

Embryo selection by metabolomic profiling.

Gepubliceerd: 10-01-2008 Laatste bijgewerkt: 13-12-2022

Ho: the life birth rate in patients after SET with only morphological embryo selection is equal to patients with metabolomic profiling added to morphological selection. H1: the life birth rate in patients after SET with only morphological embryo...

Ethische beoordeling	Positief advies
Status	Werving gestopt
Type aandoening	-
Onderzoekstype	Interventie onderzoek

Samenvatting

ID

NL-OMON20735

Bron

Nationaal Trial Register

Verkorte titel

N/A

Aandoening

1. Metabolomic profiling;
2. embryo selection;
3. IVF;
4. single embryo transfer (SET).

Ondersteuning

Primaire sponsor: VU University medical center
Division of reproductive medicine

Overige ondersteuning: Fund=initiator

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

Life birth rate.

Toelichting onderzoek

Achtergrond van het onderzoek

The high multiple pregnancy rate caused by IVF treatment leads to a higher incidence of medical, perinatal and neonatal complications and hence to higher health care costs. Single Embryo Transfer (SET) is an effective way to minimize risks of multiple pregnancies. Only one embryo is transferred, so the selection of the embryo with an optimum implantation potential very important. Currently, embryo selection is mainly based on morphological criteria using light microscope analysis. Because of its limited predictive value for ongoing pregnancy, new selection tools are being sought-after. Previous study showed that non-invasive metabolomic profiling seem to provide a strong addition to the selection of viable embryos and may serve as a useful methodology for rapid, non-invasive embryo selection. We hypothesize that pregnancy rates may improve when a more sensitive and specific selection tool like metabolomic profiling of biomarkers of oxidative metabolism by Near Infrared (NIR) Spectroscopy is used.

Doel van het onderzoek

Ho: the life birth rate in patients after SET with only morphological embryo selection is equal to patients with metabolomic profiling added to morphological selection.

H1: the life birth rate in patients after SET with only morphological embryo selection is unequal to patients with metabolomic profiling added to morphological selection.

Onderzoeksopzet

N/A

Onderzoeksproduct en/of interventie

One group will get the conventional embryo selection (morphology) prior to transfer and one group gets in addition to the morphological selection metabolomic profiling.

Contactpersonen

Publiek

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Wetenschappelijk

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Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

Patients with SET, at least two embryos of equal quality.

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

1. Patients with DET (double embryo transfer);
2. patients with less than 2 embryos of equal quality;
3. patients can only be included for one IVF/ICSI cycle.

Onderzoeksopzet

Opzet

Type:	Interventie onderzoek
Onderzoeksmodel:	Parallel
Toewijzing:	Gerandomiseerd
Blinding:	Dubbelblind
Controle:	N.v.t. / onbekend

Deelname

Nederland	
Status:	Werving gestopt
(Verwachte) startdatum:	01-03-2008
Aantal proefpersonen:	370
Type:	Werkelijke startdatum

Ethische beoordeling

Positief advies	
Datum:	10-01-2008
Soort:	Eerste indiening

Registraties

Opgevolgd door onderstaande (mogelijk meer actuele) registratie

Geen registraties gevonden.

Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

In overige registers

Register	ID
NTR-new	NL1136
NTR-old	NTR1178
Ander register	VUmc : incomplete
ISRCTN	ISRCTN wordt niet meer aangevraagd

Resultaten

Samenvatting resultaten

Day 3 embryo selection by metabolomic profiling of culture medium with near-infrared spectroscopy as an adjunct to morphology: a randomized controlled trial.

Vergouw CG, Kieslinger DC, Kostelijk EH, Botros LL, Schats R, Hompes PG, Sakkas D, Lambalk CB.

Hum Reprod. 2012 Aug;27(8):2304-11. doi: 10.1093/humrep/des175. Epub 2012 May 30.

No evidence that embryo selection by near-infrared spectroscopy in addition to morphology is able to improve live birth rates: results from an individual patient data meta-analysis.

Vergouw CG, Heymans MW, Hardarson T, Sfontouris IA, Economou KA, Ahlström A, Rogberg L, Lainas TG, Sakkas D, Kieslinger DC, Kostelijk EH, Hompes PG, Schats R, Lambalk CB.

Hum Reprod. 2014 Mar;29(3):455-61. doi: 10.1093/humrep/det456. Epub 2014 Jan 8.