AD NUMBER
ADB249596

NEW LIMITATION CHANGE

TO
Approved for public release, distribution unlimited

FROM
Distribution authorized to U.S. Gov't. agencies only; Proprietary Info.; Oct 98. Other requests shall be referred to U.S. Army Medical Research and Materiel Command, 504 Scott St., Fort Detrick, MD 21702-5012.

AUTHORITY
USAMRMC ltr, 23 Aug 2001
GRANT NUMBER DAMD17-94-J-4365

TITLE: Incidence and Psychophysiology of Post-Traumatic Stress Disorder in Breast Cancer Victims and Witnesses

PRINCIPAL INVESTIGATOR: Roger K. Pitman, M.D.

CONTRACTING ORGANIZATION: Harvard College
Cambridge, Massachusetts 02138

REPORT DATE: October 1998

TYPE OF REPORT: Annual

PREPARED FOR: Commander
U.S. Army Medical Research and Materiel Command
Fort Detrick, Frederick, Maryland 21702-5012

DISTRIBUTION STATEMENT: Distribution authorized to U.S. Government agencies only (proprietary information, Oct 98). Other requests for this document shall be referred to U.S. Army Medical Research and Materiel Command, 504 Scott Street, Fort Detrick, Maryland 21702-5012.

The views, opinions and/or findings contained in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy or decision unless so designated by other documentation.
NOTICE

USING GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA INCLUDED IN THIS DOCUMENT FOR ANY PURPOSE OTHER THAN GOVERNMENT PROCUREMENT DOES NOT IN ANY WAY OBLIGATE THE U.S. GOVERNMENT. THE FACT THAT THE GOVERNMENT FORMULATED OR SUPPLIED THE DRAWINGS, SPECIFICATIONS, OR OTHER DATA DOES NOT LICENSE THE HOLDER OR ANY OTHER PERSON OR CORPORATION; OR CONVEY ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY RELATE TO THEM.

LIMITED RIGHTS LEGEND

Award Number: DAMD17-94-J-4365
Organization: Harvard College
Location of Limited Rights Data (Pages):

Those portions of the technical data contained in this report marked as limited rights data shall not, without the written permission of the above contractor, be (a) released or disclosed outside the government, (b) used by the Government for manufacture or, in the case of computer software documentation, for preparing the same or similar computer software, or (c) used by a party other than the Government, except that the Government may release or disclose technical data to persons outside the Government, or permit the use of technical data by such persons, if (i) such release, disclosure, or use is necessary for emergency repair or overhaul or (ii) is a release or disclosure of technical data (other than detailed manufacturing or process data) to, or use of such data by, a foreign government that is in the interest of the Government and is required for evaluational or informational purposes, provided in either case that such release, disclosure or use is made subject to a prohibition that the person to whom the data is released or disclosed may not further use, release or disclose such data, and the contractor or subcontractor or subcontractor asserting the restriction is notified of such release, disclosure or use. This legend, together with the indications of the portions of this data which are subject to such limitations, shall be included on any reproduction hereof which includes any part of the portions subject to such limitations.

THIS TECHNICAL REPORT HAS BEEN REVIEWED AND IS APPROVED FOR PUBLICATION.

[Signature]

[Date] 11/25/99
The objectives are a.) to evaluate the incidence of post-traumatic stress disorder (PTSD) in breast cancer patients and "witnesses" (i.e., significant others), and b.) to validate interview-based diagnoses by measuring physiologic responses during script-driven imagery of patients' and witnesses' personal experiences with breast cancer. The rates of lifetime PTSD observed for the breast patients (26%) and witnesses (24%) are concordant with the rates of PTSD from other traumatic events. However, the percentages of lifetime PTSD cases that are current among the patients (35%) and witnesses (33%) are lower than seen with other traumatic events. These data suggest that breast cancer can lead to PTSD in patients and witnesses, but these PTSD patients are more likely to recover from their PTSD than other traumatized persons. Preliminary statistical analyses support the hypothesis that physiologic responses during personal imagery of breast-cancer-related experiences are greater in breast cancer witnesses with PTSD than in breast cancer witnesses who never had PTSD. A one-year no-cost extension has been granted for further analyses of the data and the preparation of publications.
Opinions, interpretations, conclusions and recommendations are those of the author and are not necessarily endorsed by the U.S. Army.

Where copyrighted material is quoted, permission has been obtained to use such material.

Where material from documents designated for limited distribution is quoted, permission has been obtained to use the material.

Citations of commercial organizations and trade names in this report do not constitute an official Department of Army endorsement or approval of the products or services of these organizations.

In conducting research using animals, the investigator(s) adhered to the "Guide for the Care and Use of Laboratory Animals," prepared by the Committee on Care and use of Laboratory Animals of the Institute of Laboratory Resources, national Research Council (NIH Publication No. 85-23, Revised 1985).

For the protection of human subjects, the investigator(s) adhered to policies of applicable Federal Law 45 CFR 46.

In conducting research utilizing recombinant DNA technology, the investigator(s) adhered to current guidelines promulgated by the National Institutes of Health.

In the conduct of research utilizing recombinant DNA, the investigator(s) adhered to the NIH Guidelines for Research Involving Recombinant DNA Molecules.

In the conduct of research involving hazardous organisms, the investigator(s) adhered to the CDC-NIH Guide for Biosafety in Microbiological and Biomedical Laboratories.

Signature  Date
Principal Investigator: Roger K. Pitman, M.D.

Note: This report contains unpublished data which are not to be disseminated.

4. TABLE OF CONTENTS

INTRODUCTION 5
BODY OF REPORT 6
CONCLUSIONS 6
REFERENCES 7
Principal Investigator: Roger K. Pitman, M.D.

Note: This report contains unpublished data which are not to be disseminated

5. INTRODUCTION. While it is clear from research during the past two decades that extreme, acute stressful events such as military combat or violent rape can and do produce post-traumatic stress disorder (PTSD), the ability of less acute stressors to produce this disorder remains unclear. The stressful experiences of having breast cancer diagnosed and treated in oneself or one's loved one are cases in point. Such experiences are often accompanied by subjective reactions of fear, helplessness, and horror, which are elements in diagnostic criteria for PTSD set forth in the Diagnostic and Statistical Manual of Mental Disorder, fourth edition (DSM-IV; American Psychiatric Association, 1994). However, although a lesion on a mammogram may represent as much of a threat to a woman's survival as a rapist's knife at her throat, the threat posed by the lesion is less immediate and less palpable.

The objectives of this project are a.) to evaluate the incidence of PTSD in breast cancer patients and their "witnesses" (i.e., significant others), and b.) to attempt to validate interview-based diagnoses of PTSD by using a psychophysiological technique previously shown by the PI and colleagues (Orr & Pitman, 1993; Orr et al, 1993; Pitman et al, 1987, 1990; Shalev et al, 1993) to significantly discriminate research subjects with PTSD and without PTSD. In the present project, this is being done by measuring psychophysiological responses during script-driven imagery of the most stressful aspects of patients' and witnesses' personal experiences with breast cancer in themselves or their loved ones.

The project's hypotheses are: A.1.) the incidence of diagnosed PTSD in breast cancer patients is comparable to the incidence of PTSD resulting from other, previously studied, traumatic events; A.2.) the incidence of diagnosed PTSD in breast cancer witnesses is comparable to the incidence of PTSD resulting from other, previously studied, traumatic events; B.1.) physiologic responses during personal imagery of breast-cancer-related experiences are greater in breast cancer patients with PTSD than in breast cancer patients without PTSD; B.2) physiologic responses during personal imagery of breast-cancer-related experiences are greater in breast cancer witnesses with PTSD than in breast cancer witnesses without PTSD; C.1.) PTSD breast cancer patients' physiologic responses during personal imagery of their breast-cancer-related experiences are comparable to other, previously studied, PTSD subjects' physiologic responses during personal imagery of their traumatic experiences; and C.2). PTSD breast cancer witnesses' physiologic responses during personal imagery of their breast-cancer-related experiences are comparable to other, previously studied, PTSD subjects' physiologic responses during personal imagery of their traumatic experiences.
6. BODY OF REPORT. The project is proceeding as proposed, although recruitment has not fulfilled projections. Despite our strenuous efforts, we have not received the cooperation we had hoped from local physicians in referring suitable subject candidates to us from their busy office practices.

As of the end of the project's 04 year, we had conducted personal interviews on 76 breast cancer patients. From the psychodiagnostic standpoint, using the Clinician-Administered PTSD Scale (CAPS; Blake et al, 1995), 7 (9%) met DSM-IV criteria for current PTSD related to their breast cancer experiences; 13 (17%) patients met DSM-IV criteria for past but not current (i.e., lifetime) PTSD; 56 (74%) patients met DSM-IV criteria for neither current nor past (i.e., never) PTSD. As of the end of the project's 03 year, we had conducted personal interviews on 49 witnesses. Four (8%) met DSM-IV criteria for current PTSD related to their experiences of their significant others' breast cancer: 8 (16%) met DSM-IV criteria for past PTSD; 37 (76%) met criteria for neither current nor past PTSD.

As of the end of the project's 04 year, we had studied 59 breast cancer patients and 38 witnesses in the psychophysiology laboratory. We applied to these subjects' responses an a priori discriminant function derived from the physiologic responses of 46 PTSD subjects and 48 non-PTSD subjects who had experienced other traumatic events and previously been studied in the same procedure. Of the 5 patients diagnosed current PTSD, 2 (40%) were physiologic responders. Of the 12 patients diagnosed past PTSD, 2 (17%) were physiologic responders. Of the 42 patients diagnosed never PTSD, 9 (21%) were physiologic responders. Of the 1 witness diagnosed current PTSD, 0 (0%) was a physiologic responder. Of the 7 witnesses diagnosed past PTSD, 2 (12%) were physiologic responders. Of the 30 witnesses diagnosed never PTSD, 5 (17%) were physiologic responders.

Preliminary statistical comparisons of the physiologic responses of the current-PTSD vs. never-PTSD breast cancer patients during personal script-driven imagery of their breast cancer experiences yielded $F(4,42)=6.1$, $p<.001$. Univariate tests yielded: for heart rate response, $t(45)=3.7$, $p<.001$; for skin conductance response, $t(45)=4.1$, $p<.001$; for frontalis EMG response, $t(45)=1.3$, $p=.21$; for corrugator EMG response, $t(45)=4.2$, $p<.001$.

7. CONCLUSIONS. The rates of lifetime PTSD for the breast patients (26%) and witnesses (24%) are generally concordant with the rates of PTSD from other traumatic events. However, the percentages of lifetime PTSD cases that are current among the patients (35%) and witnesses (33%) are lower than seen with other
traumatic events. These data suggest that breast cancer can lead to PTSD in patients and witnesses, although these PTSD patients are more likely to recover from their PTSD than other traumatized persons who develop PTSD. The preliminary statistical analyses support hypothesis B.2, i.e., that physiologic responses during personal imagery of breast-cancer-related experiences are greater in breast cancer witnesses with PTSD than in breast cancer witnesses who never had PTSD.

A one-year no-cost extension has been granted for further analyses of the data and the preparation of publications.

8. REFERENCES


MEMORANDUM FOR Administrator, Defense Technical Information Center (DTIC-OCA), 8725 John J. Kingman Road, Fort Belvoir, VA 22060-6218

SUBJECT: Request Change in Distribution Statement

1. The U.S. Army Medical Research and Materiel Command has reexamined the need for the limitation assigned to the technical reports listed at enclosure. Request the limited distribution statement for these reports be changed to "Approved for public release; distribution unlimited." These reports should be released to the National Technical Information Service.

2. Point of contact for this request is Ms. Judy Pawlus at DSN 343-7322 or by e-mail at judy.pawlus@det.amedd.army.mil.

FOR THE COMMANDER:

Encl

PHYLIS M. RINEHART
Deputy Chief of Staff for Information Management
Reports to be Downgraded to Unlimited Distribution

ADB241560  ADB253628  ADB249654  ADB263448
ADB251657  ADB257757  ADB264967  ADB245021
ADB263525  ADB264736  ADB247697  ADB264544
ADB222448  ADB255427  ADB263453  ADB254454
ADB234468  ADB264757  ADB243646
ADB249596  ADB232924  ADB263428
ADB263270  ADB232927  ADB240500
ADB231841  ADB245382  ADB253090
ADB239007  ADB258158  ADB265236
ADB263737  ADB264506  ADB264610
ADB239263  ADB243027  ADB251613
ADB251995  ADB233334  ADB237451
ADB233106  ADB242926  ADB249671
ADB262619  ADB262637  ADB262475
ADB233111  ADB251649  ADB264579
ADB240497  ADB264549  ADB244768
ADB257618  ADB248354  ADB258553
ADB240496  ADB258768  ADB244278
ADB233747  ADB247842  ADB257305
ADB240160  ADB264611  ADB245442
ADB258646  ADB244931  ADB256780
ADB264626  ADB263444  ADB264797