

ORIGINAL PAPER

Co-Morbid Physical Illness among Long-Stay Patients in a Psychiatric Institution

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Abstract

About 60% of people with mental illness developed co-morbid medical and physical illness that invariably worsens their lives. However, most of the studies regarding this issue were done either in the out-patient or community settings, ignoring long stay inpatients. Locally, no data exists among long stay patients in psychiatric institutions. The aim of this retrospective study was to look at the prevalence of physical illness among long-stay patients and to compare the occurrence of physical illness before and after admission to the psychiatric institution. We found that 85 (63.4%) out of 134 subjects there was suffering with co-morbid physical and medical illnesses. There were 33 (24.6%) subjects with hyperlipidaemia, 22 (16.4%) subjects with hypertension and 17 (12.7%) subjects with diabetes. Approximately 75 (55.9%) subjects developed medical illness after admission. In conclusion, long-stay psychiatric patients are at a high risk of developing medical problems that tends to begin after admission to the psychiatric institution.

Keywords: Co-morbidity, physical illness, long-stay patients, institution

Introduction

Having a psychiatric diagnosis is still considered a major burden in life. In addition to dealing with stigma regarding mental illness, persons with severe mental illness have an added risk of having co-morbid medical illnesses that can further impair their already turbulent life. The importance of detecting co-morbid medical illnesses is to ensure a complete approach to treatment. About 15 years ago, it was established that 60 percent of individuals with mental illness develop serious medical co-morbidities that result in a lost life span of 15 to 20 years compared to the general population¹. However, recently,

even more alarming evidence indicates the risk for lost years of life has accelerated to 25 years earlier than the general population². These medical problems may be due to the mental illness itself as well as the adverse effects of the medications used in the treatments^{3,4}. It is frequently said that 30-40% of persons with schizophrenia died due to suicide and injury. Medical co-morbidities such as cardiovascular disease, respiratory disease, diabetes and infectious disease would further contribute to their shortened life-span.

Rates of circulatory disease, metabolic conditions including diabetes, obesity, hyperlipidemia, osteoporosis, chronic

pulmonary disease, HIV-related illnesses, polydipsia, and epilepsy are found to be consistently elevated in individuals with medical diagnosis⁸. However, among these medical co-morbidities is the set of disorders known as metabolic syndrome that has since come to prominence since the increased popularity of atypical anti-psychotics.

Most of the studies regarding medical and physical co-morbidities in psychiatric patients were done either in the out-patient settings or in the community settings, especially those patients receiving community psychiatric services. Those that were done in the in-patient settings were mostly related to the mortality aspect of the co-morbid medical illness in psychiatric patients. Hence, there is inadequate data about medical and physical co-morbidities among persons with severe mental illness that have been hospitalized for a long period of time especially in the mental institution. This is true at least in Malaysia where there are four psychiatric institutions. Long-stay patients in these psychiatric institutions who have co-morbid medical illness may be predisposed to higher risk of several physical and psychological problems in the ward itself, such as impaired mobility with risk of falling and co-morbid psychiatric problems such as anxiety and depression due to the co-morbid medical problems. These medical illnesses would increase the cost of treatment as the affected patients will need extra investigations and treatments for their medical problems, beside the ongoing cost of the treatments of their primary psychiatric problems. More man power is also needed in the nursing and care of these patients thus further increasing the cost of the healthcare.

As there is lack of data regarding co-morbid physical illness in long-stay patients, this study was carried out. The primary aim of this study was to look at

psychiatric illness⁵⁻⁷. For instance, it has been estimated that 50% of patients with schizophrenia have another the prevalence of physical illness among long-stay patients and to compare the occurrence of physical illness before and after admission to Hospital Bahagia Ulu Kinta, Perak. This study also aimed to look at the effects of physical exercise, weight and use of anti-psychotics as factors that can contribute to the development of physical illness during admission.

Methods

This study was done in Hospital Bahagia Ulu Kinta, Perak, the largest of the four psychiatric institutions in Malaysia. The subjects for this study were from the psychogeriatric wards of the hospital. The reasons for the long stay ranges from total family rejection and lack of community and social support to the effects of institutionalization such as lost of social skills.

This was a retrospective study using Patient Case Record (PCR) to get the necessary information like demographic details and clinical history. Universal sampling was used in this study where patients with odd registration numbers and whose hospital's stay were 10 years or more were recruited. The decision to take only patients staying for 10 years or more was made because there was no definite definition for long-stay patients.

All psychiatric diagnoses, including dementia were taken into account. The psychiatric diagnoses were categorized as following: (i) Psychoses (ii) Depression (iii) Bipolar disorders (iv) Dementia and (v) Mental retardation. Subjects were accorded into the categories based on their primary psychiatric diagnosis. Medical and physical problems were categorized as following: (i) Diabetes (ii) Hyperlipidaemia (iii) Hypertension (iv) Chronic pulmonary disease (v) Infectious

disease (vi) Hepatobiliary disease (vii) Cardiovascular disease, and (viii) Stroke. and treated by the primary psychiatric team in-charge of the patient. The diagnoses were made based on history, physical examination, laboratory test and previous medical records.

Results

A total of 134 subjects were involved, comprising of 75 (56%) males and 59

The psychiatric and medical diagnoses were taken as those diagnosed (44%) females. There were 29 (21.6%) Malays, 91 (67.9%) Chinese and 14 (10.4%) Indian subjects. About 51 (38.1%) them were in the age group of 60-69 years old, followed by 39 (29.1%) in the 70-79 years old age group, as seen in Figure 1. Majority of them (37.3%) has been staying there between 10-19 years, as illustrated in Figure 2.

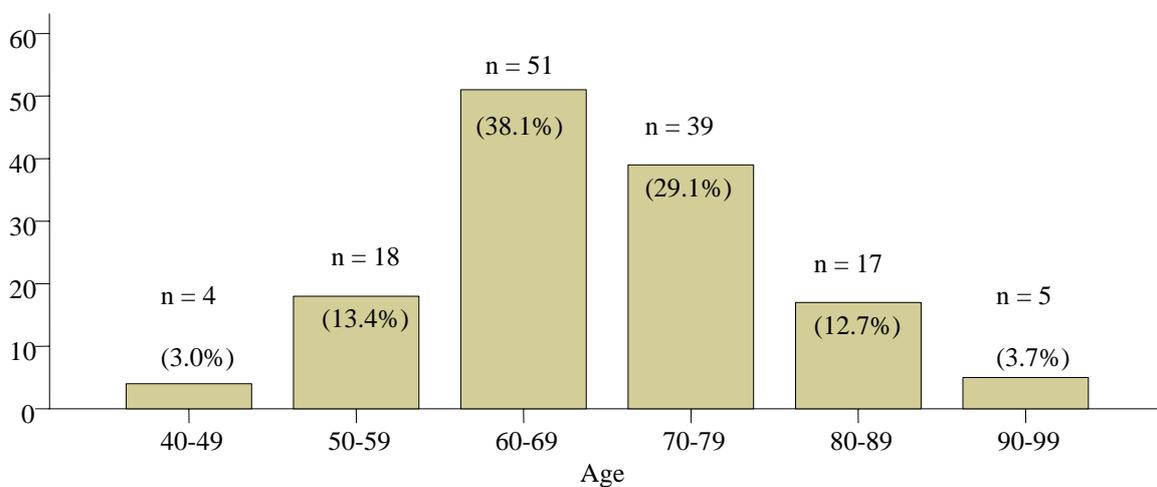


Figure 1: Age Groups of Subjects

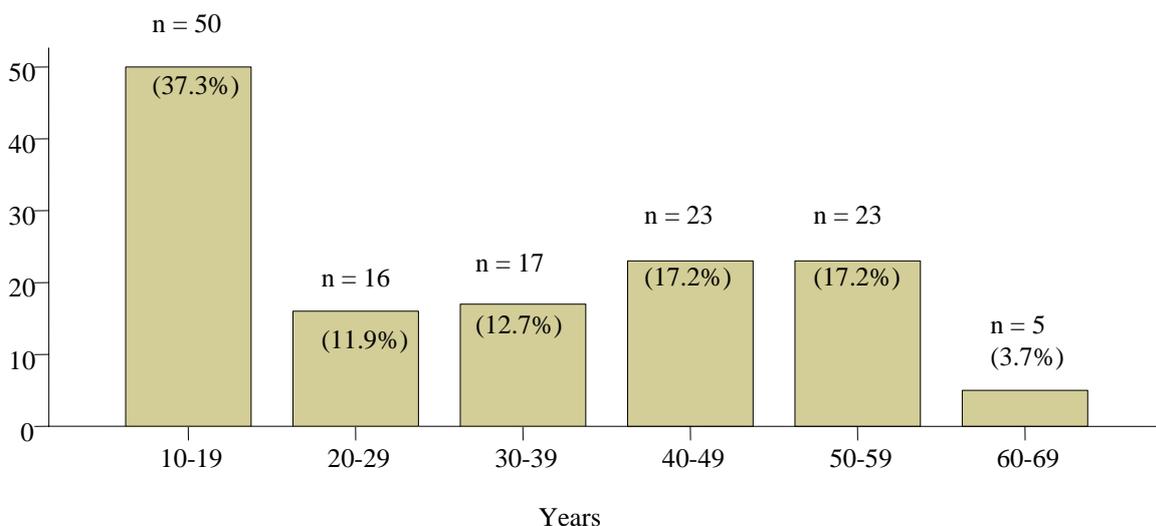


Figure 2: Duration of Stay of Subjects

There were only three psychiatric diagnoses obtained in 134 subjects in this study, where 123 (91.8%) of subjects were diagnosed as having schizophrenia. The rest comprised 1 patient with dementia and 10 with mental retardation.

A total of 85 subjects (63.4%) were diagnosed as having co-morbid medical

and physical illness. There were 33 (24.6%) subjects with hyperlipidaemia followed by 22 (16.4%) subjects with hypertension and 17 (12.7%) subjects with diabetes. The others were infectious disease, cardiovascular disease, chronic pulmonary disease and stroke, as illustrated in Figure 3.

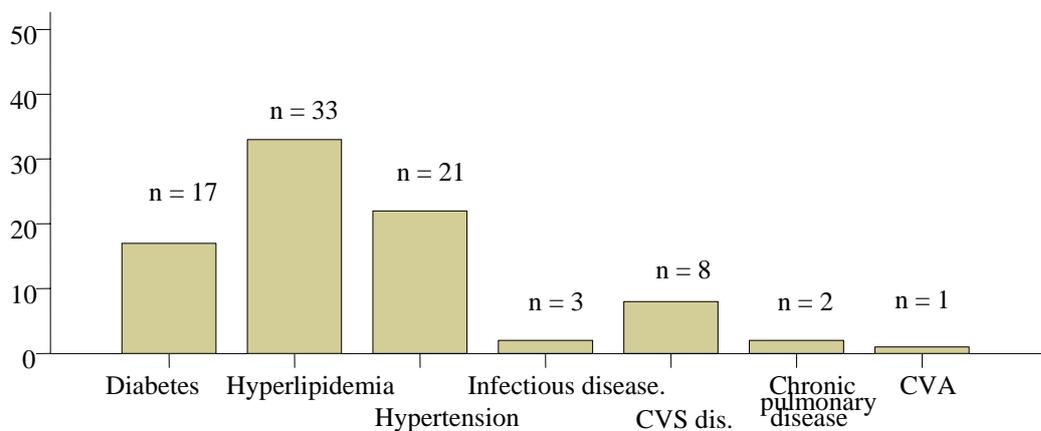


Figure 3: Medical Diagnosis Among Subjects

There were 10 (7.5%) subjects who already have co-morbid medical illness prior to admission, while about 75 (55.9%) of the subjects developed co-morbid medical illness after admission to the ward. A total of 49 (36.6%) subjects continued to be free from any co-morbid medical or physical illness after admission. There was a significant difference between onset of medical illness before and after admission ($p < 0.001$) with 33 (24.6%) of them developing hyperlipidaemia, 18 (13.4%) having hypertension and 14 (10.4%) having diabetes.

In the study, there were 69 patients on typical anti-psychotics, while only 25 patients were on atypical anti-psychotics. We failed to get any significant association

between the use of atypical anti-psychotics and the onset of medical problems. Of those 25 patients taking atypical anti-psychotics, 11 of them have medical or physical co-morbidities.

Only 34 (25.4%) patients were involved in the exercise activities in the ward. However, there was no correlation between physical exercise and the onset of medical illness after admission.

The data for either weight on admission and current weight was unfortunately not complete. As only about 10% of subjects had reliable recording of weight on admission, we could not do analysis on the body weight.

Discussion

There continue to be on-going interests regarding the occurrence of medical and physical illness among psychiatric patients. Numerous studies have been done with regards to the occurrence of medical illness in specific psychiatric diagnosis. Kilbourne⁹ found high rates of hypertension, hyperlipidaemia and Hepatitis C (HCV) infection among those diagnosed with bipolar disorder. Many more studies concentrate on the occurrence of medical illness in schizophrenia. This can be expected due to the on-going debates about the effects of second generation anti-psychotics (SGAs) in causing metabolic syndrome in schizophrenia patients.

However, as mentioned earlier in the introduction, most of the studies were done in the acute hospital settings or in the communities. Much is not known regarding the occurrence of medical and physical illness in psychiatric institutions and long-term facilities. This might be because of the deinstitutionalization process whereby more resources are being channelled to the community set-up.

This study mainly looked at the occurrence of medical and physical illness among long-stay patients in the largest psychiatric institution in Malaysia. Due to the lack of corresponding findings from other studies, the authors were unable to compare some of our results. However, we tried to compare our findings with the Malaysian data available to us. In our study, we have found that three of the commonest medical co-morbidities to be hyperlipidaemia, hypertension and diabetes mellitus. These three medical problems are well-known risk factors of cardiovascular disease (CVD), particularly coronary heart disease (CHD) that is the leading cause of medically-certified death in Malaysia¹⁰. It may be the commonest cause of death in

psychiatric institution, but this need another study to look at it. Other risk factors include smoking and family history of pre-mature CHD. Glucose intolerance, either impaired glucose tolerance or diabetes mellitus, together with hypertension and dyslipidaemia constitute what we commonly called metabolic syndrome. We found that only 8 (6%) of our samples had suffered from hyperlipidaemia and hypertension. Apart from these, the other medical co-morbidities are infectious diseases, chronic pulmonary disease and stroke. The commonest infectious diseases found are those patients suffering from leprosy and tuberculosis that was already treated. The most common chronic pulmonary diseases are chronic obstructive pulmonary disease (COPD) and bronchial asthma. We only found 1 patient who had a history of stroke while being admitted in the long stay ward.

According to the 3rd National Health and Morbidity Survey¹¹, the prevalence of hypercholesterolemia among Malaysian residents aged 18 and above was 20.6%. From our study, we found that 24.6% of our samples were suffering from hyperlipidaemia. Although direct comparison of this data was not done, it should be noted that nearly a quarter of our sample suffers from this condition. This could be due to a larger number of our samples comprising those from the age of 60 to 79 as hyperlipidaemia is associated with older age¹¹.

About 16.4% of our samples suffer from hypertension. Fagiolini et al.¹² reported a much higher percentage of 39% in a group of 171 patients with bipolar disorder suffering from hypertension. This can be explained by the more stringent criteria for the diagnosis of hypertension in their study, whereby we only took directly the diagnosis of hypertension as given by the treating teams of the patients. In Malaysia,

the prevalence of hypertension was 32.2% for those aged 18 and above¹¹. The prevalence jumped to 42.6% for those aged 30 and above¹¹.

According to the 3rd National Health and Morbidity Survey¹¹, the overall prevalence of diabetes mellitus among Malaysian adults aged 30 and above was 11.6%. We found that 12.7% of our samples were diagnosed with diabetes mellitus. In comparison, Holt and Peveler¹³ reported that diabetes occurs in approximately 15% of people with schizophrenia.

We had found that there was a significant difference between the onset of medical illness before and after admission to the psychiatric institution. However, we did not look out for any relationship between this and the causes. From our opinion, there can be a lot of factors for the high onset of co-morbid medical illness after admission to the long-stay wards of the psychiatric institution. This can range from the type of diets given, effects of the pharmacological agents given to the patients and frequencies of physical activities in the wards.

This study was a simple attempt to grossly gauge the occurrence of co-morbid medical and physical illness in the study population. Due to time limitation, this short and simple study has several limitations and disadvantages. The samples in this study were taken only from the psycho-geriatric wards of Hospital Bahagia Ulu Kinta. There might be patients who have stayed for years in the institution but were placed in the farm wards for rehabilitation. There were also long-stay patients in the forensic wards. Those patients who were staying in the psycho-geriatric wards were mostly those who already unable to participate actively in physical rehabilitation programmes like gardening.

The choice to include only patients staying for 10 years or more was up to the authors. Several studies which we looked-at even took patients who just been in the psychiatric institution for a year as long-stay patients. Limitation arises because there is always a risk of developing co-morbid medical and physical illness even before a year of staying in long-stay facilities.

This study was a retrospective study by looking into patients' case records to obtain the necessary information. The psychiatric and medical diagnoses were those established by the treating teams and the authors did not attempt to clarify the diagnoses.

The authors were also did not test the proforma developed for this study leading to inadequate questions in the proforma and mistakes in categorizing types of illness. There was also incomplete information from the case notes itself leading to inability to complete all the questions in the proforma. Some of the vital information that was lacking included the current weight, height and waist circumference. The availability of at least the weight and height (and calculated Body Mass Index) on admission and current time can certainly add more value to the study.

In conclusion, we had found that more than half of our samples were having medical and physical co-morbidities. This is alarming because this group is at a high risk for future morbidity in the psychiatric institution and is expected to need long-term medical attention. The high onset of medical problems after admission also points to many possible reasons that have yet to be clarified. Therefore, psychiatric health care workers should always be vigilant and aware that long-stay psychiatric patients are at a high risk for developing medical problems.

Detecting and treating them is of paramount importance for preventing unnecessary suffering and increasing the financial strain on our health care system.

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