UT MD Anderson receives grant for study of acupuncture in cancer

March 22 2011

The University of Texas MD Anderson Cancer Center has been awarded a grant to study whether xerostomia, a debilitating side effect caused by head and neck cancer radiation treatment, can be prevented when acupuncture is part of a patient's treatment regimen.

The $2.7 million grant awarded by the National Cancer Institute (NCI) for the study of acupuncture in cancer received a perfect score from peer scientists evaluating grant proposals for NCI.

Lorenzo Cohen, Ph.D., professor in MD Anderson's Departments of General Oncology and Behavioral Science, received the funding. The research is in collaboration with MD Anderson's Sister Institution, Fudan University Shanghai Cancer Center, in Shanghai, China.

Cohen estimates that xerostomia, also known as dry mouth, affects more than 80 percent of head and neck cancer patients undergoing radiation. The side effect can be debilitating for a patient's quality of life, making it difficult to speak, eat, sleep and often results in taste changes.

"Saliva helps keep the oral cavity sterile and healthy," said Cohen, who also is the director of MD Anderson's Integrative Medicine Program. "It's the initial step in food digestion, meaning patients with xerostomia may not be getting appropriate nutritional absorption from foods if they don't have enough saliva to help the process," said Cohen.

Acupuncture, which derives from traditional Chinese medicine, has been

practiced around the world for thousands of years, and is used to relieve pain, treat infertility, and a host of other medical conditions. MD Anderson has offered acupuncture, when appropriate, to patients for pain or other cancer or treatment-related symptoms since 2004.

Numerous small studies suggest that acupuncture helps to treat radiation-induced xerostomia; however, none has examined its use to prevent the development of xerostomia.

"Previous studies, including research conducted at MD Anderson, examined acupuncture to treat xerostomia after it developed," explained Cohen. "Our new research is unique because we're incorporating acupuncture during radiation to see if we can prevent the condition in the first place and, should it develop, to try to diminish the severity."

The Phase III randomized clinical trial will enroll 300 head and neck cancer patients receiving radiation treatment at either Shanghai Cancer Center or MD Anderson. Those enrolled in Shanghai will have nasopharyngeal carcinoma, a malignancy much less common in the United States.

Prior to undergoing radiation, patients will be randomized to receive either acupuncture (needles inserted at appropriate, selected points), sham acupuncture (real and placebo needles inserted at inactive points), or standard care. Subjective and objective assessments of xerostomia will be collected prior to, during and at the completion of therapy, as well at three, six and 12 months post-radiation.

"Our goals are to determine if true acupuncture effectively prevents radiation-induced xerostomia, diminishes symptoms in those who have the condition, as well as determine if quality of life improves," said Cohen. "Importantly, we'll also try to understand the mechanisms behind acupuncture that help treat and prevent the condition. We'll look at

salivary constituents to see if anything specific changes the saliva - perhaps in terms of different proteins -- to see why patients' saliva flow increases due to acupuncture."

Provided by University of Texas M. D. Anderson Cancer Center