8%	X 2
Thyroid malfunction	14.8% (21)	6.3%	X 2.4

Table 2: Comorbidities of chronic physical illnesses among patients with Serious Mental Illness in East-end Montreal.

Serious Mental Illness (N=142)	100%
+ 0 Chronic Physical Illness	31.7%
+ 1 Chronic Physical Illness	26.8%
+ 2 Chronic Physical Illnesses	23.9%
+ 3 Chronic Physical Illnesses	7.7%
+ 4 Chronic Physical Illnesses	4.2%
+ 5 Chronic Physical Illnesses	4.9%

Table 3: Chronic physical illness combinations among patients with Serious Mental Illness in East-end Montreal.

Diagnosis	Asthma	Bronchitis / emphysema	Cancer	Diabetes	Heart disease	High blood pressure	Thyroid malfunction
Asthma	100%	65%	15%	38%	23%	38%	15%
Bronchitis/ emphysema	68%	100%	20%	44%	28%	52%	20%
Cancer	25%	31%	100%	38%	50%	63%	31%
Diabetes	20%	22%	12%	100%	27%	37%	18%
Heart disease	24%	28%	32%	56%	100%	64%	28%
High blood pressure	24%	32%	24%	46%	39%	100%	20%
Thyroid malfunction	19%	24%	24%	43%	33%	38%	100%

is usually increased 2- to 3-fold in patients with schizophrenia [19]. Yet, as per Table (1), it is for diabetes that the relative difference for the occurrence of a CPI between study participants compared to the rest of the Montreal population is the most important; more than six-fold. In effect, the association between schizophrenia and diabetes has been known at least since 1879 [20]. It can be explained by potential cellular and genetic links [21,22] or physical inactivity, poor diet, and cigarette smoking [23,24]. Social health determinants, such as income, housing and gender [25] can also contribute, while the uptake of psychotropic medication is particularly associated with Type 2 diabetes [26]. As the life expectancy of inhabitants of East-end Montreal is globally almost 11 years shorter than for wealthier inhabitants of West-end Montreal [27], these social determinants are at stake as to why the prevalence of diabetes is so high among East-end Montreal SMI patients. In fact, this is also the case for each and every CPI reported in Table (1).

The relative contribution of the abovementioned factors underlying the association between diabetes and schizophrenia is only partially known, but it is likely that they all contribute [28]. This already complex relationship can be even more complex in terms of implications for practice with the addition of other CPIs among people with SMI. Table (2) shows that more than 2/3 (68.3%) of study participants with a diagnosis of SMI declared that they have also been diagnosed with at least one CPI.

About 1/4 of study participants had two CPIs or more, and Table (3) depicts these combinations of multiple CPIs. For example, 68% of participants who declared that they have asthma also declared that they have a diagnosis of chronic bronchitis or emphysema (highest ratio) and 12% who declared that they are diabetics also declared that they once were diagnosed with cancer (lowest ratio). It is 37% of SMI patients who declared having been diagnosed with diabetes who also reported having been diagnosed with hypertension, whereas 46% of participants who reported having been diagnosed with hypertension were also diagnosed with diabetes (Table 3).

Indeed, diabetes and hypertension frequently occur together, as there is substantial overlap between diabetes and hypertension in etiology and disease mechanisms [29]. Obesity, inflammation, oxidative stress, and insulin resistance are thought to be the common pathways. Similarly, thyroid dysfunction is relatively common in patients with schizophrenia, possibly related to a genetic linkage of the disorders and to antipsychotic treatment [30]. And since the thyroid gland plays a central role in the regulation of metabolism, thyroid dysfunction is common in diabetic patients and can produce significant metabolic disturbances [31]. Thus, 43% of study participants with diabetes have also thyroid malfunction.

Table (3) shows that 65% of SMI patients who declared

having been diagnosed with asthma have also been diagnosed with bronchitis or emphysema, while 18% of those with a thyroid malfunction also have diabetes. Given the commonalities of these inflammatory lung diseases, this relation is not surprising. Bronchitis symptoms may in fact be similar to and contribute to asthma, and asthma can develop into 'asthmatic bronchitis'. With regards to cancer, in their cohort study, González-Pérez and colleagues found that asthma was not associated with an increased risk of cancer. In fact, the risk of non-smoking related cancer was slightly reduced. However, they observed a slightly-elevated risk of lung cancer among asthmatic patients [32]. Patients diagnosed with diabetes are generally at increased risk for asthma [33,34].

Among SMI patients who also have or have had cancer (11.3%), Table (1), it is with asthma that cancer comes the least in combination (25%) with any other CPI. Finally, given that high blood pressure is the number one risk factor for stroke and a major risk factor for heart disease [35], it is not surprising to observe that 64% of SMI patients with heart disease also declared a diagnosis of high blood pressure.

In brief, all the CPIs that are discussed in this case report on the health status of a population of patients with SMI are interacting and are thus making management of CPIs very complex. Knowing the common causes and disease mechanisms of these interactions should allow a more effective and proactive approach in their prevention and treatment. Nevertheless, treating schizophrenic symptoms alone will not improve life expectancy in terms of better management of CPIs.

Not only are persons with a chronic physical illness more at risk to experience mental disorders, but persons with SMIs are more at risk of not receiving the care they need to stay in good physical health. Many studies have shown that good health status can be achieved through the practice of a healthier lifestyle and behaviors [36]. For instance, healthy diet and regular physical activity are associated with low incidences of cardiovascular diseases and diabetes [37], while positive thinking is also known to have beneficial effects on both mental and physical health [38].

Physical activity thus plays an important protective role in relation to all CPIs and also in terms of mental health [39]. Enhancement of primary care services for such disadvantaged populations is essential to reducing health and health care inequities [40]. There is now a growing argument that emphasizes the interconnectedness of health dimensions [41], with one dimension affecting the state of another; hence, there is a need for motivational support and therapeutic education for the promotion of lifestyle changes. To that end, partnership and collaboration between physical and mental health service providers for a recovery-oriented model of shared care provided in the community by professionals of various backgrounds working in synchronicity to offer complementary services and mutual support, is jointly recommended by the Canadian Psychiatric Association and the College of Family Physicians of Canada [42]. This case report reaffirms the relevance of such a recommendation, but with an additional focus on social determinants of health. This implies a continuous dialogue with the community, its elected representatives and a participatory public health approach which ought to be inclusive of patients

themselves, as promoted under the recovery paradigm [43].

In mental health, being in recovery is not to be confused with being cured [44]. Recovery does not necessarily refer to the process of complete recovery in the way that one may fully recover from a physical health problem. Recovery is more about staying in control of one's life despite experiencing an enduring mental health problem, be it a Serious Mental Illness like schizophrenia. As it has often been advocated that there is no health without mental health, based on this case report we argue that the reverse might also be true: there would be no mental health without physical health. We suggest that the idea of transposing mental health recovery principles and values to physical health is worthy of being explored in terms of living a fulfilling life with an enduring chronic physical illness, maybe even more especially so when in combination with a mental health problem.

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