

# Levamisole treatment for children with steroid sensitive nephrotic syndrome.

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This international, multi-centre, double blinded, placebo-controlled, randomised clinical trial will be performed: To assess the effectiveness of one year of alternate days Levamisole treatment in a dose of 2.5 mg/kg in the prevention of relapses...

<b>Ethische beoordeling</b>	Positief advies
<b>Status</b>	Werving gestart
<b>Type aandoening</b>	-
<b>Onderzoekstype</b>	Interventie onderzoek

## Samenvatting

### ID

NL-OMON26305

### Bron

NTR

### Verkorte titel

Levamisole trial

### Aandoening

steroid sensitive idiopathic nephrotic syndrome(steroid gevoelig idiopathisch nefrotisch syndroom), relapse (recidief), levamisole, steroid side effects (steroid bijwerkingen),

## Ondersteuning

**Primaire sponsor:** Academic Medical Center of Amsterdam

Meibergdreef 9, 1105 AZ Amsterdam Z-O

The Netherlands

**Overige ondersteuning:** Emma Foundation

Dutch Kidney Foundation (Nierstichting)

Dutch Orphan Disease Foundation

French Ministry of Health

European Union (applied)

ACE Pharmaceuticals supplies and distributes the study medication and supports the pharmacokinetic study

# Onderzoeksproduct en/of interventie

## Uitkomstmaten

### Primaire uitkomstmaten

The primary endpoint is defined as the time to relapse which is the time between start of the study medication and occurrence of a relapse or, in case of no relapse, time of censoring (12 months after start of trial medication). Only a relapse necessitating prednisone treatment is considered a primary endpoint relapse.

Proposed end of the blinded part of the study is in all patients 12 months after start of the study medication.

## Toelichting onderzoek

### Achtergrond van het onderzoek

Annually there are about 100 new children with steroid sensitive nephrotic syndrome in The Netherlands. 50-60% relapse as soon as dosage prednisone is stopped or decreased. These children are therefore exposed to toxic side effects of long-term steroids. Among the alternatives used for sparing steroids, levamisole is the least toxic and expensive, however, hardly used. Lack of good quality evidence, no approval for this indication, and difficulty to obtain levamisole may be responsible. An adequately designed RCT is now required to determine whether levamisole is effective in children with SSNS.

### Doel van het onderzoek

This international, multi-centre, double blinded, placebo-controlled, randomised clinical trial will be performed:

To assess the effectiveness of one year of alternate days Levamisole treatment in a dose of 2.5 mg/kg in the prevention of relapses and prolonging time to relapse after cessation of corticosteroids treatment in children with SSNS.

And as secondary analyses:

1. To evaluate whether the effect of Levamisole varies with disease status (steroid dependent vs. frequently relapsing; low vs. high dose steroid dependency);
2. To evaluate whether the effect of Levamisole varies with prior treatment with Cyclophosphamide;
3. To assess the steroid sparing effect of Levamisole treatment as well as the sparing

effect of other immunosuppressive drugs (i.e. average amount administered per patient);

4. To determine whether the effectiveness of Levamisole remains constant or wanes over time;

5. To assess the pharmacokinetics of Levamisole in the target population;

6. To assess the safety of treatment with Levamisole.

### **Onderzoeksopzet**

1. 05/2007: start inclusion;

2. 05/2011: end inclusion;

3. 05/2012: end cohort, begin wash out;

4. 11/2012: end wash out;

5. 11/2013: final report.

### **Onderzoeksproduct en/of interventie**

1. Active compound Levamisole Hydrochloride.

Dosage 2,5 mg/kg on alternate days.

Strength 5, 10, 25 and 50 mg.

Dosage form oral tablets, coated and non-dividable for taste-masking.

2. Placebo matching verum.

Study medication:

1. Start: during Prednisone treatment for relapse when patient's urine is protein free for 3-21 days;

2. Duration: 12 months or until relapse  
Concomitant medication.

Cyclosporine, Cyclophosphamide, MMF and other immunosuppressive drugs are not permitted.

Prednisone: given at inclusion during relapse in accordance with the French protocol including tapering (Société de Néphrologie Pédiatrique).

Cohort study: To evaluate whether Levamisole effect remains constant or wanes over time and to evaluate side effects of long term Levamisole treatment, Levamisole patients still in remission at trial completion will be followed for another 18 months (12 additional months of levamisole plus 6 extra months after Levamisole cessation).

## Contactpersonen

### Publiek

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### Wetenschappelijk

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## Deelname eisen

### Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

1. Primary diagnosis: frequently relapsing idiopathic Steroid Sensitive Nephrotic Syndrome with or without steroid dependency;

2. 2 > Age < 18 years;

3. Written informed consent.

## **Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)**

1. Patients previously treated with Levamisole;

2. Patients unresponsive to Cyclosporine or MMF;

3. Nephrotic syndrome due to a specific kidney disease (such as Henoch -Schoenlein purpura, acute infectious glomerulonefritis, Lupus erythematosus or associated with Hepatitis B or C...);

4. Patients presenting with neutropenia, convulsions or with hepatic diseases;

5. Patients with a prolongation of the QTc-time on the surface electrocardiogram;

6. Pregnancy, breast-feeding or planned pregnancy during the study;

7. Participation in another trial.

## **Onderzoeksoepzet**

### **Opzet**

Type:	Interventie onderzoek
Onderzoeksmodel:	Parallel
Toewijzing:	Gerandomiseerd
Blindering:	Dubbelblind
Controle:	Placebo

### **Deelname**

Nederland	
Status:	Werving gestart
(Verwachte) startdatum:	23-05-2007
Aantal proefpersonen:	100

Type:

Verwachte startdatum

## Ethische beoordeling

Positief advies

Datum:

20-04-2009

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	NL1668
NTR-old	NTR1769
Ander register	EudraCT : 2005-005745-18
ISRCTN	ISRCTN wordt niet meer aangevraagd

## Resultaten

### Samenvatting resultaten

Davin JC, Merkus MP. -

Levamisole in steroid-sensitive nephrotic syndrome of childhood: the lost paradise?

Pediatr Nephrol. 2005 Jan;20(1):10-4.