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*****UTHSCD, area hospitals start collaborative program for osteoporosis study and treatment

DALLAS--A city-wide collaborative effort by The University of Texas Health Science Center at Dallas and several area hospitals is under way to study and treat the effects of the debilitating bone disorder, osteoporosis.

Osteoporosis specialists from throughout the city have formed the Dallas Osteoporosis Management and Study Group, which is intended to improve patient care while assessing new osteoporosis treatments.

Initiator of the study group is Dr. Charles Y.C. Pak, chief of mineral metabolism at the health science center and director of the National Institutes of Health-sponsored General Clinical Research Center.

Through the study group, physicians will share the latest advances in osteoporosis care. Additionally, Pak will be directing studies on the effectiveness of new drugs for the prevention and/or treatment of osteoporosis through the group.

Funding for the osteoporosis drug research is being provided by NIH grants with the endorsement of the U.S. Food and Drug Administration.

Osteoporosis clinic directors working with Pak include Dr. Richard Berger of Medical City Dallas, Dr. Sydney Lou Bonnick of AMI Medical Arts Hospital, Dr. Stanley Cohen of St. Paul Medical Center, Dr. William Fears of Methodist Medical Center and Dr. Stanley Feld of Presbyterian Hospital of Dallas.

Included in the study group is a multidisciplinary team of physicians from the Osteoporosis Clinic at the UTHSCD James Aston Ambulatory Care Center, which is led by Pak and co-directed by Dr. Clare Edman of the health science center's Department of Obstetrics and Gynecology.

Each clinic participating in the research has an on-going program for the diagnosis and treatment of osteoporosis, and each has access to a sophisticated device to measure bone density in the spine called a "dual photon densitometer."

Osteoporosis, a gradual thinning of bone throughout the body, is common among post-menopausal women and afflicts an estimated 20 million persons in the United States. It is responsible for approximately 1.3 million bone fractures each year in persons aged 45 and older, according to an NIH consensus statement.

Two major studies of osteoporosis drugs--a slow-release form of sodium fluoride and the calcium supplement, calcium citrate--will be among the research conducted by the group. Both drugs, the subject of extensive research by Pak and collaborators at the health science center, were prepared by Mission Pharmacal Company of San Antonio.

Sodium fluoride, a compound used for years by dentists to strengthen teeth, is known for its ability to build bone. When administered in conjunction with calcium, it is capable of binding calcium to bone, thereby increasing bone mass in some people.

(more)

"But while there is ample evidence that sodium fluoride can make more bone and prevent osteoporosis, a high prevalence of side effects has precluded its wide usage," says Pak.

A slow-release form of sodium fluoride was developed to overcome gastrointestinal and rheumatic complications. "We want to test the hypothesis that slow-release sodium fluoride can safely make more bone and prevent further bone fractures in persons with established osteoporosis without causing harmful side effects," says Pak.

In the drug tests, sodium fluoride will be administered with a calcium supplement to gauge its effectiveness against treatment with calcium alone.

Calcium citrate, shown in clinical studies to be much better absorbed through the walls of the intestine than the widely used calcium supplement, calcium carbonate, will now be assessed for its effectiveness in preventing the development of osteoporosis.

"In this case, we want to test the hypothesis that if calcium supplements work to prevent bone loss, then calcium citrate works better because it is better absorbed, it is without the side effects of gas and bloating and it lowers the risk of crystallization of calcium salts in urine, which may lead to kidney stones," Pak says.

Patient volunteers will be enlisted to participate through the various clinics. The researchers are seeking groups of "early" and "late" post-menopausal women, including those who have recently gone through menopause and have not developed osteoporosis and those women who have established osteoporosis.

The health science center will make certain laboratory blood tests available to the hospitals that are not routinely available and will share evaluation methods with the group.

The joint effort with area hospitals is designed to benefit the patient, Pak says. Each month the study group will meet to share cases and to discuss various available treatment options, Pak says.

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