Isotretinoin and the effectiveness of the pregnancy prevention programmes in Europe

First published: 31/05/2012

Last updated: 03/09/2013

Study Finalised

Administrative details

EU PAS number

EUPAS2474

Study ID

4654

DARWIN EU® study

No

Study countries

- [ ] Italy
- [ ] Norway
- [ ] United Kingdom

Study description

Isotretinoin is effective in treating severe nodular acne vulgaris that is unresponsive to other therapies. It is, however, highly teratogenic when used during the first trimester of pregnancy and as a result, pregnancy prevention programs (PPPs) are in place committing female isotretinoin users to use ≥2 means of contraception. Research indicates that often, female isotretinoin users are unaware of these measures or do not adhere to them and the question arises as to why this should be the case. To ensure efficacy of PPPs, we need to determine what makes PPPs fail and what can be done to improve adherence. This study aims to use a combination of quantitative and qualitative research to provide an overview of isotretinoin use in women of childbearing age, to evaluate the effectiveness of the PPP and to develop and provide recommendations for improving the effectiveness of PPPs in Europe. The first 2 components of the study will use data from electronic healthcare databases in three European countries to determine the prevalence of oral isotretinoin use in females of childbearing age, to characterise its use in terms of demographic and clinical characteristics and to estimate factors predictive of PPP failure and the occurrence of pregnancies in women of childbearing age using isotretinoin. The qualitative component of the study will involve conducting interviews with women who have experienced a ‘breakthrough pregnancy’ whilst taking isotretinoin. In addition to the interviews a consultation exercise with a committee constituting representatives from across Europe of stakeholders from dermatology, hospital and community pharmacy, general practice, fertility specialists, teratology information services as well as female user representatives of childbearing potential will be carried out. All the information collected by the different components of this study will then be used to create a PPP failure model.

Study status

Finalised

Research institutions and networks

Institutions

University of Bath

First published: 01/02/2024

Last updated: 01/02/2024

Institution

Pharmacy & Pharmacology, University of Bath

United Kingdom

First published: 30/04/2010

Last updated: 08/04/2019

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

Emilia-Romagna Health and Social Agency (ASSR Emilia-Romagna)

Italy

First published: 23/04/2010

Last updated: 18/12/2017

Institution | Outdated | Laboratory/Research/Testing facility | ENCePP partner

Swansea University Medical School

United Kingdom

First published: 01/02/2024

Last updated: 01/02/2024

Institution | Educational Institution | Hospital/Clinic/Other health care facility

Emilia Romagna, SAIL, Tuscany database, Norwegian National Birth Cohort

Networks

EUROmediCAT

Contact details

Study institution contact

Corinne de Vries c.de-vries@bath.ac.uk

Study contact

c.de-vries@bath.ac.uk

Primary lead investigator

Corinne de Vries

Primary lead investigator

Study timelines

Date when funding contract was signed
Planned: 16/12/2011

Actual: 16/12/2011

Study start date
Planned: 01/01/2004

Actual: 01/01/2004

Data analysis start date
Planned: 03/09/2012

Actual: 03/09/2012

Date of final study report
Planned: 01/02/2013

Actual: 11/07/2013

Sources of funding

- EMA

Study protocol

IsotretinoinFP7_University_of_Bath.pdf (514.27 KB)

Regulatory

Was the study required by a regulatory body?

Yes

Methodological aspects

Study type

Study type list

Study topic:

Human medicinal product

Study type:

Non-interventional study

Scope of the study:

Drug utilisation

Data collection methods:

Secondary use of data

Main study objective:

The main objective of the study is to evaluate the effectiveness of the isotretinoin pregnancy prevention plan, to identify potential factors associated with its effectiveness and to provide practical recommendations for improving the effectiveness of pregnancy prevention plans in Europe.

Study drug and medical condition

Study drug International non-proprietary name (INN) or common name

ISOTRETINOIN

Population studied

Short description of the study population

1. For the drug utilisation study: females who have received ≥1 prescription for an oral isotretinoin product at anytime during the study period
2. For the factors predictive of PPP failure study: females of child bearing age (11-50 years) who have received ≥1 prescription for isotretinoin

---

Age groups

- Adolescents (12 to < 18 years)
- Adults (18 to < 46 years)
- Adults (46 to < 65 years)

Special population of interest

Pregnant women

Estimated number of subjects

30000

Study design details

Data analysis plan

The prevalence (with CI95) of oral isotretinoin use in women of childbearing age will be calculated and the demographic and clinical characteristics, including use of contraception, of oral isotretinoin users will be described. The incidence (with CI95) of pregnancy among women of childbearing age using oral

isotretinoin will be calculated for the five data sources separately and, if appropriate, combined. Characteristics of isotretinoin users who become pregnant will be compared with those who do not in order to identify factors associated with a higher or lower likelihood of pregnancy. Differences in proportions will be tested using chi-square tests, differences in means will be tested using student's t-tests, and predictors of the risk of becoming pregnant in the isotretinoin user population will be identified using logistic regression. The transcripts of interviews and the workshop will be reviewed and analysed using thematic and content analysis.

Documents

Study results

Draft isotretinoin report_July2013.pdf (804.89 KB)

Study, other information

Appendix I_Isotretinoin systematic review.pdf (425.63 KB)

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.

This study has been awarded the ENCePP seal

Conflicts of interest of investigators

ENCePPDoIForm_CdeV_May_2012.pdf (633.81 KB)

Composition of steering group and observers

EUPAS2474-2632.pdf (162.77 KB)

Signed code of conduct

Declaration of Compliance with CoC 2474.pdf (31.98 KB)

Signed code of conduct checklist

Checklist of CoC 2474.pdf (234.87 KB)

Signed checklist for study protocols

Checklist of Study Protocol 2474.pdf (162.27 KB)

Data sources

Data source(s)

Clinical Practice Research Datalink

Data source(s), other

NorPD, Emilia Romagna GPs drug prescription

Data sources (types)

Administrative healthcare records (e.g., claims)

Drug dispensing/prescription data

Electronic healthcare records (EHR)

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

No