Feasibility, meachanism of action and potential side effects of extended release depot naltrexone (XRNT) in opioid dependent patients

Published: 27-10-2011
Last updated: 29-04-2024

The aims are: (1) to explore the feasibility of XRNT treatment in the Netherlands in terms of treatment participation and treatment retention; and (2) to study the mechanism of action of XRNT using pharmacoMRI and SPECT, and (3) to study the...

Ethical review	Approved WMO
Status	Pending
Health condition type	Other condition
Study type	Interventional

Summary

ID

NL-OMON35900

Source
ToetsingOnline

Brief title
Extended release depot naltrexone

Condition

- Other condition

Synonym
heroin dependence, opioid dependence

Health condition

middelenafhankelijkheid (heroine)

Research involving

Human

Sponsors and support

Primary sponsor: Academisch Medisch Centrum
Source(s) of monetary or material Support: ZonMw

Intervention

Keyword: fMRI, heroin dependence, naltrexone, SPECT

Outcome measures

Primary outcome

Brain functions of 20 heroin addicts just before and during a three month XRNT treatment using both functional MRI and dopamine transporter SPECT, compared to brain functions of 20 healthy controls. Adverse effects of XRNT on natural rewards. These changes in subjective experiences will be correlated with changes in dopamine transporter density (SPECT).

Secondary outcome

The feasibility and potential efficacy of XRNT in a small sample of 20 heroin addicts in terms of (a) the percentage of patients that actually starts XRNT treatment when invited and (b) the percentage of 3 months retention.

Adverse events and side effects will also be measured.

Study description

Background summary

Heroin dependence is a quintessential international health problem, with a significant prevalence. In the Netherlands there are about 18,000 problematic heroin users (NDM, 2010). Of these, almost 13,000 (70%) are in regular contact with the treatment system: 11,000 in methadone maintenance treatment (MMT), 800 in heroin assisted treatment (HAT), and 1,200 in abstinence oriented treatment.

Average age is 44 years, only 6% is younger than 30 years, and only 5% are new referrals with no previous treatment history. The vast majority are chronic polydrug dependent patients with a long treatment history. Based on anecdotal information, it seems that some of the new referrals, many of the patients in abstinence treatments, and some of the patients in MMT and HAT are interested in a life without opioids, i.e. without illegal
heroin or prescribed methadone or heroin. However, drug free treatments, including pharmacologically supported interventions using oral naltrexone (NT), have not been very successful, mainly due to low compliance. The recent introduction of extended release naltrexon (XRNT) treatment, consisting of monthly injections, may create new opportunities.
Injectable XRNT is an innovative treatment delivery method that blocks the rewarding effects heroin, and possibly also alcohol and stimulants for at least one month after injection. XRNT (Vivitrol®, Alkermes Inc, Cambridge, MA, USA) has been approved by the US FDA for the treatment of opioid dependence in the general population in October 2010.

Study objective

The aims are: (1) to explore the feasibility of XRNT treatment in the Netherlands in terms of treatment participation and treatment retention; and (2) to study the mechanism of action of XRNT using pharmacoMRI and SPECT, and (3) to study the potential negative effect of XRNT on natural rewards.

Study design

Quasi-experimental design: pre and on XRNT assessments using brain fMRI and SPECT.

Intervention

Three XRNT injections will be administered at 1-month intervals.

Study burden and risks

Patients will visit the AMC eight times: prior to the first XRNT injection participants* eligibility for XRNT will be determined by history, biochemical testing and the naloxone challenge test. Patients will receive three XRNT injections at 1-month intervals. Two fMRI sessions and two SPECT sessions will be conducted. In addition, participants will complete some questionnaires and the site of injection will be inspected a week after injection.
Healthy controls will ondergo a MRI and SPECT scan once after completing some questionnaires.
The anticipated risks associated with research participation are limited to the possible side effects of depot naltrexone, which are relatively few.
The project will yield considerable information regarding the effectiveness of

depot naltrexone in reducing opioid use and reducing recidivism and may provide information as to the best way to treat opioid dependence. Some subjects may actually find participation to be beneficial in supporting their recovery.

Contacts

Public
Academisch Medisch Centrum

Meibergdreef 5
Postbus 22660, 1100 DD AMSTERDAM ZUIDOOST
NL
Scientific
Academisch Medisch Centrum

Meibergdreef 5
Postbus 22660, 1100 DD AMSTERDAM ZUIDOOST
NL

Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age
Adults (18-64 years)
Elderly (65 years and older)

Inclusion criteria

Heroin dependent patients: have a diagnosis of opioid dependence according to DSM-IV criteria.
Healthy controls: no diagnosis of substance dependence, no current psychotropic medication. Care will be taken to match controls for gender, age and smoking status.

Exclusion criteria

1) Age below 18 or over 55
2) Medical contraindications for XRNT or MRI
3) Presence of disorders precluding normal perception of visual and auditory stimuli
4) Patients who are psychiatrically unstable
5) History or evidence of disorders that may affect cerebral function or circulation
6) Female subjects: women who are pregnant or breast-feeding

Study design

Design

Study phase:	3
Study type:	Interventional
Intervention model:	Other
Allocation:	Non-randomized controlled trial
Masking:	Open (masking not used)

Primary purpose: Treatment

Recruitment

NL

Recruitment status:	Pending
Start date (anticipated):	01-10-2012
Enrollment:	40
Type:	Anticipated

Medical products/devices used

Product type:	Medicine
Brand name:	Vivitrol
Generic name:	naltrexone (for extended-release injectable suspension)

Ethics review

Approved WMO

Date:	27-10-2011
Application type:	First submission
Review commission:	METC Amsterdam UMC
Approved WMO Date:	25-06-2012
Application type:	Amendment
Review commission:	METC Amsterdam UMC
Approved WMO Date:	14-01-2013
Application type:	Amendment
Review commission:	METC Amsterdam UMC

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
EudraCT	EUCTR2011-001890-15-NL
CCMO	NL36681.018.11