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TITLE: A Psychophysiologic Study of Weakening Traumatic Combat Memories With Post-Reactivation Propranolol

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13. SUPPLEMENTARY NOTES

14. ABSTRACT

We have only run two subjects as of the end of the report period. There are no findings yet.

15. SUBJECT TERMS
Stress disorders, post-traumatic; reconsolidation; propranolol; imagery, psychotherapy; psychophysiology (all MeSH terms)

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INTRODUCTION:

The objective of this project is to test whether the β-adrenergic blocker propranolol, given following combat memory reactivation, results in a significantly greater weakening of traumatic memories than propranolol alone, supporting the proposition that this weakening is due to pharmacological blockade of memory reconsolidation, rather than non-specific actions of propranolol. We hypothesize that subjects who undergo script preparation for the combat event(s) that caused their PTSD, followed by (post-reactivation) propranolol, will show significantly smaller psychophysiologic responses during script-driven imagery testing a week later, indicative of weakening of the emotional memory, compared to those who receive (non-reactivation) propranolol two days prior to combat script preparation. Subjects will be randomly assigned to one of two groups: post-reactivation propranolol or non-reactivation propranolol. Subjects randomized to the non-reactivation propranolol group will receive a "test" dose of propranolol, whereas subjects randomized to the post-reactivation propranolol group will receive placebo. Two days later, all subjects will return for an approximate 15-30 minute "script preparation" session, at which time they will describe the details of their traumatic combat event(s). Subjects randomized to the post-reactivation propranolol group will then receive propranolol, whereas subjects randomized to the non-reactivation propranolol group will receive placebo. Scripts will be composed portraying each subject's personal combat events in their own words. Subjects will return to the psychophysiology laboratory one week and six months later. During each of these visits, heart rate, skin conductance, and corrugator electromyogram responses during will be recorded during script-driven imagery of personal combat events. The hypothesis predicts that at each time period, the physiologic responses of the post-reactivation propranolol group will be significantly smaller than those of the non-reactivation propranolol group.

BODY:

After a prolonged process that entailed obtaining IRB approval from the Massachusetts General Hospital, the Department of Veterans Affairs, and the USAMRMC Office of Research Protections (ORP), the PI finally received approval to begin recruiting subjects on March 10, 2008. i.e., 10.5 months after the project's start date. The PI wishes to emphasize that the lengthy time it took to gain this approval was entirely outside the PI's control. The PI directly communicated his opinion that this process had been unduly burdensome and time consuming to the ORP Director, Laura R. Brosch. Col. Brosch graciously concurred and indicated that in view of the experience with this project and others, steps were being taken to streamline the process.

Thus, there were only 1.67 months remaining in the 01 year to recruit subjects. The Statement of Work calls for a recruitment rate of approximately 1.67 subjects per month. According to this rate, the project should have been able to recruit 2.8 subjects in this remaining period. However, a bit of extra time was required to implement the recruitment procedures, which could not begin until final ORP approval had been obtained. In actuality, we succeeded in recruiting and successfully running 2 subjects through the procedure (except the long-term follow-up) during the 01 year.

KEY RESEARCH ACCOMPLISHMENTS:

In each instance, the procedure went as planned, and usable data were obtained in both subjects.

REPORTABLE OUTCOMES:

None yet

CONCLUSION:

None yet

REFERENCES

None

APPENDICES:

None

SUPPORTING DATA:

None