# Pharmacokinetics of a new paediatric formulation of valacyclovir used for prophylaxis and treatment of VZV and HSV infections in children (VALID II).

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In this trial the plasma pharmacokinetics of acyclovir will be investigated after administration of valacyclovir oral solution in children who have an indication for (val)Acyclovir prophylactic treatment.Furhermore, the safety profile of a single...

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| **Ethical review** | Approved WMO |
| **Status** | Recruitment stopped |
| **Health condition type** | Viral infectious disorders |
| **Study type** | Interventional |

## Summary

### ID

NL-OMON50198

**Source**
ToetsingOnline

**Brief title**
VALID-2

### Condition

- Viral infectious disorders

**Synonym**
chicken pox, herpes infection

**Research involving**
Human

### Sponsors and support

**Primary sponsor:** Afdeling Apotheek

**Source(s) of monetary or material Support:** ZonMW

## Intervention

**Keyword:** paediatric formulation, pharmacokinetics, valacyclovir oral solution

## Outcome measures

### Primary outcome

Pharmacokinetic parameters of acyclovir: AUC0-12, Cmax and Cmin.

### Secondary outcome

Amount and severity of adverse events

# Study description

### Background summary

Herpes infections in immunocompromised patient cause longer periods of clinical symptoms and viral shedding, increased
severity and more frequent episodes of reactivation. This may leed to dissemination, hepatitis, post herpetic neuralgia,
bacterial super infection, pneumonitis, encephalitis and death.
Valacyclovir is an oral prodrug of acyclovir, with at least equal efficacy and a similar safety profile as intravenous aciclovir
and therefore less expensive and more convenient. However, in immunocompromised children practical problems exist
with adult-dose tablets. A formulation with acceptable palatability, good pharmaceutical quality and possibility of flexible
dosing is needed. A new paediatric formulation (oral solution) has been developed to fullfill those needs. The pharmacokinetics of this formulation will be investigated in children who have an indication for (val)Acyclovir prophylaxis.

### Study objective

In this trial the plasma pharmacokinetics of acyclovir will be investigated after administration of valacyclovir oral solution in children who have an indication for (val)Acyclovir prophylactic treatment.
Furhermore, the safety profile of a single dose of valacyclovir oral solution in children will be determined.

## Study design

This study will be an opportunistic design, single dose (at steady state), one-period, steady state, multiple center, trial.

Pharmacokinetics will be determined on a day of valacyclovir oral solution dosing (which is giving as standard of care).

## Intervention

Intake of valacyclovir oral solution (as standard of care) and collection of bloodsamples for determination of the pharmacokinetics.

## Study burden and risks

This study will be performed in children who have an indication for (val)Acyclovir prophylactic treatment. These children are admitted to the hospital. Therefore, no more visits are scheduled for the study. The duration of the entire trial is one day during hospital admission.
One could argue that a study in children might be unethical, but the oral solution had antiviral activity. So, the study participants will benefit from the participation in this clinical trial. The study participants are subjects between 2 and 12 years, these subjects are representative for the group who will receive this formulation.
On the other hand, valacyclovir can lead to adverse events including: headache (*10%), nausea, vomiting, diarrhea, dizziness, rash, pruritis (*1% and <10%), leucopenia, thrombocytopenia, hallucinations, mental confusion, diminished consciousness, agitation, tremor, dyspnoea, abdominal discomfort, urticaria, kidney pain (*0,1% and <1%), anaphylaxis, ataxia, dysarthria, convulsions, encephalopathy, coma, psychotic symptoms, reversible increase in liver enzymes and bilirubin, angioedema, impaired renal function and acute renal failure (*0,01% and <0,1%).
Adverse events of acyclovir are comparable, but also include: shortness of breath (*0,01% and <0,1%) anaemia and hepatitis (*0,01%).
However, the patients will receive valayclovir anyway according to the local protocol. So, the study does not rise or decrease the risk on these adverse events. For pharmacokinetic purposes 7 blood samples will be taken in total. The total blood volume collected will be approximately 21 mL.
Blood samples will be collected from an inserted canulla or PAC being already in place for treatment of their underlying condition, which minimizes inconvenience for the children. The overall risk is judged to be minimal.

# Contacts

**Public**
Selecteer

Geert Grooteplein 10
Nijmegen 6525 GA
NL
**Scientific**
Selecteer

Geert Grooteplein 10
Nijmegen 6525 GA
NL

# Trial sites

## Listed location countries

Netherlands

# Eligibility criteria

**Age**
Children (2-11 years)

## Inclusion criteria

1. Subject is in the age of 1-12 years.
2. Subject receives (val)acyclovir prophylaxis and is planned to receive valacyclovir oral solution.
3. Subject is managed with a central venous catheter (CVC/Port-a-Cath).
4. Subject*s parents have signed the Informed Consent Form prior to screening evaluations.

## Exclusion criteria

1. Severe anemia (Hb < 5.0 mmol/L).
2. Full dose has not been taken.

# Study design

## Design

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| Study phase: | 4 |
| Study type: | Interventional |
| Masking: | Open (masking not used) |
| Control: | Uncontrolled |
| Primary purpose: | Treatment |

## Recruitment

NL

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|---|---|
| Recruitment status: | Recruitment stopped |
| Start date (anticipated): | 20-01-2020 |
| Enrollment: | 16 |
| Type: | Actual |

# Ethics review

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| Approved WMO Date: | 16-04-2019 |
| Application type: | First submission |
| Review commission: | CMO regio Arnhem-Nijmegen (Nijmegen) |
| Approved WMO Date: | 17-06-2019 |
| Application type: | First submission |
| Review commission: | CMO regio Arnhem-Nijmegen (Nijmegen) |
| Approved WMO Date: | 30-04-2020 |
| Application type: | Amendment |
| Review commission: | CMO regio Arnhem-Nijmegen (Nijmegen) |
| Approved WMO Date: | 04-05-2020 |
| Application type: | Amendment |
| Review commission: | CMO regio Arnhem-Nijmegen (Nijmegen) |

# 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 |
|---|---|
| EudraCT | EUCTR2017-001451-30-NL |
| ClinicalTrials.gov | NCT04081480 |
| CCMO | NL61579.091.18 |

# Study results

Date completed: 12-05-2021

Actual enrolment: 7

**Summary results**
Trial ended prematurely