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Dose escAlation study of Melatonin in Sepsis: healthy voLunteers

Submission date	Recruitment status	[X] Prospectively registered
29/02/2012	No longer recruiting	[_] Protocol
Registration date	**Overall study status**	[_] Statistical analysis plan
24/04/2012	Completed	[X] Results
Last Edited	**Condition category**	[_] Individual participant data
29/08/2019	Infections and Infestations	

Plain English summary of protocol

Background and study aims
Patients who are admitted to an Intensive Care Unit with severe infections (called sepsis) have a very high risk of death. We have shown in laboratory studies that melatonin can be of benefit. This is because melatonin is a very powerful antioxidant and can protect cells and organs against the damage caused by severe infections. We would like to give melatonin to patients with sepsis but we need to get some key information in healthy subjects first so we can decide what dose to give. In this study we will give groups of healthy men different doses of melatonin to provide crucial information for a further study (clinical trial) of melatonin in patients with sepsis. The main aim is to see how well different doses of melatonin are tolerated. We will also measure levels of melatonin and related substances in the blood and urine This will tell us how quickly the doses are processed in the body. If we find that melatonin is able to protect cells in patients with sepsis, this might mean treatment will also reduce the death rate.

Who can participate?
Male participants, aged between 18 and 30 years old, weighing less than 100kg, not taking any medication.

What does the study involve?
Participants will be given a single dose of melatonin (20-100mg) as oral capsules and will be monitored for 6 hours. This will include heart rate, temperature, blood pressure and also blood sampling and urine collection. A week later participants will fill in a questionnaire. The doses given will gradually increase, with each group of 5 people getting the same dose. The decision to increase the dose will be made by an independent groups of doctors, not the researchers.

What are the possible benefits and risks of participating?
Melatonin is a naturally occurring hormone which controls the sleep wake cycle. Melatonin manufactured as a drug has been used for several years as a treatment for jet lag. It has also been used in other clinical studies in various doses and the only common side effect is drowsiness. There have been some rare reports of slight nausea with very high doses but other side effects have not been reported. The needle used to put a tube into a vein to take blood

samples may sting a bit and may cause bruising but this is likely to be very transient. There is no direct benefit to taking part but the study will provide essential information which will help decide what dose of melatonin to give to patients in the future.

Where is the study run from?
At Aberdeen Royal Infirmary in Scotland and is organised by researchers at the University of Aberdeen (UK)

When is the study starting and how long is it expected to run for?
June 2012 and will last for 1 year

Who is funding the study?
Chief Scientist Office (Experimental and Translational Medicine Board), UK

Who is the main contact?
Professor Helen Galley
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Contact information

Type(s)
Scientific

Contact name
Prof Nigel R Webster

Contact details
University of Aberdeen
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Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number
NCT01724424

Secondary identifying numbers
3/057/11

Study information

Scientific Title
A dose escalation study of melatonin in healthy volunteers as a potential treatment for sepsis

Acronym
DAMSEL1

Study objectives
The aim of this proposed study is to administer melatonin to healthy volunteers to determine the tolerability at each dose and pharmacokinetics of melatonin using a standard dose escalation study design. We will measure the concentrations of melatonin and its major metabolites to determine a dosing interval and clearance.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Not provided at time of registration

Study design
Single-centre phase I open-label dose-escalation study

Primary study design
Interventional

Secondary study design
Non randomised study

Study setting(s)
Hospital

Study type(s)
Treatment

Participant information sheet
Not available in web format, please contact damsel.study@gmail.com to request a patient information sheet

Health condition(s) or problem(s) studied
Sepsis

Interventions
Oral melatonin, 20-100mg, single dose in cohorts of 5 subjects

Intervention Type
Other

Phase
Phase I

Primary outcome measure
Tolerance of the oral melatonin dose with no adverse events and approval by the Data Monitoring Committee to proceed to the next dose

Secondary outcome measures
Plasma levels and clearance of melatonin/metabolites at different doses measured at intervals up to 6 hours

Overall study start date
01/06/2012

Completion date
14/06/2013

Eligibility

Key inclusion criteria
1. Male
2. Aged 18-30 years
3. <100kg
4. Not taking medication

Participant type(s)
Patient

Age group
Adult

Lower age limit
18 Years

Upper age limit
30 Years

Sex
Male

Target number of participants
20

Key exclusion criteria
1. Female
2. <18 or >30 years
3. >100kg
4. Taking regular medication

Date of first enrolment
01/06/2012

Date of final enrolment
14/06/2013

Locations

Countries of recruitment
Scotland

United Kingdom

Study participating centre
Aberdeen Royal Infirmary
Intensive Care Unit
Aberdeen
United Kingdom
AB25 2ZN

Sponsor information

Organisation
University of Aberdeen (UK)

Sponsor details
Polwarth Building
Foresterhill
Aberdeen
Scotland
United Kingdom
AB25 2ZD

Sponsor type
University/education

Website
http://www.abdn.ac.uk/

ROR
https://ror.org/016476m91

Funder(s)

Funder type
Government

Funder Name
Chief Scientist Office (UK) ref: ETM/167

Alternative Name(s)
CSO

Funding Body Type
Government organisation

Funding Body Subtype
Local government

Location
United Kingdom

Results and Publications

Publication and dissemination plan
Not provided at time of registration

Intention to publish date

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	01/05/2014		Yes	No