Influence of oxynorm melt tablet versus paracetamol melt tablet on pain relief in healthy volunteers

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Ethische beoordeling	Positief advies
Status	Werving gestopt
Type aandoening	-
Onderzoekstype	Interventie onderzoek

Samenvatting

ID

NL-OMON28272

Bron
NTR

Verkorte titel
OXY study

Aandoening

Chronic pain

Ondersteuning

Overige ondersteuning: This investigator initiated trial is partly supported financially by Mundipharma Nederland BV

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

Pain relief as measured by electrical pain tolerance, electrical pain threshold and pressure pain threshold.

Toelichting onderzoek

Achtergrond van het onderzoek

A relatively new treatment option for acute breakthrough pain is the use of orodispersible (ie. disintegrating or melt) tablets that are applied on or under the tongue and that give a rapid onset of analgesia. In the current study we will assess the antinociceptive effect of treatment with a 20 mg orodispersible oxycodone tablet versus a 500 mg paracetamol orodispersible tablet in a population of healthy volunteers. We recently showed that a longitudinal pharmacodynamic analysis provides important information on the onset and offset of action of analgesic treatment and argued that this approach is superior to analysis of effect at fixed time points during the course of treatment (Martini, J Pain Res 2012; Martini Eur J Pain 2013). In the current study we will apply this pharmacodynamic analysis on the timexeffect data. The effect of treatment on two experimental pain models (electrical and pressure pain) is assessed over 5-hours and the longitudinal responses were characterized in terms of speed of onset, speed of offset and magnitude of effect. This technique further allows estimation of the first observation of meaningful analgesia assuming a specific increase in response threshold as marker for meaningful analgesia. The study has a a randomized, double-blind, active comparator controlled and crossover design.

Doel van het onderzoek

The main aim of the study was to quantify the temporal antinociceptive profile of administration of oxynorm orodispersible tablets versus orodispersible paracetamol tablets. We hypothesize that oxycodone produces greater analgesia than the active comparator and meaningful analgesia, as defined by a 15% increase in response thresholds, within 10 min.

Onderzoeksopzet

Electrical pain threshold and tolerance: at t = 5, 10, 15, 20, 25, 35, 45, 55, 65, 75, 85, 95, 110, 125, 140, 170 200, 230, 260 and 290 min.

Pain pressure threshold at 30, 60, 90, 120, 180, 240 and 300 min.
t =

Onderzoeksproduct en/of interventie

In this randomized, double blind, active-comparator and crossover study, subjects were randomized to receive one oxycodone 20 mg (Oxynorm Instant, Mundipharma BV, Hoevelaken, The Netherlands) orodispersible tablet on one occasion and one paracetamol 500 mg orodispersible tablet (Roter, Hilversum, The Netherlands) on another occasion. One

week was allowed for washout. The subjects were requested to fast for at least 6-hours prior to the intake of study medication. The tablets were placed under the tongue; the subject was not allowed to swallow until the drug had completely disintegrated. To assess the analgesic treatment efficacy, two nociceptive assays were applied: electrical noxious stimulation of the skin over the shin bone and noxious pressure stimulation of the area between thumb and index finger. Prior to the study the subjects were familiarized with both pain tests.
2.2.1 Electrical noxious stimulation. A locally designed and manufactured transcutaneous electrical stimulation (TES) device was used to create a constant current electrical stimulus train (stimulation at 20 Hz, pulse duration 0.2 ms).The device was attached to two surface electrodes that were applied on the skin over the tibial bone of the non-dominant side. The location of the electrodes was chosen such that the electrical stimulation did not cause any muscle contraction. The current over the electrodes was increased from 0 mA at a rate of 1 mA per second, with a cutoff of 128 mA. The subjects were instructed to indicate when the stimulation became painful (ie.electrical pain threshold, EPTh) by pressing a button on a control box. Pressing a second button, they could end the stimulus train when the pain was perceived as intolerable (ie. electrical pain tolerance, EPTol). Prior to drug administration baseline values were obtained. To that end, three tests were performed at 5 min intervals. The three currents obtained for pain threshold and tolerance were averaged and served as baseline values. Following treatment, TES was applied at t = 5, 10, 15, 20, 25, 35, 45, 55, 65, 75, 85, 95, 110, 125, 140, 170 200, 230, 260 and 290 min.
2.2.2 Pressure pain. An FPN 100 N Algometer (FDN 100, Wagner Instruments Inc., Greenwich, CT) was used to deliver pressure pain on an area of 1 cm2 between thumb and index finger. The FDN 100 has a force capacity (± accuracy) of 100 ± 2 N (10 ± 0.2 kgf) and graduation of 1N (100 gf), respectively. A gradually increasing pressure was manually applied and the subjects were asked to indicate when the procedure became painful (ie. pressure pain threshold, PPTh). The pressure was then released. Following treatment, the pressure test was applied at t = 30, 60, 90, 120, 180, 240 and 300 min.

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Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

Healthy male or female volunteer

age 18 - 65 years,

body mass index 18 - 35 kg/m2

body weight 50 - 100 kg.

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

(a) a history of mental health problems; (b) a history of alcohol or substance abuse; (c) alcohol use of three or more (male) or two or more (female) units per day; (d) positive pregnancy test; (e) females not using oral contraceptives, not surgically sterilized, or not post-menopausal (last menstrual period > 2 years ago and FSH > 25 IU/L); (f) a history of allergic or anaphylactic reaction or significant intolerability to prescription or non-prescription drugs or food, (g) participation in an investigational drug trial in the last 3 months or participation in medical trials more than 4 times per year; and (h) any other condition that in the opinion of the investigator would complicate or compromise the study, or the well-being of the subject.

Onderzoeksopzet

Opzet

Type:	Interventie onderzoek
Onderzoeksmodel:	Cross-over
Toewijzing:	Gerandomiseerd
Blindering:	Dubbelblind
Controle:	Geneesmiddel

Deelname

Nederland

Status:	Werving gestopt
(Verwachte) startdatum:	01-10-2013
Aantal proefpersonen:	12
Type:	Werkelijke startdatum

Ethische beoordeling

Positief advies

Datum:	13-12-2013
Soort:	Eerste indiening

Registraties

Opgevolgd door onderstaande (mogelijk meer actuele) registratie

Geen registraties gevonden.

Andere (mogelijk minder actuele) registraties in dit register

Geen registraties gevonden.

In overige registers

Register	ID
NTR-new	NL4124
NTR-old	NTR4313
Ander register	: P12.124

Register	ID
ISRCTN	ISRCTN wordt niet meer aangevraagd.

Resultaten

Samenvatting resultaten

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