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PENTA 16 Trial: short-cycle therapy (SCT) (5 days on/2 days off) in young people with chronic human immunodeficiency virus (HIV) infection

Submission date
27/05/2009

Registration date
05/08/2009

Last Edited
07/01/2019

Recruitment status
No longer recruiting

Overall study status
Completed

Condition category
Infections and Infestations

[X] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol
http://www.ctu.mrc.ac.uk/research_areas/study_details.aspx?s=78

Contact information

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Additional identifiers

Clinical Trials Information System (CTIS)
2009-012947-40

ClinicalTrials.gov (NCT)
NCT01641016

Protocol serial number
HTA 08/53/25; PENTA 16 version 1.0

Study information

Scientific Title
Short-cycle therapy (SCT) (5 days on/2 days off) in young people with chronic human immunodeficiency virus (HIV) infection: an open, randomised, parallel group, multicentre phase II /III trial

Acronym
PENTA 16

Study objectives
The overall aim of the PENTA 16 trial is to evaluate the role of short-cycle therapy (SCT) in the management of human immunodeficiency virus (HIV)-infected young people who have responded well to antiretroviral therapy and to determine whether young people undergoing SCT (five days on and two days off) maintain the same level of viral load suppression as those on continuous therapy, over 48 weeks.

The advantages and disadvantages of the strategy, the incidence of toxicities, immunological control, resistance mutations, acceptability, quality of life and adherence to the randomised strategy will also be compared.

More details can be found at: http://www.nets.nihr.ac.uk/projects/hta/085325
Protocol can be found at: http://www.nets.nihr.ac.uk/__data/assets/pdf_file/0004/52987/PRO-08-53-25.pdf

Ethics approval required
Old ethics approval format

Ethics approval(s)
Central London REC 4, 08/02/2010, ref: 10/H0714/8

Study design
Open randomised parallel-group multicentre phase II/III trial

Primary study design

Interventional

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Infectious disease - Paediatric HIV

Interventions
1. Short cycle therapy - 5 days on ART, 2 days off
2. Routine care - continuous ART

Once randomised participants will be followed for 48 weeks. However all participants will be followed (seen in clinic every 12 weeks) until the last patient to be randomised has completed week 48, therefore some participants will be followed for up to 3 years.

Intervention Type
Drug

Phase
Phase II/III

Primary outcome(s)
HIV-1 RNA greater than or equal to 50 c/ml (confirmed) at any of week 4, 8, 12, 24, 36 or 48

Key secondary outcome(s))
1. HIV-1 RNA less than 50 c/ml at 24 and 48 weeks
2. Number of HIV mutations present at week 4, 8, 12, 24, 36 or 48 conferring resistance to drugs taken at randomisation or during the trial
3. Change in CD4 (absolute and percentage) from randomisation to 24 and 48 weeks
4. Change in ART (defined as any change from the ART regimen at randomisation)
5. ART-related grade 3 or 4 clinical and laboratory adverse events
6. New CDC stage C diagnosis or death
7. Changes in fasting cholesterol, triglycerides, low density lipoprotein (LDL), high density lipoprotein (HDL) and very low density lipoprotein (VLDL) levels through 48 weeks
8. Adherence, acceptability, and well-being over 48 weeks as assessed by patient completed questionnaires

Completion date
13/09/2016

Eligibility

Key inclusion criteria
Current inclusion criteria as of 16/01/2013
1. HIV-1 infected young people aged 8 to 24 years inclusive (Young people recruited between the ages of 16-21 must either be in regular physical contact with their clinician or be able to transfer to an adult physician at the same site for follow-up or to an affiliated adult site).
2. Parents/carers and/or young people, where applicable, willing to provide informed consent.
3. On a stable first-line ART treatment containing at least 2 NRTIs/NtRTIs and EFV for at least 12

months and willing to continue the regimen throughout the study period. Young people on regimens containing nevirapine (NVP) or a boosted protease inhibitor with undetectable viral load for over one year who wish to enrol should switch to EFV. Once they are stable on the EFV containing regimen for more than 12 weeks they may be enrolled (must have 2 subsequent HIV-1 RNA measurements <50 c/ml over a minimum period of 12 weeks). Previous dual therapy and /or substitution of NRTIs is allowed providing any changes were not for disease progression, immunological or virological failure (where virological failure is defined as two successive HIV-1 RNA results>1000 c/ml) subsequent to virological control having been achieved on ART.
4. Viral suppression (HIV-1 RNA <50 c/ml) for at least the prior 12 months (at least the last 3 measurements, including screening): young people who have experienced a single viral load >50 but <1000 copies/ml (preceded and followed by VL<50 c/ml) in the last 12 months can be enrolled.
5. CD4 cell count ≥350 106/L at screening visit.
6. Centre must routinely use an assay which detects HIV RNA-1 viral load ≥50 c/ml.

Previous inclusion criteria until 16/01/2013:
1. HIV-1 infected young people aged 8 to 21 years inclusive (Young people recruited between the ages of 16-21 must either be in regular physical contact with their clinician or be able to transfer to an adult physician at the same site for follow-up or to an affiliated adult site).

Previous inclusion criteria until 08/05/2012:
1. HIV-1 infected young people (either sex) aged 8 to 21 years inclusive (young people recruited between the ages of 16 - 21 years must either be in regular physical contact with their paediatrician or be able to transfer to an adult physician at the same site for follow-up or to an affiliated adult site)
2. Parents/carers and young people, where applicable, willing to provide informed consent
3. On a stable first-line anti-retroviral therapy (ART) regimen containing at least two nucleoside reverse transcriptase inhibitors (NRTIs) and efavirenz (EFV) for at least 12 months and willing to continue the regimen throughout the study period. Children on regimens containing nevirapine (NVP) or a boosted protease inhibitor with undetectable viral load wishing to enrol should switch to EFV, and may be enrolled if they have three subsequent HIV-1 ribonucleic acid (RNA) measurements less than 50 copies/ml over a minimum period of 12 weeks.
4. Viral suppression (HIV-1 RNA less than 50 copies/ml) for at least the prior 12 months (at least the last three measurements). Young people who have experienced a single viral load blip in the last 12 months can be enrolled; where the blip is defined as 'one or more detectable viral loads (greater than or equal to 50 copies/ml) between two undetectable values (less than 50 c/ml) less than 9 months apart, during a period of sustained viral suppression'.
5. Started highly-active anti-retroviral therapy (HAART) naive (i.e. no previous mono- or dual-therapy unless for prevention of mother-to-child transmission)
6. May have experienced more than two classes of drug as long as change due to toxicity or simplification rather than due to virological failure (where virological failure is defined as two successive HIV-1 RNA results greater than 1000 c/ml (confirmed) more than 6 months after starting HAART)
7. CD4 cell count greater than or equal to 350 cells/µL at screening visit
8. Centre must routinely use an assay which detects HIV RNA-1 viral load greater than or equal to 50 copies/ml. Smaller blood sample requiring higher cut-off will be allowed.

Participant type(s)
Patient

Healthy volunteers allowed

No

Age group
Other

Sex
All

Key exclusion criteria
Current exclusion criteria as of 08/05/2012:
1. Pregnancy or risk of pregnancy in females of child-bearing potential.
2. Acute illness (young people may be enrolled after illness).
3. Receiving concomitant therapy for an acute illness (young people may be enrolled after finishing therapy).
4. A creatinine, AST or ALT of grade 3 or above at screening.
5. On a regimen including nevirapine or a boosted PI (young people may switch to an EFV based regimen).
6. Previous ART monotherapy (except for the prevention of mother-to-child transmission)

Previous exclusion criteria:
1. Pregnancy or risk of pregnancy in females of child bearing potential
2. Acute illness
3. Receiving concomitant therapy for an acute illness except antibiotic prophylaxis

Date of first enrolment
25/03/2011

Date of final enrolment
30/09/2014

Locations

Countries of recruitment
United Kingdom

England

Argentina

Belgium

Denmark

Germany

Ireland

Spain

Thailand

Uganda

Ukraine

United States of America

Study participating centre
Aviation House
London
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Sponsor information

Organisation
PENTA Foundation (Italy)

ROR
https://ror.org/00d7mpc92

Funder(s)

Funder type
Government

Funder Name
Health Technology Assessment Programme

Alternative Name(s)
NIHR Health Technology Assessment Programme, Health Technology Assessment (HTA), HTA

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
United Kingdom

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	01/06/2016		Yes	No
Results article	results	01/09/2016		Yes	No
Results article	results	23/04/2018		Yes	No
HRA research summary			28/06/2023	No	No
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes
Study website	Study website	11/11/2025	11/11/2025	No	Yes