ISRCTN72651199 https://doi.org/10.1186/ISRCTN72651199

Effect of food on the absorption, distribution, metabolism and elimination of diclofenac after administration of diclofenac epolamine tablets to healthy volunteers

Submission date
04/11/2020

Recruitment status
No longer recruiting

Registration date
16/11/2020

Overall study status
Completed

Last Edited
06/12/2022

Condition category
Other

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

Plain English summary of protocol

Background and study aims
This is a study of the way food affects the ways a drug is processed by the body. 'Bioavailability' is the amount of the active substance of medicine that reaches the blood flow while the 'pharmacokinetics profile' describes the way the medicine behaves inside the body, after administration, i.e. the absorption, distribution, metabolism and elimination of the substance. This study is designed to investigate the food effect on the bioavailability and the pharmacokinetics profile of an oral formulation of diclofenac epolamine (DHEP) tablets (each tablet contains 65 mg of diclofenac epolamine corresponding to 50 mg of diclofenac sodium), when administered under fed and fasting conditions to healthy subjects. Diclofenac is a medicine that reduces inflammation and pain.

Who can participate?
Healthy women and men, 18 - 55 years old, can participate. They must comprehend the full nature and purpose of the study, including possible risks and side effects and co-operate with the investigator to comply with the requirements of the entire study. Women of child-bearing potential must be using at least one reliable method of contraception.

What does the study involve?
The study will be conducted at the CROSS Research S.A. Phase I Unit Clinical Centre, in Arzo, Switzerland. Study participants will receive a single oral dose of diclofenac epolamine tablets, under fasting conditions and on a full stomach, in 2 periods, with an interval of at least 5 days between administrations. The formulation to be tested is not yet available on the market in Switzerland, and should therefore be considered a trial product. Participants will have blood samples taken and vital parameters recorded at regular intervals.

What are the possible benefits and risks of participating?
Participating in this study will not bring any direct benefit to participants, with the exception of the medical tests that will be performed during it. As single doses of diclofenac will be

administered during this study, no particular risks are expected. However, as with all products, the appearance of allergic reactions or side effects that are known or not yet known cannot be ruled out.

Where is the study run from?
The study will be conducted at the CROSS Research S.A. Phase I Unit Clinical Centre, in Arzo, Switzerland.

When is the study starting and how long is it expected to run for?
August 2019 to November 2019.

Who is funding the study?
IBSA Institut Biochimique S.A. (Switzerland)

Who is the main contact?
Dr Milko Radicioni, clinic@croalliance.com

Contact information

Type(s)
Scientific

Contact name
Mrs Carol Caverzasio

ORCID ID
http://orcid.org/0000-0002-2697-4271

Contact details
IBSA Institut Biochimique S.A.
Via Pian Scairolo 49
Pazzallo
Switzerland
6912
+41583601000
sd@ibsa.ch

Additional identifiers

EudraCT/CTIS number
Nil known

IRAS number

ClinicalTrials.gov number
Nil known

Secondary identifying numbers
19CH-GIB05

Study information

Scientific Title
Effect of food on diclofenac pharmacokinetics after administration of diclofenac epolamine (DHEP) tablets to healthy volunteers

Study objectives
This study is designed to investigate the food effect on the bioavailability of an oral formulation of DHEP tablets (each tablet contains 65 mg of diclofenac epolamine corresponding to 50 mg of diclofenac sodium), when administered under fed and fasting conditions to healthy subjects.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Approved 08/08/2019, Canton Ticino Ethics committee (c/o Ufficio di sanità, Via Orico 5, 6501 Bellinzona, Switzerland; +41(0)91 814 30 57; beatrice.giberti-gai@ti.ch), ref: 2019-01362 / CE 3503

Study design
Single dose open-label randomized two-way cross-over food effect study

Primary study design
Interventional

Secondary study design
Randomised cross over trial

Study setting(s)
Other

Study type(s)
Other

Participant information sheet
Not available in web format, please use contact details to request a participant information sheet

Health condition(s) or problem(s) studied
Effect of food on diclofenac pharmacokinetics

Interventions
A single dose of the investigational medicinal product (Diclofenac epolamine [DHEP] 65 mg tablet [containing 65 mg of diclofenac epolamine, corresponding to 50 mg of diclofenac sodium]) will be administered to healthy male and female volunteers under fed and fasting conditions in 2 study periods, according to a two-way cross-over design, with a wash-out interval of at least 5 days between the two administrations.

Intervention Type
Drug

Phase
Phase I

Drug/device/biological/vaccine name(s)
Diclofenac epolamine (DHEP)

Primary outcome measure
Bioavailability of diclofenac assessed by comparing the rate (Cmax) and extent (AUC0-t) of absorption measured using ... during each condition

Secondary outcome measures
Safety and tolerability of diclofenac will be evaluated during each condition by
1. Adverse events measured using self-reports and patient records throughout the study
1.1. Pre-treatment AEs (PTAEs) are all AEs occurring after IC signature by the enrolled subject but before the the first dose of IMP
1.2. Treatment-Emergent AEs (TEAEs) are all AEs occurring or worsening after the administration of the first dose of IMP
2. Vital signs (blood pressure [mmHg], heart rate [bpm]) measured at screening visit, day 1of each period: pre-dose (0) and 8 h post-dose and at early termination visit (if applicable)
3. Bodyweight (kg)
4. Physical examinations are performed at the screening and final visit/early termination visit (ETV) to check subjects' overall health and the occurrence of any AE throughout the study duration
5. Laboratory parameters:
5.1. Haematology, blood chemistry, serum virology and urine analysis is performed at the screening visit
5.2. A urine drug test is performed at the screening and at the entrance of each study period, using a urine multi-drug kit
5.3. A serum pregnancy test is performed by the laboratory at screening. A urine pregnancy test is performed at the entrance of each study period
5.4. Haematology, blood chemistry are performed at the final visit/ETV
6. Heart rate variability and heart activity measured using ECG at screening and final visit/ETV

Overall study start date
08/08/2019

Completion date
05/11/2019

Eligibility

Key inclusion criteria
1. Informed consent: signed written informed consent before inclusion in the study
2. Age 18 - 55 years old inclusive
3. Body Mass Index: 18.5 - 30 kg/m² inclusive
4. Vital signs: systolic blood pressure 100 - 139 mmHg, diastolic blood pressure 50 - 89 mmHg, heart rate 50 - 90 bpm, measured after 5 min at rest in the sitting position
5. Full comprehension: ability to comprehend the full nature and purpose of the study, including possible risks and side effects; ability to co-operate with the investigator and to comply with the requirements of the entire study

6. Contraception and fertility (women): women of child-bearing potential must be using at least one of the following reliable methods of contraception:
6.1. Hormonal oral, implantable, transdermal, or injectable contraceptives for at least 2 months before the screening visit
6.2. A non-hormonal intrauterine device or female condom with spermicide or contraceptive sponge with spermicide or diaphragm with spermicide or cervical cap with spermicide for at least 2 months before the screening visit
6.3. A male sexual partner who agrees to use a male condom with spermicide
6.4. A sterile sexual partner
7. Female participants of non-childbearing potential or in post-menopausal status for at least one year will be admitted
8. For all women, pregnancy test result must be negative at screening and Day -1

Participant type(s)
Healthy volunteer

Age group
Adult

Lower age limit
18 Years

Sex
Both

Target number of participants
20

Total final enrolment
20

Key exclusion criteria
1. Electrocardiogram: 12-leads (supine position): clinically significant abnormalities
2. Physical findings: clinically significant abnormal physical findings which could interfere with the objectives of the study
3. Laboratory analyses: clinically significant abnormal laboratory values indicative of physical illness
4. Allergy: ascertained or presumptive hypersensitivity to the active principle and/or formulations' ingredients; history of anaphylaxis to drugs or allergic reactions in general, which the investigator considers may affect the outcome of the study
5. Diseases: significant history of renal, hepatic, gastrointestinal, cardiovascular, respiratory, skin, haematological, endocrine or neurological diseases that may interfere with the aim of the study
6. Medications: medications, including over the counter medications, herbal remedies and supplements for 2 weeks before the start of the study. Hormonal contraceptives and hormonal replacement therapy for women will be allowed
7. Investigative drug studies: participation in the evaluation of any investigational product for 3 months before this study. The 3-month interval is calculated as the time between the first calendar day of the month that follows the last visit of the previous study and the first day of the present study
8. Blood donation: blood donations for 3 months before this study

9. Drug, alcohol, caffeine, tobacco: history of drug, alcohol (>1 drink/day for women and >2 drinks /day for men, defined according to the USDA Dietary Guidelines 2015-2020), caffeine (>5 cups coffee/tea/day) or tobacco abuse (10 cigarettes/day)
10. Drug test: positive result at the drug test at screening or Day -1
11. Alcohol test: positive alcohol breath test at Day -1
12. Diet: abnormal diets (<1600 or >3500 kcal/day) or substantial changes in eating habits in the 4 weeks before this study; vegetarians
13. Pregnancy (women only): positive or missing pregnancy test at screening or Day -1, pregnant or lactating women

Date of first enrolment
14/10/2019

Date of final enrolment
15/10/2019

Locations

Countries of recruitment
Switzerland

Study participating centre
CROSS Research S.A.
Phase I Unit
Via F.A. Giorgioli 14
Arzo
Switzerland
6864

Sponsor information

Organisation
IBSA Institut Biochimique (Switzerland)

Sponsor details
Via Pian Scairolo 49
Pazzallo
Switzerland
6912
+41 583601000
sd@ibsa.ch

Sponsor type
Industry

Website

https://www.ibsagroup.com/

ROR
https://ror.org/051tj3a26

Funder(s)

Funder type
Industry

Funder Name
IBSA Institut Biochimique S.A.

Results and Publications

Publication and dissemination plan
To date, there are no plans to public the study results on scientific journals.

Intention to publish date
31/12/2020

Individual participant data (IPD) sharing plan
The current data sharing plans for this study are unknown and will be available at a later date.

IPD sharing plan summary
Data sharing statement to be made available at a later date

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Basic results		23/06/2021	30/07/2021	No	No