Clinical trial results:
Metformin-Wirkung am Ovar bei PCOS (MAO-Studie) - eine Pilotstudie

Summary

EudraCT number	2006-001911-31
Trial protocol	AT
Global end of trial date	01 October 2008

Results information

Result version number	v1 (current)
This version publication date	13 February 2022
First version publication date	13 February 2022

Trial information

Trial identification

Sponsor protocol code	30032006

Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	-
WHO universal trial number (UTN)	-

Notes:

Sponsors

Sponsor organisation name	Medical University Innsbruck
Sponsor organisation address	Christoph-Probst-Platz 1, Innrain 52, Innsbruck, Austria, 6020
Public contact	Assoz. Prof. Priv.Doz. Dr. Beata Seeber, University Hospital for Gynaecological Endocrinology and Reproductive Medicine, Anichstr.35,6020 Ibk, +43 (0)512 504 23276, info.kinderwunsch@tirol-kliniken.at
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Notes:

Paediatric regulatory details

Is trial part of an agreed paediatric investigation plan (PIP)	No
Does article 45 of REGULATION (EC) No 1901/2006 apply to this trial?	No
Does article 46 of REGULATION (EC) No 1901/2006 apply to this trial?	No

Notes:

Results analysis stage

Analysis stage	Final
Date of interim/final analysis	01 October 2008
Is this the analysis of the primary completion data?	Yes
Primary completion date	01 October 2008
Global end of trial reached?	Yes
Global end of trial date	01 October 2008
Was the trial ended prematurely?	No

Notes:

General information about the trial

Main objective of the trial:

normalisation of hyperandrogenaemia in PCOS women

Protection of trial subjects:

The subjects were instructed to take one tablet in the morning, midday and evening after a meal and not to alter their usual eating habits, physical activity, or lifestyle during the study.
During the follow-up period, each subject returned for weekly clinical assessment including anthropometric measures, evaluation of serum progesterone (level > 5 µg/l confirmed ovulation), and documentation of menstrual bleeding.

Background therapy:

-

Evidence for comparator:

Ten women were randomly assigned to receive metformin 500 mg, three times daily and nine women to receive placebo three times daily for the following 2 days.

Actual start date of recruitment	27 June 2007
Long term follow-up planned	No
Independent data monitoring committee (IDMC) involvement?	No

Notes:

Population of trial subjects

Subjects enrolled per country

Country: Number of subjects enrolled	Austria: 19
Worldwide total number of subjects	19
EEA total number of subjects	19

Notes:

Subjects enrolled per age group

In utero	0
Preterm newborn - gestational age < 37 wk	0
Newborns (0-27 days)	0
Infants and toddlers (28 days-23 months)	0
Children (2-11 years)	0
Adolescents (12-17 years)	0
Adults (18-64 years)	19

From 65 to 84 years	0
85 years and over	0

Subject disposition

Recruitment

Recruitment details:

Women with PCOS were recruited from the Department of Gynecological Endocrinology and Reproductive Medicine of the Innsbruck Medical University.

Pre-assignment

Screening details:

To be eligible for the study, subjects had to be between 18 and 40 years of age and have PCOS. All participants underwent a hormonal profile, an oral glucose tolerance test and an ACTH- stimulation test to exclude secondary causes of hyperandrogenism and manifest diabetes.

Period 1

Period 1 title	Treatment
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Double blind
Roles blinded	Subject, Investigator

Blinding implementation details:

Randomization was accomplished by using a random number table. A copy of the randomization code was stored in a sealed envelope in the patient's health record for emergency situations. The randomization code was not broken until the last patient completed all observations.

Arms

Are arms mutually exclusive?	No
Arm title	Metformin

Arm description:

Ten women were randomly assigned to receive metformin 500 mg, three times daily for 2 days.

Arm type	Experimental
Investigational medicinal product name	Metformin hydrochloride
Investigational medicinal product code	
Other name	Glucophage
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

500 mg three times daily for 2 days

Arm title	Control

Arm description:

Nine women were randomly assigned to receive placebo three times daily for 2 days

Arm type	Placebo
Investigational medicinal product name	Placebo
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

Three times daily for 2 days.

Number of subjects in period 1	Metformin	Control
Started	10	9
Completed	10	9

Period 2	
Period 2 title	Follow-up
Is this the baseline period?	No
Allocation method	Not applicable
Blinding used	Not blinded

Blinding implementation details:

The follow-up period was not blinded.

Arms

Arm title	Follow-up

Arm description: -

Arm type	Experimental
Investigational medicinal product name	Metformin hydrochloride
Investigational medicinal product code	
Other name	Glucophage
Pharmaceutical forms	Tablet
Routes of administration	Oral use

Dosage and administration details:

All study participants were then given metformin 500 mg twice daily for 1 week, followed by 500 mg three times daily to complete twelve weeks of therapy.

Number of subjects in period 2	Follow-up
Started	19
Completed	18
Not completed	1
Pregnancy	1

Baseline characteristics

Reporting groups	
Reporting group title	Metformin
Reporting group description:	
Ten women were randomly assigned to receive metformin 500 mg, three times daily for 2 days.	
Reporting group title	Control
Reporting group description:	
Nine women were randomly assigned to receive placebo three times daily for 2 days	

Reporting group values	Metformin	Control	Total
Number of subjects	10	9	19
Age categorical Units: Subjects			
In utero	0	0	0
Preterm newborn infants (gestational age < 37 wks)	0	0	0
Newborns (0-27 days)	0	0	0
Infants and toddlers (28 days-23 months)	0	0	0
Children (2-11 years)	0	0	0
Adolescents (12-17 years)	0	0	0
Adults (18-64 years)	10	9	19
From 65-84 years	0	0	0
85 years and over	0	0	0
Age continuous Units: years			
arithmetic mean	26.10	27.89	
standard deviation	± 4.25	± 4.83	-
Gender categorical Units: Subjects			
Female	10	9	19
Male	0	0	0

End points

End points reporting groups

Reporting group title	Metformin
Reporting group description:	
Ten women were randomly assigned to receive metformin 500 mg, three times daily for 2 days.	
Reporting group title	Control
Reporting group description:	
Nine women were randomly assigned to receive placebo three times daily for 2 days	
Reporting group title	Follow-up
Reporting group description: -	

Primary: Change AUC Testosterone

End point title	Change AUC Testosterone
End point description:	
End point type	Primary
End point timeframe:	
Day 1- day 4	

End point values	Metformin	Control		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	10	9		
Units: Number				
arithmetic mean (standard deviation)	-8.100 (± 2.188)	4.524 (± 4.69)		

Statistical analyses

Statistical analysis title	Change AUC Testosterone
Comparison groups	Metformin v Control
Number of subjects included in analysis	19
Analysis specification	Pre-specified
Analysis type	other
P-value	= 0.02
Method	Wilcoxon (Mann-Whitney)

Adverse events

Adverse events information

Timeframe for reporting adverse events:

Day 0- week 12

Assessment type	Systematic

Dictionary used

Dictionary name	CTCAE
Dictionary version	3.0

Reporting groups

Reporting group title	Metformin

Reporting group description:

Ten women were randomly assigned to receive metformin 500 mg, three times daily for 2 days.

Reporting group title	Control

Reporting group description:

Nine women were randomly assigned to receive placebo three times daily for 2 days

Reporting group title	Follow-up

Reporting group description: -

Serious adverse events	Metformin	Control	Follow-up
Total subjects affected by serious adverse events			
subjects affected / exposed	0 / 10 (0.00%)	0 / 9 (0.00%)	0 / 19 (0.00%)
number of deaths (all causes)	0	0	0
number of deaths resulting from adverse events	0	0	0

Frequency threshold for reporting non-serious adverse events: 5 %

Non-serious adverse events	Metformin	Control	Follow-up
Total subjects affected by non-serious adverse events			
subjects affected / exposed	0 / 10 (0.00%)	0 / 9 (0.00%)	4 / 19 (21.05%)
Gastrointestinal disorders			
Nausea			
subjects affected / exposed	0 / 10 (0.00%)	0 / 9 (0.00%)	4 / 19 (21.05%)
occurrences (all)	0	0	4
Diarrhoea			
subjects affected / exposed	0 / 10 (0.00%)	0 / 9 (0.00%)	4 / 19 (21.05%)
occurrences (all)	0	0	4

More information

Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? No

Interruptions (globally)

Were there any global interruptions to the trial? No

Limitations and caveats

None reported

Online references

http://www.ncbi.nlm.nih.gov/pubmed/25304843