

Effectiveness of Oral Antipsychotic versus Long-Acting-Injectable Antipsychotics: A Comparison of Suicidality, Relapse, and Recidivism

Abstract: Background: Long acting injectable antipsychotic (LAI) medication has been shown extensively to reduce relapse rates in schizophrenic patients previously treated with oral antipsychotics (OA). This study seeks to determine whether the long acting injectable mechanism, despite the drug-type being administered, is an effective treatment for all mental health (MH) disorders associated with psychosis; and moreover, whether it has the potential to improve patient suicidal ideation and overdose rates. **Methods:** This was a retrospective chart review conducted on all patients being treated for a MH disorder with OA medication at a mid-sized community hospital in Oshawa, Ontario, Canada. Patients who switched from OA to LAI regimens between June 2014 and June 2015 were identified and included in the study. Relapse rates and patient outcomes were measured by a means of hospitalizations (ward admissions and emergency room (ER) visits) due to relapse, suicidal ideation, or intentional drug overdose. Data was collected in the form of frequencies for consecutive one-year periods on OA and LAI medications and then compared using descriptive statistics. **Result**

INTRODUCTION

Patients who suffer from psychiatric disorders associated with psychosis relapse despite treatment with antipsychotic medication (Lafeuille et al., 2013), leading to re-hospitalization (emergency room (ER) visits, and admissions), high healthcare costs, and other poor outcomes (Koczerginski & Arshoff, 2011; Su et al.,

2009). Traditionally, treatment of with oral antipsychotic (OA) medications is effective, despite the evidence for poor, overall patient prognoses (Denham & Adamson, 1971; Velligan et al., 2006; Lindstrom, 1989). Furthermore, patients suffering from psychotic disorders tend to have high suicide rates, especially in patients who repeatedly relapse (Pompili et al., 2017). A multitude of factors must therefore contribute to patient relapse.

Many factors are linked with non-adherence to medication as part of the treatment plan. These include symptoms that interfere

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with therapy, such as hallucinations, poor cognition, lack of insight, social stigma and other factors; furthermore, many patients need assistance to take the medication (Haddad et al., 2014). Many antipsychotic medications have been made available in a long-acting- injectable (LAI) formulation, in which patients are required to receive an appropriate dosage on a specific recurring time-interval (Lafeuille et al., 2013). Medical professionals are then able to assume greater confidence that their patients are adhering to their treatment plans - if they regularly attend appointments scheduled for injection. MH illnesses treated with antipsychotics often pose many obstacles for patients, families and providers to overcome - this solution reduces these challenges, improves patient outcomes and is believed to reduce hospitalization rates.

Previous studies have exhibited a reduction in healthcare resource utilization in schizophrenic patients treated with LAI medication (Lafeuille et al., 2013; Kocerginski & Arshoff, 2011; Su et al., 2009; Davis, 1975; Sena et al., 2003; Olivares et al., 2009; Sheperd et al., 1989). At Lakeridge Health Oshawa (LHO), a mid-sized community hospital in Oshawa, Ontario, Canada, a group of patients with disorders associated with psychosis were switched from OA treatment to LAI regimens, and multiple drug types were included. Mental health (MH)-related ER visits, hospital admissions, reports of patient suicidal ideation and attempts, as well as intentional drug overdose rates were compared before and after switching from an OA to a LAI formulation.

This article investigates the relationship between antipsychotic delivery methods (OA and LAI) with respect to hospitalization rates and suicidal ideation to better determine methods for improving patient prognoses. Specifically, patients were switched from OA to LAI treatment regimens, and to our knowledge, this is first investigation of its kind to examine health services outcomes associated with suicidality in such a population.

METHODS

Study Design

A retrospective chart review was conducted for 92 adult patients (age 18) previously treated with OA medication whose regimens were subsequently switched to LAI monotherapy formulations from June 2014 to June 2015. The primary comparison was the year prior to LAI to the year on LAI. All LAI drugs were included. The study followed a mirror-image model in which hospitalizations were compared in all patients for one year on OA therapy and one year on LAI therapy. Furthermore, efficacy of the treatment methods was also assessed by comparing patient self-reports of suicidal ideation and attempts in patients while on OA and LAI regimens. Approval from the hospital's Research Ethics Board was granted prior to beginning the study.

Health System

Lakeridge Health Oshawa (LHO) is based in Oshawa, Ontario, and is a part of the Lakeridge Health Corporation, which is one of Ontario's largest community hospitals, with 16 sites spanning across the Durham region from Bowmanville to Pickering. The Lakeridge Health Corporation sites provide primary, secondary,

Patient Outcomes

ER visits

The number of patients who visited the ER at least once, for

with various psychiatric disorders when OA treatment plans were replaced with LAI regimens. Hospitalization and suicidality frequencies, as well as the mean patient values for these variables, all decreased after one year on LAI medication relative the OA phase of the study.

Our results are consistent with many similar studies that seek

CONCLUSIONS

This one-year, observational study found that the LAI treatment method for antipsychotic drug administration is superior to the OA treatment method by reducing hospitalizations, as well as rates of suicidal ideation and drug overdose in patients treated at LHO in Oshawa, Ontario, Canada. LAI is underutilized in psychiatric populations and could have significant impact in many patient populations, particularly when combined with other biopsychosocial interventions. Future studies with better methodology and which are longer and expand on non-schizophrenic populations are indicated.

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