PET/CBT/NEUROCOGNITIVE TESTING STUDY

NEWSLETTER: What are you looking for in your PET/CBT/Neurocognitive Testing Study?

SAXENA / MAIDMENT:

This study will examine regional brain activity, as measured by positron emission tomography (PET) scans, and neurocognitive performance in adults diagnosed with obsessive-compulsive disorder (OCD), before and after four weeks of treatment with intensive cognitive-behavioral therapy (CBT), with or without medication. This study is similar to our PET/Paxil study in that we are looking at changes in brain activity in specific regions of the brain that occur with treatment. In this case the treatment we are using is intensive CBT, conducted 5 days/week for 4 weeks. We are also looking at how neurocognitive functions, such as memory, attention, language, and visual-spatial abilities change with intensive CBT for OCD.

The overall goals of this study are to better understand how CBT works in OCD, by determining how it affects the functioning of the brain, as measured by PET scans that show brain activity, as well as neurocognitive performance. This will also help us better understand the underlying neurobiology of OCD and its response to treatment.

The specific objectives of this study are:

1. To identify the brain systems that mediate response to intensive CBT in OCD. We also wish to find out whether the changes in brain activity previously seen after 12 weeks of conventional, weekly CBT can be significantly accelerated by intensive CBT, to be attained in only 4 weeks. No prior study has ever shown changes in brain function in such a short time period in patients with OCD, which is notoriously slow to respond to treatment. Our intensive CBT method has already shown excellent clinical efficacy in 4 weeks, a dramatic acceleration of treatment response. Thus, it makes sense now to determine whether this rapid response is accompanied by the same (or different) brain functional changes that have been associated with slower response in many previous studies. Results from this study could have important ramifications for our understanding of the brain mechanisms of treatment response in OCD and for how it will be treated in the future.

2. To determine whether the neurocognitive abnormalities associated with OCD improve or change after intensive CBT. This would help us understand whether they are trait or state markers of OCD. It also helps us determine how CBT works. We also plan to examine the links between changes in regional brain metabolism, neurocognitive deficits, and OCD symptom severity.

3. To determine whether the changes in brain activity associated with response to intensive CBT are the same or different as those produced by response to medication treatment. (Subjects in a parallel study receive 12 weeks of free medication treatment with Paxil for their OCD).

NEWSLETTER: What does this study involve? How long is it?

SAXENA / MAIDMENT:

This study is 5 weeks long. It involves having two PET scans of the brain, one just before, and one after treatment with intensive CBT. It also involves receiving a battery of neurocognitive tests before and after treatment. Each patient will also receive a magnetic resonance imaging (MRI) scan of the brain.

NEWSLETTER: Please describe the 4-week intensive Cognitive Behavior Therapy program each participant will be involved in.

SAXENA / MAIDMENT:

All participants receive 4 weeks of daily, intensive CBT that consisting of daily 90-minute sessions of exposure and response prevention (ERP), followed by daily structured home assignments conducted under close supervision. ERP is the behavioral treatment of choice for OCD. ERP involves the gradual exposure of a person to the object or situation that causes anxiety. During an exposure, which leads to initial increase in anxiety, patients are encouraged to resist their urges to ritualize, in both treatment and non-treatment settings. The patient is then supported as they resist the urge to do their compulsions. This ultimately leads to a decrease in anxiety. The treatment also includes cognitive and mindfulness techniques and a relapse prevention module. Treatment is done on a one-on-one basis with Dr. Eda Gorbis, a specialist in intensive CBT for OCD.

NEWSLETTER: How many days a week and hours a day will the CBT sessions be? How many weeks will the study last?

SAXENA / MAIDMENT:

The treatment is five days a week for 1 1/2 hours each day, plus homework exercises. It last for 4 weeks.

NEWSLETTER: Will the intensive CBT be provided to study participants free of charge?

SAXENA / MAIDMENT:

Yes.

NEWSLETTER: Will there be monetary compensation for individuals who take part in this study? Will there be travel reimbursement?

SAXENA / MAIDMENT:

No. All participants will receive free CBT, free PET and MRI scans, and free neurocognitive testing.

NEWSLETTER: What is neurocognitive testing? How does it relate to OCD? What are you looking for with the neurocognitive testing?

SAXENA / MAIDMENT:

The neurocognitive testing done in this study measures several aspects of thinking, including memory, attention, language, fine motor coordination, visual-spatial abilities, and problem solving skills. Many previous studies have found neurocognitive abnormalities in OCD, but it is unclear whether these are stable trait features of the illness, or whether they improve with treatment. This study will determine if neurocognitive performance changes with intensive CBT. The neurocognitive testing includes 4 general tests, each with several subtests, designed to investigate specific areas of mental processing. The *Executive Function*s portion tests ability to form concepts, plan and sequence information. It looks at language patterns, and attention. The *Memory Functions* portion test verbal and nonverbal recall in various time periods. The *Visual/Spatial Functions* portion tests abilities to perceive and work with visual stimuli. The *Psychomotor Functions* portion assesses fine motor coordination.

NEWSLETTER: Give our readers some examples of the kinds of questions that will be asked?

SAXENA / MAIDMENT:

Some examples would be questions about specific types of memory. A patient might be asked to remember details from a story, or look at a list of objects and try to remember the list later on in the session, or to remember the details of an abstract figure drawing. Other tests examine a patient's ability to problem solve different kinds of puzzles.

NEWSLETTER: How long will the neurocognitive testing take? How many times will a participant have to take it? Will someone go over the results of this test with the individuals who took it?

SAXENA / MAIDMENT:

The neurocognitive tests will take 1.5 - 2 hours to complete. They are done before and after the four weeks of treatment with intensive CBT. The testing is performed by a neuropsychologist with extensive experience in OCD, who can review the results with participants who are interested.

NEWSLETTER: How long is the study? How many sessions will participants have to attend? How long are the sessions?

SAXENA / MAIDMENT:

The study is 5 weeks long. There are two PET scans, each 3 - 3 and 1/2 hours long. The MRI is one session, about 45 minutes long. There are two sets of neurocognitive testing. The

first is 1 and 1/2 – 2 hours long and the second is 1 – 1and 1/2 hours. There are 20 sessions of CBT. Each session is 90 minutes long, followed by homework exercises.

NEWSLETTER: Participants in this study will have two PET scans of their brains; one before and one after the four weeks of intensive CBT. What will you be looking for in these scans?

SAXENA / MAIDMENT:

The PET scans serve several purposes. They show the activity of the brain, as measured by the rate of glucose metabolism. Many PET studies have shown abnormal patterns of brain activity in people with OCD. More significantly, these abnormalities improve significantly with response to treatment. As in our PET/Paxil study, we are examining specific brain regions that show abnormal activity in patients with OCD and measuring the changes in brain activity from before to after treatment. This allows us to find out which brain areas mediate different clusters of symptoms, such as OCD symptoms versus depression symptoms. In this study, we are investigating the brain mechanism of action of intensive CBT by measuring the effect of CBT on brain activity, as seen on the PET scans. We want to find out whether intensive CBT has the same, or different effects on brain activity as medication treatment. We also want to find out whether short-term, 4 week, intensive CBT can produce the same brain changes generally seen only after longer treatments, such as 12 weeks of medication or standard, weekly CBT. We also hope to identify pre-treatment patterns of brain activity that predict response to CBT for OCD, in hopes that that we might someday be able to tailor treatment to each individual, based on their own unique pattern of brain activity.

NEWSLETTER: Participants will also have an MRI scan of the brain as part of this study? When will that be done? Why is an MRI scan being done? What do you expect these scans to tell you about the brains of people with OCD? About the effect of CBT on brain functioning?

SAXENA / MAIDMENT:

MRI scans are standard medical procedures. Each patient in our study receives one MRI of the brain, which can be done at any point during the twelve weeks of treatment with Paxil, between the first and second PET scans. The MRI scan gives a great deal of information. First, it tells us if there are any structural abnormalities in the brain, such as cysts, tumors, strokes, or atrophy. Should any anything abnormal show up on the MRI, the patient is informed immediately and referred for appropriate evaluation or treatment. Secondly, the MRI is used to more accurately map the brain regions on the PET scan. We 'overlay' the PET scan image over the MRI image for each patient, in order to more accurately identify the precise boundaries of the brain regions that we are examining. Thirdly, the MRIs will help us determine whether people with OCD have different volumes or shapes of specific brain regions, as compared to controls.

NEWSLETTER: Who is the lead investigator on this study? What is his/her experience with CBT and neurological functioning?

SAXENA / MAIDMENT:

Sanjaya Saxena, M.D. is the Principal Investigator for this study. Dr. Saxena is the Director of the UCLA OCD Research Program and Associate Director of the UCLA Anxiety Disorders Program. He has been treating patients with OCD and doing research on brain imaging and treatment of OCD for the last 10 years. Dr. Saxena is an Associate Professor in the UCLA Department of Psychiatry and Biobehavioral Sciences and is a member of the OCF Scientific Advisory Board. He has won numerous grants and awards for his work in OCD and has published over 30 scientific articles and chapters.

NEWSLETTER: Who will be doing the intensive cognitive behavior therapy with the individuals who agree to be in this study? What are their backgrounds and experience?

SAXENA / MAIDMENT:

All participants will receive intensive CBT with Eda Gorbis, Ph.D., MFCC. Dr. Gorbis has been specializing in the intensive treatment of patients with OCD for about 10 years and has extensive experience in this area. She is an Assistant Clinical Professor in the UCLA Department of Psychiatry and a member of the OCF Scientific Advisory Board.

NEWSLETTER: If a reader is interested in participating in this study, whom should s/he contact and how?

SAXENA / MAIDMENT:

Contact Karron Maidment RN, M.A. at (310) 794-7305 and refer to the PET/CBT study.