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6:40 p.m. Eastern Time

Thursday, April 24, 2014

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Can a High Tech, Non Pharmacologic Approach Successfully Manage Cancer Treatment Side Effects?***An iPod Intervention to Control Hot Flashes in Advanced Prostate Cancer Patients on Hormone Therapy***

Philadelphia, PA - Androgen deprivation therapy (ADT) is considered first-line treatment for prostate cancer (PC) patients who are experiencing a rising PSA after definitive treatment for PC. Although effective in slowing the rise in PSA, ADT has side effects. These are extinction of libido and decreased bone mineral density, as well as metabolic changes including breast enlargement and vasomotor symptoms (VS; also known as hot flashes). VS are unexpected episodes of heat and flushing accompanied by extensive sweating and tachycardia. Approximately 75-80% of men undergoing ADT report VS, and for 50%, the symptoms are sufficiently severe to require treatment. More than half of the men who experience VS also report extreme levels of psychological distress, with sleep disturbance, fatigue and reduced quality of life (QOL). For these men, the impact of VS on QOL is often so serious that it disrupts patients' adherence to this life-prolonging medication. Despite its high prevalence and negative impact on QOL, the burden of VS among men treated with ADT has received little attention.

Previous studies indicated that PC patients have strong preferences for non-pharmacological approaches to control symptoms and side effects and complementary and alternative medicines (CAM) to reduce suffering, increase QOL and forestall recurrence of PC. Among menopausal women, the most promising non-pharmacological intervention for hot flashes is paced respiration (slow controlled diaphragmatic breathing at 6 breaths per minute).

With a grant from the Department of Defense of the US Army Medical Research and Materiel command Michael A, Diefenbach, PhD, Director of Behavioral Health of The Department of Urology at the Mount Sinai Health System together with his research team, is currently conducting a trial with the goal to ultimately enroll 60 patients being treated for prostate cancer with androgen deprivation therapy. Patients were recruited from the Icahn School of Medicine at Mount Sinai and the J Peters Veterans Affairs Hospital in the Bronx, NY. The purpose of this study was to determine the feasibility and efficacy of a paced breathing intervention. A total of 17 prostate cancer patients have been enrolled in the study. Study results will be presented at a poster session at 6:40 PM on Thursday, April 24 during the 2014 Society of Behavioral Medicine's Annual Meeting & Scientific Sessions in Philadelphia, PA.

Participants were instructed in the slow breathing technique and the use of the 2Breathe iPod based application. To aid men in slowing their breathing to the recommended frequency of 6 breaths/min, the iPod based software program guides the user with appropriate graphic

animations and music. The software will also collect data in real time about occurrence, duration, and severity of the hot flash. All study participants receive an iPod during the 9-week long study. Assessments take place at baseline and at 3-, 6-, and 9-week follow up. Breathe usage is extracted from each iPod.

Results are based on the 17 men who completed participation. Men are, on average, 63 years old, African American (82%), and had at least a high school education. Participants used the program an average of 3-4 times per day. Participants used the program to guide their breathing 88% of the time.

All participants evaluated the application as easy to use and very helpful for performing the breathing exercise. Three quarters of the participants used the program most of the time or always when experiencing a hot flash. Preliminary effectiveness result showed that the breathing intervention reduced hot flash occurrence by 35% over the study period.

“The side effects of androgen deprivation therapy on a man’s physical and emotional well being are so onerous for so many men, we are gratified that an intervention, preferred by men over drug therapy, has proven so acceptable and efficacious”, comments Dr. Diefenbach. “Paced respiration guided by use of an iPod allows men to stick with a regimen that may prevent disease progression and help restore a sense of normalcy.”

The presentation is entitled, “***Intervention to control Hot Flashes in Advanced Prostate Cancer Patients on Hormone.***” The other contributors, Simon J. Hall, MD, Phapichaya Chaoprang Herrera, MA; Jessica R. Lake, BS; Matt A. Hall, MA; Vinay Patel, BS; Glen W. McWilliams, MD¹; George A. Dawson, MD

The authors declare no financial or other conflicts of interest.

This project was supported by Grant PC101229 from the Department of Defense of the US Army Medical Research and Materiel Command to M.A. Diefenbach, Ph.D.

The Society of Behavioral Medicine (www.sbm.org) is a multidisciplinary organization of clinicians, educators, and scientists dedicated to promoting the study of the interactions of behavior with biology and the environment and the application of that knowledge to improve the health and wellbeing of individuals, families, communities and populations.

This study was presented during the 2014 Annual Meeting and Scientific Sessions of the Society of Behavioral Medicine (SBM) from April 20-24 in Philadelphia, PA. However, it does not reflect the policies or the opinion of the SBM.

About the Mount Sinai Health System

The Mount Sinai Health System is an integrated health system committed to providing distinguished care, conducting transformative research, and advancing biomedical education. Structured around seven member hospital campuses and a single medical school, the Health System has an extensive ambulatory network and a range of inpatient and outpatient services—

from community-based facilities to tertiary and quaternary care. The System includes approximately 6,600 primary and specialty care physicians, 12-minority-owned free-standing ambulatory surgery centers, over 45 ambulatory practices throughout the five boroughs of New York City, Westchester, and Long Island, as well as 31 affiliated community health centers. Physicians are affiliated with the Icahn School of Medicine at Mount Sinai, which is ranked among the top 20 medical schools both in National Institutes of Health funding and by U.S. News & World Report.

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