guardian[™]5: a prospective non-interventional study of the treatment of severe and moderately severe haemophilia A with turoctocog alfa

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Objective

To further investigate, in a real-world setting, the safety and effectiveness of turoctocog alfa in the treatment of patients with severe to moderately severe haemophilia A (FVIII ≤2%).

Introduction

- Turoctocog alfa is a B-domain-truncated recombinant coagulation factor VIII (rFVIII) product developed by Novo Nordisk for the prevention and treatment of bleeding in patients with haemophilia A.
- guardian[™] is an ongoing, multinational clinical activity programme consisting of several trials and studies designed to investigate the pharmacokinetics, safety and effectiveness of turoctocog alfa in the treatment of haemophilia A.
- guardian[™]1 and guardian[™]3 assessed the safety and efficacy of turoctocog alfa in previously treated adults $(\geq 12 \text{ years})$ and children (<12 years), respectively.
- guardian[™]2 is an extension trial of guardian[™]1 and guardian™3.
- guardian[™]4 is investigating turoctocog alfa treatment in previously untreated patients (PUP).
- The EMA guideline stipulates post-marketing studies should be undertaken for rFVIII products to ensure consistency between outcomes in pre-authorisation clinical trial data and routine clinical use.¹
- guardian[™]5 (NCT02035384) is a non-interventional, prospective, post-authorisation safety study (PASS) that has been developed to meet this EMA guideline.¹
- guardian^{M5} further investigates, in a real-world setting, the safety and effectiveness of turoctocog alfa in the treatment of patients with severe to moderately severe haemophilia A (FVIII ≤2%).

Outcomes

The results of this study will provide information on the real-world, long-term safety and effectiveness of turoctocog alfa in routine clinical practice.

Methods

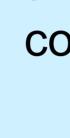
- Patient enrolment for guardian[™]5 began in June 2014 and is ongoing (study design is shown in Figure 1).
- The study aims to screen 80 patients in order to enrol approximately 70 patients from Europe and North America.
- Currently, centres from 13 countries are participating: Austria, France, Germany, Greece, Hungary, Italy, the Netherlands, Slovakia, Slovenia, Spain, Sweden, Switzerland and the US.
- Additional countries within Europe and North America are invited to enrol participants as the study progresses.
- Patients receive turoctocog alfa either as an on-demand therapy or as prophylaxis for the duration of the study; directions for use are at the discretion of the treating physician in accordance with the local label.
- Patients are evaluated until ≥50 patients have reached ≥100 exposure days (EDs), which is expected to take approximately 4 years from first patient first visit.

Inclusion criteria

- Male, previously treated patients (PTP; >150 EDs) with congenital severe or moderately severe haemophilia A (FVIII ≤2%).
- Patients with a history of inhibitors may be enrolled if they have undergone successful immune tolerance induction (ITI).

Exclusion criteria

- Treatment with any investigational drug 30 days prior to enrolment into the study.
- Any contraindications for use as per turoctocog alfa prescribing information or summary of product characteristics.
- Previous participation in the guardian[™] clinical trial programme.

















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■ The guardian[™]5 study began in June 2014 and is enrolling participants from a range of countries in Europe and North America.

Outcomes

■ guardian[™]5 will provide information on the long-term safety and effectiveness of turoctocog alfa when used in routine clinical practice.

■ The primary outcome of guardian[™]5 is the incidence of inhibitors (≥0.6 Bethesda units/ml).

The secondary outcomes include:

- Adverse reactions and serious adverse reactions.
- Haemostatic effect in the treatment of bleeds. assessed by the patient or physician using a four-point scale ('excellent', 'good', 'moderate' or 'none').
- Haemostatic effect during surgical procedures assessed using a four-point scale ('excellent', 'good', 'moderate' or 'none').
- Annualised bleeding rate for prevention and on-demand treatment.

Enrolment is ongoing with data completion for the primary outcome expected in 2018.

Reference

1. European Medicines Agency 2011. EMA/CHMP/BPWP/144533/2009.

Conflict of interest disclosure

IM, LK, SK, HG and IK are employees of Novo Nordisk.

Key patient inclusion criteria are shown in dark blue; turoctocog alfa treatment options are shown in grey; study exposure is shown in light blue; outcomes are shown in bright blue. *Patients are treated with commercially available turoctocog alfa, according to the label, as prescribed by the treating physician in daily clinical practice. ABR, annualised bleeding rate; BU, Bethesda units; EDs, exposure days; PTP, previously treated patients.

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≥50 patients ≥100 EDs

Patients^{*}

haemophilia A (FVIII ≤2%)

• PTP FVIII >150 EDs

Severe or moderately severe

On-demand

treatment with

turoctocog alfa*

Primary outcome Incidence of inhibitors (≥0.6 BU/ml)

Secondary outcomes

Adverse reactions

Figure 1 guardian[™]5 study design

Prophylaxis

with

turoctocog alfa*

- Haemostatic effect on treatment of bleeds
- Haemostatic effect of turoctocog alfa during surgery
- ABR for prevention and on-demand treatment