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Prednisolone in nephrotic syndrome

Submission date	Recruitment status	[_] Prospectively registered
17/02/2011	No longer recruiting	[_] Protocol
Registration date	**Overall study status**	[_] Statistical analysis plan
17/02/2011	Completed	[X] Results
Last Edited	**Condition category**	[_] Individual participant data
25/07/2019	Urological and Genital Diseases	

Plain English summary of protocol

Background and study aims
Nephrotic syndrome is a chronic disorder that occurs during childhood where the kidneys do not work properly, causing large amounts of protein to leak into the urine. This loss of protein can cause swelling of body tissues and increase the chance of catching infections. Initial treatment is with steroid drugs. This is usually successful but patients can relapse and require more treatment. The best duration of initial steroid treatment remains uncertain. We aim to compare two months versus four months of steroid (prednisolone) treatment. Both of these durations have been used in clinical practice, but we are unsure which is best. Previous research has suggested that with longer treatment, fewer children relapse, but the quality of the research was not very good and the results may be biased. We would like to carry out a further, better quality, study.

Who can participate?
Children aged 1 - 15 with nephrotic syndrome

What does the study involve?
The children are randomly allocated to either two months or four months of prednisolone treatment. All the children take tablets for the same amount of time, but the children in the shorter treatment group take dummy (placebo) tablets in the last weeks. The main outcome we are interested in is how many children relapse and need further treatment for nephrotic syndrome. The children are asked to test their urine with dipsticks as the presence of protein in the urine is a sign of relapse. We also investigate how many children relapse frequently and how many are unable to manage without taking steroids and how relapses are treated. We look at how long it is before patients relapse. Although prednisolone is an effective drug in the treatment of nephrotic syndrome it does have side effects. These include making patients more vulnerable to infection, changes in facial appearance, hairiness, increased appetite, weight gain and a tendency to more aggressive behaviour. We do not know how often these side effects occur in the treatment of nephrotic syndrome from previous research, nor do we know what the impact of them is on parents and children and how important they are to families. We wish to find out whether there are more side effects with longer treatment. As part of this, we ask parents to complete a questionnaire about their child's behaviour at the beginning and at the peak of treatment, as well as checking regularly for side effects. As well as looking at how well the treatments work, we look at which is best value for the NHS. We follow the children up until the end of the study and each child is followed for at least 12 months.

What are the possible benefits and risks of participating?
Not provided at time of registration

Where is the study run from?
Birmingham Clinical Trials Unit (UK)

When is the study starting and how long is it expected to run for?
February 2011 to May 2015

Who is funding the study?
NIHR Health Technology Assessment Programme - HTA (UK)

Who is the main contact?
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Contact information

Type(s)
Scientific

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Additional identifiers

Clinical Trials Information System (CTIS)
2010-022489-29

Protocol serial number
9617

Study information

Scientific Title
Long-term tapering versus standard prednisolone (steroid) therapy for the treatment of the initial episode of childhood nephrotic syndrome: national multicentre randomised double-blind trial

Acronym
PREDNOS

Study objectives
PREDNOS is a national multicentre randomised double blind trial of long-term tapering versus standard prednisolone (steroid) therapy for the treatment of the initial episode of childhood nephrotic syndrome.

Further details can be found at: http://www.nets.nihr.ac.uk/projects/hta/085331
Protocol can be found at: http://www.nets.nihr.ac.uk/__data/assets/pdf_file/0008/52982/PRO-08-53-31.pdf

Ethics approval required
Old ethics approval format

Ethics approval(s)
NRES Committee North West, 05/04/2011, ref: 10/H1008/122

Study design
Multicentre randomised interventional treatment trial

Primary study design
Interventional

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Topic: Medicines for Children Research Network; Subtopic: All Diagnoses; Disease: All Diseases

Interventions
Standard course therapy:
Weeks 1 - 4: prednisolone 60 mg/m2/day (max 80 mg)
Weeks 5 - 8: prednisolone 40 mg/m2 (max 60 mg)
Duration: given on alternate days for 28 days

Extended course therapy:
Weeks 1 - 4: prednisolone 60 mg/m2/day (max 80 mg)
Weeks 5 - 16: prednisolone 60 mg/m2 (max 80 mg)
Duration: given on alternate days tapering by 10 mg/m2 every 2 weeks

Study entry: single randomisation only

Intervention Type
Drug

Phase
Phase III

Drug/device/biological/vaccine name(s)
Prednisolone

Primary outcome(s)
Time to first relapse. Relapse of proteinuria is defined by Albustix positive proteinuria (++ or greater) for 3 consecutive days.

Key secondary outcome(s))
1. Relapse rate
2. Incidence of frequently relapsing steroid sensitive nephrotic syndrome (defined as 2 relapses or more in the first six months following presentation or 4 relapses within any 12 month period)
3. Incidence of steroid dependent nephrotic syndrome (defined as relapses on or within 14 days of completion of steroid therapy) nephrotic syndrome
4. Incidence of use of second line immunosuppressive agents, including levamisole, cyclophosphamide, ciclosporin, tacrolimus, mycophenolate mofetil and rituximab
5. Incidence of serious adverse events
6. Incidence of adverse events
7. Incidence of behavioural change (as assessed by the Achenbach child behaviour checklist)
8. Cost per relapse of proteinuria
9. Cost per QALY gained

Assessment schedule:
Clinical trial follow-up assessments will be at weeks 4, 8, 12 and 16 and months 5, 6, 8, 10 and 12, 18, 24, 30, 36, 42 and 48. All patients will be followed up for at least 24 months and for a variable time period beyond 24 months until 24 months after the last patient is randomised.

Completion date
01/05/2015

Eligibility

Key inclusion criteria
Children presenting with the first episode of steroid sensitive NS who meet all of the following criteria:
1. Urine albumin: creatinine ratio greater than 200 mg/mmol or protein: creatinine ratio greater than 200 mg/mmol, determined quantitatively on an early morning urine sample
2. Serum/plasma albumin level less than 25 g/L
3. Age over 1 year and less than 15 years at the time of diagnosis (children of 15 years and above have been excluded because of the reduced likelihood of their nephrotic syndrome being steroid sensitive and the increased likelihood of adult causes of nephrotic syndrome)
4. No prior therapy with steroids, immunosuppressive or cytotoxic agents for any form of renal disease (other than the 28 days of prednisolone therapy given initially as routine clinical practice)
5. No evidence of underlying systemic disorder or exposure to agents known to be associated with newly presenting steroid sensitive nephrotic syndrome
6. Informed consent

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group

Child

Lower age limit
1 years

Upper age limit
15 years

Sex
All

Total final enrolment
237

Key exclusion criteria
1. Children with histological changes other than minimal lesion glomerulonephritis where renal biopsy has been undertaken
2. Children with a prior history of poor compliance with medical therapy
3. Known allergy to prednisolone

Date of first enrolment
01/02/2011

Date of final enrolment
01/05/2015

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
Birmingham Clinical Trials Unit
Birmingham
United Kingdom
B15 2TT

Sponsor information

Organisation
University of Birmingham (UK)

Organisation
Central Manchester University Hospitals NHS Foundation Trust (UK)

Organisation
University of Birmingham

ROR
https://ror.org/03angcq70

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	HTA results	01/05/2019	04/06/2019	Yes	No
Results article	results	23/05/2019	25/07/2019	Yes	No
Basic results			21/05/2019	No	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