Observational, non-interventional, multicenter study of adverse events in hemodialysis patients receiving ESA (erythropoiesis-stimulating agents) originators or biosimilars (ESAVIEW -View on erythropoiesis-stimulating agents)

First published: 29/05/2014

Last updated: 01/04/2024

Study Finalised

Administrative details

EU PAS number

EUPAS5711

Study ID

27994

DARWIN EU® study

No

Study countries

Italy

Study description

Background: Erythropoietin is a growth factor that primarily stimulates red cell production and it is produced by the kidneys. When there is a chronic renal failure, the erythropoietin’s production is not sufficient for the growth of red blood cells and these patients develop anemia. ESAs are administered to anaemic patients. Epoetin alfa has been the first representative of ESA. The patient of epoetin alfa was expired in 2004 and in this year EMA approved two biosimilars of epoetina alfa. These drugs are produced by recombinant DNA technology and the major preoccupation is the immunogenicity. For the complexity of the production process it is necessary a pharmacovigilance’s activity. The study estimates the incidence of adverse event (AE) that happen in patients making hemodialysis and taking ESA. Objectives: The main objective is the safety profile of ESAs: originators and biosimilars. The secondary objectives are the effectiveness and the cost-effectiveness of ESA (originators and biosimilars). Methods: It’s an observational study and the prescription drugs in question are part of the normal clinical practice. The originators observed are Eprex®, Neorecormon®, Aranesp® and Mircera®. The biosimilars are Binocrit® and Retacrit®. The study is conducted in these regions: Veneto (center coordinator), Calabria, Liguria, Molise and Sardinia. Each region has one or more monitors. Inclusion criteria are: 1) patients who do the dialysis at least two times a week, 2) patients receiving ESAs, 3) patients older than 18 years. Esclusion criteria are: patients who are not able to read and sign the informed consent. Criteria for the exit during the study are: 1) patients who are transplanted, 2) patients who switch to peritoneal dialysis. Monitors have to register on a electronic Case Report Form: patient data, drug therapy and specific laboratory tests and adverse event. Results: we are working on and results will be published as soon as available.

Study status

Finalised

Research institutions and networks

Institutions

Pharmacology Unit - Veneto Pharmacovigilance Centre (Pharmacol UNIVR), University Hospital Verona

Italy

First published: 25/10/2022

Last updated: 13/03/2025

Institution | **Educational Institution** | **Hospital/Clinic/Other health care facility** | **ENCePP partner**

15 Dialysis centre Veneto Region, 3 Dialysis centre Sardinia Region, 4 Dialysis centre Molise Region, 1 Dialysis centre Liguria Region, 1 Dialysis centre Calabria Region

Contact details

Study institution contact

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Study contact

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Primary lead investigator

Moretti Ugo

Primary lead investigator

Study timelines

Date when funding contract was signed

Planned: 01/01/2011

Actual: 01/01/2011

Study start date

Planned: 01/09/2013

Actual: 01/10/2013

Data analysis start date

Planned: 01/01/2015

Actual: 06/10/2017

Date of final study report

Planned: 31/12/2015

Actual: 20/07/2018

Sources of funding

- Other

More details on funding

AIFA_ Italian Medines Agency

Regulatory

Was the study required by a regulatory body?

No

Is the study required by a Risk Management Plan (RMP)?

Not applicable

Methodological aspects

Study type

Study type list

Study topic:

Disease /health condition

Human medicinal product

Study type:

Non-interventional study

Scope of the study:

Assessment of risk minimisation measure implementation or effectiveness

Drug utilisation

Effectiveness study (incl. comparative)

Data collection methods:

Primary data collection

Main study objective:

The main objective is the safety profile of ESAs: originators and biosimilars. The secondary objectives are the effectiveness and the cost-effectiveness of ESA (originators and biosimilars).

Study Design

Non-interventional study design

Cohort

Study drug and medical condition

Anatomical Therapeutic Chemical (ATC) code

(B03XA01) erythropoietin

erythropoietin

(B03XA02) darbepoetin alfa

darbepoetin alfa

Medical condition to be studied

Dialysis

Population studied

Short description of the study population

All adult (≥ 18 years) chronic kidney disease (CKD) outpatients undergoing hemodialysis at least twice a week and who were treated with epoetins as per the clinical practice of the participating hospitals. The study population comprised both prevalent users (patients already on ESAs before inclusion in the study) and incident users (patients starting the use of ESA at inclusion).

Age groups

Adults (18 to < 46 years)

Adults (46 to < 65 years)

Adults (65 to < 75 years)

Adults (75 to < 85 years)

Adults (85 years and over)

Special population of interest

Renal impaired

Estimated number of subjects

1600

Study design details

Outcomes

Adverse events to ESAs (originators vs biosimilars), Utilization and effectiveness of ESAs (originators vs biosimilars)

Data analysis plan

For each variable and for each endpoint a statistic description with a confidence intervals at 95% will be produced. The primary endpoint will be synthesized by specific indicators such as the cumulative incidence in each cohort, the

incidence rate and the incidence patients. The stratification will be based on appropriate indicators such as: the time of exposure to erythropoietin prior to the start of the study, the time passed since the first dialysis and the number of changes of erythropoietin. For each exposure the incidence rate will also be calculated. Categorical variables will be analyzed using univariate (the Chi square test and Fisher's exact test) or multivariate analysis (logistic regression) . Continuous variables will be analyzed using parametric (eg, t-tests, ANOVA) or non-parametric (eg, Mann-Witney test) analysis. The variables "time to failure" will be analyzed by Kaplan Meier method or Cox regression. All tests will be carried out in two tails.

Documents

Study publications

Stoppa G, D’Amore C, Conforti A, Traversa G, Venegoni M, Taglialatela M, Leone ...

Data management

ENCePP Seal

The use of the ENCePP Seal has been discontinued since February 2025. The ENCePP Seal fields are retained in the display mode for transparency but are no longer maintained.

Data sources

Data sources (types)

Other

Data sources (types), other

Prospective patient-based data collection

Use of a Common Data Model (CDM)

CDM mapping

No

Data quality specifications

Check conformance

Unknown

Check completeness

Unknown

Check stability

Unknown

Check logical consistency

Unknown

Data characterisation

Data characterisation conducted

Unknown