This report may include approved and non-approved uses, formulations, or treatment regimens. The results reported may not reflect the overall profile of a product. Before prescribing any product mentioned in this report, healthcare professionals should consult local prescribing information for the product approved in their country.

SPONSOR is committed to publicly disclosing all medical research results that are significant to patients, health care providers or payers-whether favorable or unfavorable to the SPONSOR product-in an accurate, objective and balanced manner in order for our customers to make more informed decisions about our products.
Personally identifiable information (PII) within this document is either removed or redacted (i.e., specific content is masked irreversibly from view with a black bar) to protect personal privacy. Personally identifiable information includes:

- All named persons associated with the study
- Patient identifiers within text, tables, or figures
- By-patient data listings

Anonymized patient data may be made available subject to an approved research proposal submitted. Information which is considered intellectual property or company confidential was also redacted.

1.0 ABSTRACT

Title

VPRIV® Non-Interventional Study in Patients Previously Treated with Other Enzyme Replacement Therapies (ERTs)/Substrate Reduction Therapies (SRTs)

Keywords

Velaglucerase alfa, real world, Gaucher disease type 1, enzyme replacement therapies, patient reported outcome

Rationale and Background

Gaucher disease (GD) is an autosomal recessive disorder characterized by mutations in the glucocerebrosidase gene. Gaucher disease is categorized into 3 subtypes (type 1, type 2, and type 3), of which Gaucher disease type 1 (GD1) makes up 94% of cases. Enzyme replacement therapies (ERTs) are the treatment of choice, while substrate reduction therapies (SRTs) are typically reserved for second-line treatment. Velaglucerase alfa (VPRIV) is indicated as a long-term ERT for pediatric and adult patients with GD1 in Canada. Clinical studies have reported VPRIV to be well tolerated and efficacious in patients who transitioned to VPRIV from other ERTs/SRTs. To date, there is limited real world data available on patients switching from one ERT to another, and even less is available regarding the transition from SRTs to ERTs. The purpose of the current study was to augment the limited real world data for patients with GD1 transitioning from ERTs/SRTs to VPRIV treatment.

Research Question and Objectives

What are the safety profiles, treatment patterns, effects on biomarker levels, and impact on patient reported health-related quality of life for patients with GD1 transitioning from other ERTs/SRTs to VPRIV in a routine clinical practice setting in Canada?

Primary Objective

The primary objective was to describe the safety in patients with GD1 transitioning from other ERTs/SRTs to VPRIV across all age groups.

Secondary Objectives

The secondary objectives of the study were to:

- Describe VPRIV treatment dosing and administration patterns for patients with GD1 of all ages transitioning from other ERTs/SRTs
- Describe the effect of treatment change on a novel biomarker for GD1, namely glucosylspingosine (lyso-Gb1)
- Describe the effect of treatment change on the patient reported outcome (PRO) of health-related quality of life (for adults ≥local age of majority)

Study Design

This was a Phase 4, observational, retrospective/prospective, non-controlled, non-comparative study conducted with an observational period of 12 months. Data were collected, where routinely available, at baseline, 1, 3, 6, and 12 months following VPRIV transition.

Setting

Approximately 6 sites were planned to be recruited for participation in this study in Canada. Hospital-or office-based physicians were eligible for participation if they were experienced in the treatment of patients with GD1 and were responsible for the treatment of patients taking VPRIV.

Subjects and Study Size, Including Dropouts

Approximately 12 to 24 patients with GD1 who were transitioning (or had recently transitioned) to VPRIV from other ERTs/SRTs were planned to be consecutively enrolled.

Variables and Data Sources

Information was extracted from patient medical records and recorded in an electronic case report form (eCRF) using an electronic data collection (EDC) platform. Details on demographics, height and weight, medical history, clinical parameters, biomarkers (chitotriosidase, CC-chemokine ligand18 [CCL18], and lyso-Gb1), VPRIV dosing information, anti-drug antibodies, concomitant medications, adverse events (AEs), and GD1 questionnaire (PRO) results were collected.

Results

Two (2) patients were enrolled from one participating study site and completed follow-up before the study was terminated early. Both patients completed the study per the original study protocol (version 1.0, 14 Jan 2019). Key results cannot be presented due to the small sample size (N=2). No AEs were observed in the 2 patients who switched to VPRIV and completed the study.

Discussion

The sample size was too small, and data were not robust to make any conclusions.

Marketing Authorization Holder(s)

Shire Human Genetic Therapies, Inc.*,

300 Shire Way, Lexington, MA 02421 USA

EU:

Takeda Pharmaceuticals International AG Ireland Branch

Block 3 Miesian Plaza
50 – 58 Baggot Street Lower, Dublin 2, Ireland
* Shire is now part of Takeda

Names and Affiliations of Principal Investigators

[redacted], Canada