Recurrent miscarriages: Causes, treatment and consequences.

No registrations found.

| Ethical review | Not applicable |
|-----------------------|----------------------------|
| Status | Pending |
| Health condition type | - |
| Study type | Observational non invasive |

Summary

ID

NL-OMON20356

Source NTR

Brief title Abortion

Health condition

-recurrent miscarriages -trombophilia -antiphospholipid syndrome

Sponsors and support

Primary sponsor: LUMC (Leidsch University Mediccal Center) **Source(s) of monetary or material Support:** -Ministery of OC&W -Donation NVLE (Nationale vereniging voor lupus, sclerodermie en MCTD)

Intervention

Outcome measures

Primary outcome

Pregnancy outcome.

Secondary outcome

1. To describe maternal immune responses in women with miscarriages compared to women with an ongoing pregnancy and women with a normal pregnancy at different gestational periods;

2. To research which role medication (progesteron, anticoagulantia) plays in the immune response and pregnancy outcome;

3. To research whether specific KIR genes combined with specific HLA-C ligands determines or influences pregnancy outcome;

4. To research the presence of KIR and KAR on NK cells, and their effect on cytokine profiles during pregnancy and pregnancy outcome;

5. To research whether the proportion of Th1 cells compared to the proportion of Th2 cells influences pregnancy outcome;

6. To study the presence of C4d deposition in placental tissue in patients with recurrent miscarriage in relation to the presence of autoantibodies, allo-antibodies and to pregnancy outcome;

7. To determine whether cytokines, chemokines or sHLA-1 in sperm influences pregnancy outcomes.

Study description

Background summary

With 1 to 2% of the couples suffering from recurrent miscarriages, prevention would be of undisputable benefit for couples who suffer from recurrent miscarriages on a medical as well as psychological point of view. Understanding mechanisms triggering the maternal immune system in more detail, especially at the maternal-fetal interface, could help to elucidate mechanism behind recurrent miscarriages. An inadequate peripheral maternal immune response against paternal antigens may lead to improper implantation and rejection of the embryo. Both HLA genes and cytokines have been studied extensively in women with recurrent miscarriages. So far no study has focussed on the specific immune response and cytokine production by maternal PMBCs to paternal or umbilical cord cells in couples with recurrent miscarriage. The outcome of these functional studies will be related to HLA analysis of both partners and the newborn. Hopefully these results will give us new insights and possibilities for development of various treatments.

Study objective

The fetus is protected from maternal immune responses through various mechanisms such as lack of expression of classical HLA class I and class II molecules, inhibitory T cell, costimulatory molecules, NK cells, complement regulatory proteins by trophoblasts, and by local maternal regulatory T cells.

We hypothesize that an imbalance between immunomodulatory and effector cells and as a consequence an inadequate cytokine production could be responsible for recurrent miscarriage. This study will include couples with recurrent miscarriages. A prospective study will be performed during the following pregnancy by taking peripheral blood samples, which will be stimulated with paternal, third party (unrelated PBMCs) and, if available cord blood cells expressing HLA-antigens, and monitored for cell proliferation, cytokine production, antibodies and complement activation to determine the difference between ongoing pregnancies and miscarriages.

Study design

01-12-2011: Start recruiting couples at miscarriage clinic;

01-03-2012: Start first labexperiments; 01-01-2013: Start analyzing results;

01-01-2014: Finishing study.

Intervention

N/A

Contacts

Public PO Box 9600 K.W.M. Bloemenkamp Department of Obstetrics Leiden University Medical Centre Leiden K-6-P; room 35 Leiden 2300 RC The Netherlands +31 (0)71 5263360 Scientific PO Box 9600 K.W.M. Bloemenkamp **Department of Obstetrics** Leiden University Medical Centre Leiden K-6-P; room 35 Leiden 2300 RC The Netherlands

Eligibility criteria

Inclusion criteria

- 1. > two subsequently miscarriages;
- 2. Maternal age < 40.

Exclusion criteria

- 1. Parental chromosomal abnormalities;
- 2. Uterus anomalies;
- 3. Cervical insufficiency;
- 4. Untreated thyroid disease;
- 5. Patient mentally or legally incapacity;
- 6. Any history of/ or recent alcohol or drug abuse;
- 7. Poor balance or treatment of diabetes mellitus;
- 8. ART (assisted reproductive technology) pregnancies.

Study design

Design

| Observational non invasive |
|---------------------------------|
| Parallel |
| Non-randomized controlled trial |
| Open (masking not used) |
| N/A , unknown |
| |

Recruitment

| NL | |
|---------------------------|-------------|
| Recruitment status: | Pending |
| Start date (anticipated): | 01-12-2011 |
| Enrollment: | 60 |
| Туре: | Anticipated |

Ethics review

Not applicable Application type:

Not applicable

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

| Register | ID |
|----------|-------------------------------------|
| NTR-new | NL2960 |
| NTR-old | NTR3107 |
| Other | : |
| ISRCTN | ISRCTN wordt niet meer aangevraagd. |

Study results

Summary results

N/A