Tackling the effect of duloxetine on brain function in mood specific emotional processing in healthy volunteers: An fMRI study bridging pharmacotherapeutical and cognitive psychological approaches to depression

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Ethische beoordeling	Positief advies
Status	Anders
Type aandoening	-
Onderzoekstype	Interventie onderzoek

Samenvatting

ID

NL-OMON24781

Bron
Nationaal Trial Register

Verkorte titel
Duloxetine fMRI study

Aandoening

depression, mood disorders,
depressie, stemmingsstoornis

Ondersteuning

Primaire sponsor: Radboud University Nijmegen Medical Centre
Overige ondersteuning: In part supported by Eli Lilly Nederland BV

Onderzoeksproduct en/of interventie

Uitkomstmaten

Primaire uitkomstmaten

Main outcome-measures consist of behavioral measures as well as statistical maps of the functional imaging data as measured by fMRI.
Three tests will be administered targetting:
- perception of emotionally valenced pictures
- the processing of punishment and reward monetary reward task
- memory bias with regards to emotional valence.

Toelichting onderzoek

Achtergrond van het onderzoek

Enhancement of serotonin and/or norepinephrine neurotransmission is the main approach in the pharmacological treatment of depressive disorder. However, the precise neurobiological mechanisms on the system level are not fully understood yet. Our starting point is that cognitive psychological approaches emphasise the role of negative biases in perception, attention and memory in the development and maintenance of depressive disorder.
In an attempt to bridge the pharmacological and the cognitive psychological approach, a recent study by Harmer and colleagues (2004) in healthy volunteers has shown that administration (for 7 days) of a selective serotonin reuptake inhibitor (SSRI, citalopram) as well as of a selective norepinephrine reuptake inhibitor (reboxetine) had similar effects in reducing the negative biases of emotional stimuli. In particular, the link between depression and bias for memory appears to be of most importance: A depressed individual retrieves preferentially negative memories, which in turn maintains or aggravates depressive symptomatology, resulting in a vicious cycle. Moreover, negative retrieval reinforces an interpretation bias potentially affecting the formation of new memories by preferring negative information.

The current study wants extend this research and to further elucidate the mechanisms of action at a neuronal level of the new ‘dual action’ antidepressant duloxetine in the modulation of negative biases in information processing of the emotional stimuli in connection with depressive mood with a special emphasis on memory. Like Harmer and colleagues, we will investigate these mechanisms in healthy volunteers and not in patients with a depression. The use of healthy volunteers enables us to shed light on the direct action of the antidepressant unconfounded by symptom remission or mood improvement that may be seen in patients.

Doel van het onderzoek

The main hyothesis of the experiments is that a dual action antidepressant (duloxetine) modulates functions in specific brain areas involved in the processing bias of emotional stimuli in the context of neutral versus depressed mood.

Onderzoeksopzet

- after 14 days of use of duloxetine

- after 14 days of use of placebo

Onderzoeksproduct en/of interventie

This study will be a double-blind, placebo-controlled, cross-over study. Volunteers will be randomly assigned to one of two treatment sequences. Each volunteer will receive the dual action antidepressant duloxetine for 14 days and placebo for 14 days with an interval of 14 days between each treatment.

Contactpersonen

Publiek

Radboud University Nijmegen Medical Centre
Department of Psychiatry, 966
PO Box 9101

Robbert J Verkes
Nijmegen 6500 HB
The Netherlands
+31 (0)24 3613970

Wetenschappelijk

Radboud University Nijmegen Medical Centre
Department of Psychiatry, 966
PO Box 9101

Robbert J Verkes
Nijmegen 6500 HB
The Netherlands
+31 (0)24 3613970

Deelname eisen

Belangrijkste voorwaarden om deel te mogen nemen (Inclusiecriteria)

1. Subjects must be at least 18 but not older than 50 years of age.

2. Subjects must have given a written informed consent.

3. They must have good physical and mental health as determined by medical history and medical, ECG and laboratory examination.

4. Their Body Mass Index between 18.5-24.9.

Belangrijkste redenen om niet deel te kunnen nemen (Exclusiecriteria)

1. Known hypersensitivity to duloxetine or any of the inactive ingredients.

2. Contra-indications for duloxetine (hepatic impairment, severe renal impairment with a GFR < 30ml/min)

3. History of prescribed medication within the month prior to the start of treatment with trial medication with the exception of oral contraceptives and of paracetamol as needed.

4. History of OTC medication or cannabis usage within 2 months prior to the start of treatment with trial medication with exception of occasional use of paracetamol;

5. History of opiate, LSD, amphetamine, cocaine, alcohol, solvents or barbiturate abuse;

6. Family history of schizophrenia.

7. Medical or surgical history that in the investigator’s view may significantly affect the outcome of the trial; such as cardiovascular disorders, neurological disorders (especially myastenia gravis, epilepsy, migraine and dyslexia), psychiatric and personality disorders (especially depression, anxiety and schizophrenia), gastro-intestinal disorders, renal or hepatic disorders, glaucoma, hormonal disorders (especially diabetes mellitus) and coagulation, hematological or cerebrovascular disorders, severe visual impairment;

8. Positive drug/alcohol screen before each experiment.

9. Excessive smoking (more than 10 cigarettes or equivalent daily);

10. Febrile illness within 3 days before the first dose;

11. Clinically significant abnormal laboratory, ECG abnormalities;

12. Blood pressure at rest systolic > 170 mm Hg; diastolic > 100 mm Hg;

13. Participation in another drug study within 3 months preceding this study;

14. Orthostatic dysregulation at the screening examination;

15. Uncontrolled Narrow-Angle Glaucoma;

16. Post-menopausal women, pregnant women, lactating women and women without adequate hormonal anticonception;

17. Inability to understand the nature and extent of the trial and the procedures required;

18. Inability to understand the procedures of the neuropsycholoigcal tests;

19. Contraindication to MRI.

Onderzoeksopzet

Opzet

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

Deelname

Nederland

Status:	Anders
(Verwachte) startdatum:	01-08-2008
Aantal proefpersonen:	24
Type:	Onbekend

Ethische beoordeling

Positief advies

Datum:	25-09-2008
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	NL1399
NTR-old	NTR1459
Ander register	CMO 2007/138 : III.04.0602
ISRCTN	ISRCTN wordt niet meer aangevraagd

Resultaten

Samenvatting resultaten
N/A