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Original article

Baseline results from the European non-interventional Antipsychotic Long acTing injection in schizOphrenia (ALTO) study

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ABSTRACT

Background: The Antipsychotic Long-acTing injection in schizOphrenia (ALTO) study was a non-interventional study across several European countries examining prescription of long-acting injectable (LAI) antipsychotics to identify sociodemographic and clinical characteristics of patients receiving and physicians prescribing LAIs. ALTO was also the first large-scale study in Europe to report on the use of both first- or second-generation antipsychotic (FGA- or SGA-) LAIs.
Methods: Patients with schizophrenia receiving a FGA- or SGA-LAI were enrolled between June 2013 and July 2014 and categorized as incident or prevalent users. Assessments included measures of disease severity, functioning, insight, well-being, attitudes towards antipsychotics, and quality of life.
Results: For the 572 patients, disease severity was generally mild-to-moderate and the majority were unemployed and/or socially withdrawn. 331/572 were prevalent LAI antipsychotic users; of whom 209 were prescribed FGA-LAI. Paliperidone was the most commonly prescribed SGA-LAI (56% of incident users, 21% of prevalent users). 337/572 (58.9%) were considered at risk of non-adherence. Prevalent LAI users had a tendency towards better insight levels (PANSS G12 item). Incident FGA-LAI users had more severe disease, poorer global functioning, lower quality of life, higher rates of non-adherence, and were more likely to have physician-reported lack of insight.
Conclusions: These results indicate a lower pattern of FGA-LAI usage, reserved by prescribers for seemingly more difficult-to-treat patients and those least likely to adhere to oral medication.

1. Introduction

Schizophrenia, typically a chronic mental illness with a high risk of relapse, impairs cognitive and social functioning and can negatively impact on health and quality of life [1–3]. Relapse in people with schizophrenia may lead to hospitalization, reduced social and work-based functioning, increased stigma and higher risk of suicide or homicide [4,5]. Antipsychotics are used for relapse prevention, however non-adherence is a significant barrier [6,7].

Multiple factors can contribute to non-adherence [8] and it is not only difficult to predict, but also difficult to identify and measure [9]. Long-acting injectable (LAI) antipsychotics were developed to improve adherence and reduce the likelihood of treatment cessation [10–12]. A meta-analysis of 16 naturalistic mirror-image studies in patients with schizophrenia found LAI antipsychotics were associated with a significant reduction in hospitalization, or risk of hospitalization than oral antipsychotics [13]. Other registry-based naturalistic studies have shown that in clinical practice, LAIs reduce hospitalizations more effectively than

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oral antipsychotics [14–16]. However, a meta-analysis of randomized controlled trials showed no benefit of LAIs over oral formulations [17]. Differences in methodology between study types may explain these variable results [17,18]. Despite the potential for LAIs to impact positively on adherence and clinical outcomes, prescription rates vary considerably between service providers [19], and often fall below 20% nationally [7].

Appropriate prescribing of LAI antipsychotics is affected by several factors including variable pharmacokinetics [20], delayed resolution of side-effects [7], patient fear of injection, and negative patient and physician attitudes towards LAIs [7,21]. Consequently, LAI antipsychotics are often potentially reserved for patients with a history of relapse and poor compliance to oral medication [7,21–24].

The primary aim of the Antipsychotic Long-acTing injection in schizOphrenia (ALTO) study was to describe utilization of first- and second-generation (FGA- and SGA-) LAI antipsychotic treatments, and the sociodemographic and clinical characteristics of patients with schizophrenia from different countries in Europe, as well as the characteristics of their prescribing physicians. The secondary aim was to identify subgroups of LAI antipsychotic patients with common attributes to ascertain whether the sociodemographic and clinical characteristics of patients receiving FGA- or SGA-LAIs differed.

2. Experimental procedures

2.1. Study design

ALTO was a multi-site, non-interventional study across several European countries investigating LAI antipsychotics usage in inpatients and outpatients with schizophrenia, and included the assessment of patient functioning and insight as recommended by the US Food and Drug Administration and European Medicines Agency [25–27].

ALTO study design is shown in Fig. 1A. The baseline population encompassed 4 LAI user types: FGA- and SGA-LAI incident users and FGA- and SGA-LAI prevalent users. Incident users were defined as patients who started LAI treatment at study baseline (±14 days) with

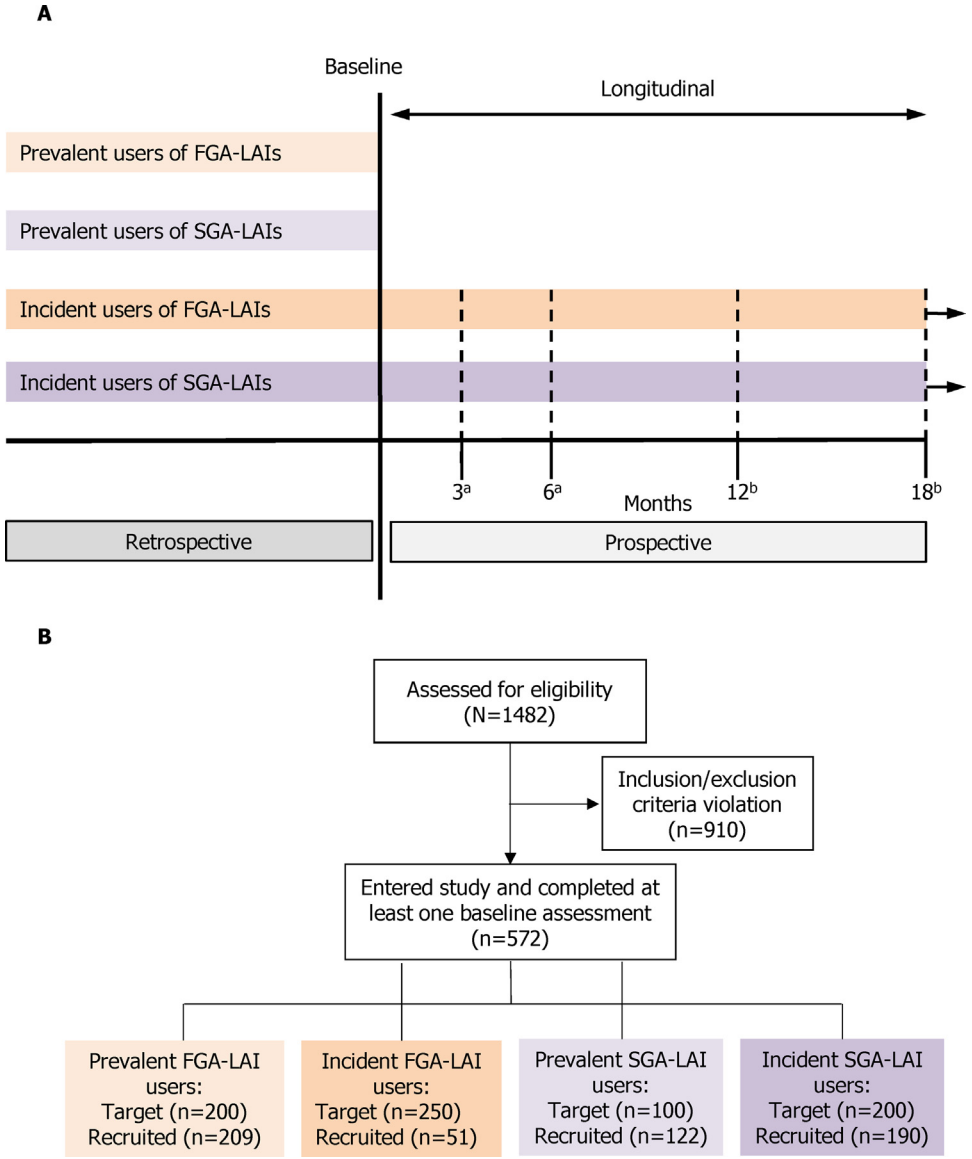

Fig. 1. ALTO Study Design. A – The design of the ALTO study. [a]Time window for the visit at 3 months and 6 is ± 1 month. [b]Time window for the visits at months 12 and 18 is ± 1.5 months. B – Patient flow-diagram for the ALTO study. FGA: first generation antipsychotic, LAI: long-acting injectable, SGA: second generation antipsychotic. All patients were enrolled between 5th July 2013 and 30th June 2014. Enrollment targets were met for prevalent FGA-LAI and prevalent SGA-LAI users but not for incident SGA-LAI users (95% of the target attained) or for incident FGA-LAI users (20% of the target attained).