NIHR | National Institute for Health Research

PROSPERO
International prospective register of systematic reviews

To enable PROSPERO to focus on COVID-19 submissions, this registration record has undergone basic automated checks for eligibility and is published exactly as submitted. PROSPERO has never provided peer review, and usual checking by the PROSPERO team does not endorse content. Therefore, automatically published records should be treated as any other PROSPERO registration. Further detail is provided here.

Citation

Michelle Chan, Caron Kim, Roopan Gill. A systematic review: Rh isoimmunization in unsensitized Rh negative individuals seeking abortion <12 weeks. PROSPERO 2020 CRD42020149073 Available from: https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42020149073

Review question

Among women who undergo an abortion, medical or surgical, what is the rate of isoimmunization in subsequent pregnancy.

Searches

Run on 23 July 2019 by Fertility Regulation Group Information Specialist, Robin Paynter (MLIS), conducted a search for all published, unpublished, and ongoing studies, without restrictions on language or publication status.

The following databases from their inception:

• EBM Reviews Ovid - Cochrane Central Register of Controlled Trials (CENTRAL)

• MEDLINE Ovid (Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Daily)

• Embase.com

• Popline https://www.popline.org/advancedsearch

• Google Scholar

The following trials registries:

• The World Health Organization International Clinical Trials Registry Platform www.who.int/trialsearch

• ClinicalTrials.gov www.ClinicalTrials.gov.

Types of study to be included

Types of studies:

Included: Primary studies including RCTs, controlled trials, cohort studies, case-control studies

Excluded: Case series, review articles, editorials, letters, advisories, non-comparative studies, unpublished manuscripts, conference abstracts, diagnostic studies, animal studies, cost-benefit analysis, study with basic science outcomes

- Date cut off: nothing before 1971 *WHO recommended in this year to its nations that Rh testing and treatment with immune globulin be made part of the standard protocol of medical care for pregnant women

- Non-English publications

Condition or domain being studied

In most countries anti-D Immunoglobulin G is provided for rhesus (Rh)-negative patients. The administration

of Rh-immunoglobulin was first introduced in 1968 and significantly reduced immunization to D-antigen (Fiala 2003). There is sparse evidence for such intervention after abortion in early pregnancy (Fiala 2003). Early abortion includes threatened, spontaneous, surgical or medical abortion.

Currently, the WHO recommends Rh testing and administration of anti-D in populations with higher prevalence of Rh-negative individuals. Recently, the National Abortion Federation of North America published a statement that women presenting for early abortion can forego Rh testing and anti-D immunoglobulin administration (Mark 2019).

Participants/population

Reproductive aged women who have recently undergone surgical or medical management of pregnancy <12 weeks (includes induced, incomplete, spontaneous, or septic abortion)

Intervention(s), exposure(s)

Intervention:

Routine administration of Anti-D

Comparator(s)/control

Comparisons:

No administration of Anti-D

Context

Global setting

Main outcome(s)

Primary outcomes

1. Development of a positive Kleihauer Betke test (a test that detects fetal cells in the maternal blood).

2. Development of RhD alloimmunisation in a subsequent pregnancy.

Measures of effect

As defined by studies

Additional outcome(s)

Secondary outcomes

1. Detection of atypical blood group antibodies by positive indirect Coombs test after six months of exposure (non?prespecified outcome).

2. Need for increased surveillance for suspected fetal blood sampling and fetal transfusions in subsequent pregnancies.

3. Neonatal morbidity such as neonatal anaemia, jaundice, bilirubin encephalopathy, erythroblastosis, prematurity, hypoglycaemia (low blood sugar) in subsequent pregnancies.

4. Maternal adverse events of anti?D administration including anaphylactic reaction

Measures of effect

As defined by studies

Data extraction (selection and coding)

With less than 20 articles, all data extraction will be performed by Dr. Michelle Chan. Data extraction will be

obtained directly from the original published article. Recording of information for the data abstraction will occur in a table format, with the following headings. (1) Author, Year, Funding (2) Study Design, location, year(s) of data collection, follow-up (3) Population (4) Intervention (5) Comparison (6) Results (7) Strengths (8) Weaknesses (9) Risk of Bias

Risk of bias (quality) assessment

Risk of bias quality assessment will be addressed with criteria depending on study design.

RCT - List of factors for RCT quality framework: Adequate randomization (computer generated); Allocation concealment (opaque sealed envelopes); Blinding of participants and personnel; Blinding of outcome assessment;

Objective measurement of outcome; Incomplete data/lost to follow-up; Small sample size (need to define the size); Power calculations by appropriate outcome measure.

Observational studies - List of factors for observational quality framework: Population, Participation and follow up rates as above; Defined exposure (esp with comparator); Exposure defining, duration, timing; Measurement of isoimmunization; Confounding issue

Strategy for data synthesis

Data synthesis will primarily be descriptive analysis based on the outcomes. Pooled data will be reviewed with the GRADE system.

Given the anticipated small number of articles, this review will be primarily narrative. A descriptive analysis will provide summary of the studies including: study location, years of data collection, follow-up, population, intervention, comparison, results, strengths and weaknesses. Risk of bias will also be included.

A broader summary and tables of primary outcomes:

1. Development of a positive Kleihauer Betke test (a test that detects fetal cells in the maternal blood).

2. Development of RhD alloimmunisation in a subsequent pregnancy.

and secondary outcomes:

1. Detection of atypical blood group antibodies by positive indirect Coombs test after six months of exposure (non?prespecified outcome).

2. Need for increased surveillance for suspected fetal blood sampling and fetal transfusions in subsequent pregnancies.

3. Neonatal morbidity such as neonatal anaemia, jaundice, bilirubin encephalopathy, erythroblastosis, prematurity, hypoglycaemia (low blood sugar) in subsequent pregnancies.

4. Maternal adverse events of anti?D administration including anaphylactic reaction

and secondary outcomes (will also be included.

Analysis of subgroups or subsets

Not applicable

Contact details for further information

Michelle C Chan
michelle.c.chan@gmail.com

Organisational affiliation of the review

University of British Columbia/ World Health Organization, Department of Reproductive Health & Research

NIHR | National Institute for Health Research

PROSPERO
International prospective register of systematic reviews

Review team members and their organisational affiliations

Dr Michelle Chan. University of British Columbia/ World Health Organization, Department of Reproductive Health & Research
Dr Caron Kim. World Health Organization, Department of Reproductive Health & Research
Dr Roopan Gill. World Health Organization, Department of Reproductive Health & Research

Collaborators

Ms Robyn Paynter. Cochrane Fertility Regulation Group Information Specialist, MLS

Type and method of review

Systematic review

Anticipated or actual start date

23 July 2019

Anticipated completion date

29 February 2020

Funding sources/sponsors

Not applicable, no funders

Conflicts of interest

Language

English

Country

Canada, Switzerland, United States of America

Stage of review

Review Ongoing

Subject index terms status

Subject indexing assigned by CRD

Subject index terms

Abortion, Induced; Abortion, Spontaneous; Female; Humans; Pregnancy; Rh Isoimmunization

Date of registration in PROSPERO

28 April 2020

Date of first submission

30 August 2019

Stage of review at time of this submission

Stage	Started	Completed
Preliminary searches	Yes	No
Piloting of the study selection process	Yes	No
Formal screening of search results against eligibility criteria	Yes	No
Data extraction	Yes	No
Risk of bias (quality) assessment	No	No
Data analysis	No	No

NIHR | National Institute for Health Research

PROSPERO
International prospective register of systematic reviews

The record owner confirms that the information they have supplied for this submission is accurate and complete and they understand that deliberate provision of inaccurate information or omission of data may be construed as scientific misconduct.
The record owner confirms that they will update the status of the review when it is completed and will add publication details in due course.

Versions

28 April 2020