

Mini Review

Drug Therapy Problems in Schizophrenic Patients

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Abstract

The term schizophrenia can be derived from the Greek 'schizo' which means splitting and 'phren' which means mind. Schizophrenia affects slightly more males than females. It occurs in all ethnic groups around the world. Symptoms such as hallucinations and delusions usually start between ages 16 and 30. Males tend to experience symptoms a little earlier than females. Most commonly, schizophrenia occurs in late adolescence and early adulthood. Schizophrenia afflicts approximately 1% of the world's population. Drug related problems are of a major concern in health care because of increased cost, morbidity and mortality. Drug related a problem is correlated with prolonged medication adverse drug reaction, elevated economic burden, and an almost 2-fold enhanced risk of death. Adverse drug reaction is characterized as the drug product causes an undesirable reaction; a safer drug product is required due to risk factors, the drug product causes an allergic reaction and the drug product is contraindicated due to risk factors. Additional drug therapy can be defined as the additional drug therapy is required to treat or prevent a medical condition in the patient. Antipsychotic poly pharmacy is defined as two or more combination of antipsychotic drugs prescribed at the same time.

Keywords

- Drug therapy problems
- Pharmaceutical care
- Schizophrenia

INTRODUCTION

Schizophrenia is defined as a chronic psychiatric disorder with a heterogeneous genetic and neurobiological background that influences early brain development and is expressed as a combination of psychotic symptoms such as hallucinations, delusions and disorganization and motivational and cognitive dysfunctions [1,2]. The term schizophrenia can be derived from the Greek 'schizo' which means splitting and 'phren' which means mind with the term first coined by Eugen Bleuler in 1908, schizophrenia is a functional psychotic disorder described by the presence of delusional beliefs, hallucinations, and disturbances in thought, perception, and behavior [3]. Traditionally, symptoms have divided into two main categories such as positive symptoms which include hallucinations, delusions, and formal thought disorders, and negative symptoms such as anhedonia, poverty of speech, and lack of motivation. The diagnosis of schizophrenia is clinical; made exclusively after obtaining a full psychiatric history and excluding other causes of psychosis [4]. Risk factors are maternal influenza in pregnancy, family history, social isolation, cannabis use, minority ethnicity, and urbanization. Despite a low prevalence, schizophrenia's global burden of disease is immense. Over half of the patients have significant co-morbidities, both psychiatric and medical, making it one of the leading causes of disability worldwide. The diagnosis correlates with a 20% reduction in life expectancy, with up to 40% of deaths attributed to suicide [5,6]. Schizophrenia affects slightly more males than females. It occurs in all ethnic groups around the world. Symptoms such as hallucinations and delusions usually start between ages 16 and 30. Males tend to

experience symptoms a little earlier than females [7]. Most commonly, schizophrenia occurs in late adolescence and early adulthood [8]. Schizophrenia afflicts approximately 1% of the world's population. The disorder is described by disturbances of perception, thought, and volition, with significant impairment in social and occupational functioning [9]. Pharmaceutical care, delineated as "the stipulation responsible of medication therapeutic for the intention of performing determinate consequences that ameliorate patient's quality of life", has been applicable in multitudinous distinctive clinical parcel to manipulate and meliorate treatment consequences using a follow-up strategy [10]. Problems correlated with drug use are many and involves inappropriate medication prescribing, discrepancies between prescribed and actual regimens, poor adherence, drug interactions, inappropriate use, patients monitoring and inadequate surveillance for adverse effects etc. Drug related problems are of a major concern in health care because of increased cost, morbidity and mortality. Drug related a problem is correlated with prolonged medication adverse drug reaction, elevated economic burden, and an almost 2-fold enhanced risk of death. In 1990 when drug therapy problem investigated, drug related problems was described and assessed depending on indication, effectiveness, safety, and adherence. The purpose of assessing drug related problems is to ameliorate an individual patient's quality of life by lowering medication-related problems and optimizing therapeutic outcome [11,12]. The pharmaceutical care practitioner is responsible for identifying drug therapy problems which helps the patient to achieve treatment intentions and get the best possible out comes from

drug therapy. Unfortunately, even in some developed nations, the responsibility of clinical pharmacists in mental health on drug related problems is also under-utilized. Patients with schizophrenia are at elevated risk of metabolic and other cardiac risk factors, and most antipsychotic drugs also enhance the risk of weight gain and metabolic syndrome for example the well-known atypical anti-psychotic clozapine can cause fatal agranulocytosis that requires immediate medical attention which is age and gender correlated. Thus, before treating patients with clozapine, clinicians must consider patients with a clozapine monitoring system and if the patient has a white blood cell count below 2,000 cells per mm³ or a granulocyte count below 1,000 cells per mm³, clozapine must be switched. So it is significant for psychiatrists to be aware of cardio metabolic risks in their patients so that appropriate lifestyle and pharmacologic interventions can be planned. In most low and middle income countries mental health services, especially, specialized mental health care are not easily accessible and there are limitation for treatment utilization for people with schizophrenic disorders [13,14].

According to a prospective cross sectional study done by Bereda et al among schizophrenic patients in psychiatric ambulatory clinic of Mettu Karl Referral Hospital, South Western, Ethiopia shown that from the total 117 study subjects, 96(82.1%) of the respondents were ≥25 years. The overall incidence of drug therapy problem among schizophrenic patients in psychiatric ambulatory clinic follow up was 45(38.5%). Among seven types of drug therapy problem, 11(24.4%) of the study subjects were unnecessary drug therapy followed 9(20%) of participants had in-compliance. Rural residency, duration of schizophrenia treatment 6-10 years, frequency of attending follow up appointment in every 2 month, patients who had comorbidities, and patients who had taken haloperidol were associated factors of the outcome drug therapy problems [15,16]. Antipsychotic poly pharmacy is defined as two or more combination of antipsychotic drugs prescribed at the same time [17]. Some terms commonly used in the above paragraphs defined in turn below. Wrong drug can be defined as the drug product is not being effective or sub optimal efficacy at producing the desired response in the patient, the dosage form of the drug product is inappropriate [18]. Adverse drug reaction is characterized as the drug product causes an undesirable reaction; a safer drug product is required due to risk factors, the drug product causes an allergic reaction and the drug product is contraindicated due to risk factors [19]. Additional drug therapy can be defined as the additional drug therapy is required to treat or prevent a medical condition in the patient [20]. Dose too high is described as the dosage is high, need additional monitoring to determine if dosage is too high, the dosing frequency is too short, the duration of drug therapy is too long [21]. Unnecessary drug therapy is characterized as multiple drug products are being used for a condition that requires only single drug therapy [22]. Dose too low can be defined as the dosage is low to produce the desired response in the patient, the dosing frequency is long and the duration of drug therapy is short [23].

CONCLUSION

Schizophrenia is defined as a chronic psychiatric disorder with a heterogeneous genetic and neurobiological background

that influences early brain development and is expressed as a combination of psychotic symptoms such as hallucinations, delusions and disorganization and motivational and cognitive dysfunctions. The pharmaceutical care practitioner is responsible for identifying drug therapy problems which helps the patient to achieve treatment intentions and get the best possible outcomes from drug therapy. Unfortunately, even in some developed nations, the responsibility of clinical pharmacists in mental health on drug related problems is also under-utilized. Additional drug therapy can be defined as the additional drug therapy is required to treat or prevent a medical condition in the patient. Dose too high is described as the dosage is high, need additional monitoring to determine if dosage is too high, the dosing frequency is too short, the duration of drug therapy is too long.

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DATA SOURCES

Sources searched include Google Scholar, Research Gate, PubMed, NCBI, NDSS, PMID, PMCID, and Cochrane database. Search terms included: drug therapy problems in schizophrenic patients

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