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Does a fracture liaison service program minimize recurrent fragility fractures in the elderly with osteoporotic vertebral compression fractures☆

DR. NICHOLAS J. ZYROMSKI (Indianapolis, Indiana): It will be helpful if you can define for us a little more precisely exactly what the fracture liaison service does. And as an extension of this question, how do you think that this intervention decreased the incidence of recurrent fractures in this patient population. And the second question, it would be also helpful for those of us who may not be quite as familiar with the concept of fragility fractures, if you could elaborate and define a little more precisely what is the distribution of these fractures among patients with osteoporosis.

DR. WASFIE: I am going to answer the second question first, because that's the easiest one. The fragility fracture is defined by any person 50 and above who had a minor injury and sustained fractures, not necessarily vertebral compression fracture but any other fracture. We excluded fracture of the fingers, the hand and the feet, as well as the skull. All other fractures are fragility fractures. As far as the fracture liaison service program, it's preventive measures is a system which take care of the patient's follow-up and care and follow-up on this over a period of two years. So we see the patient first after they presented to us with their fractures which is mostly, in this case now, is a vertebral compression fracture, but we will try in the future to expand to other fractures. Patient would be followed in the program every month for the first three months, and then extend that to three months and then six months for a total of 24 months. During the first visit, these tests, which they have not been done by their primary physician, we'll do them, which include the DEXA scan, the fracture scan, the vitamin D and calcium level. Very prolonged history and a questionnaire is on patient background to be obtained. And then according to this, we will make plan for the patients.

First, is environmental changes, and this is include the home environment, which proper lighting, proper carpeting, it has to be secure, rails in the house, stay in one level, and avoiding steps. Then we go to exercise and all the patients will go to a balance weight bearing exercise, muscle strengthening, and if they are overweight, to reduce weight. Then we go with a balanced diet, and reducing alcohol. We recommend to stop the water use, reduce coffee drinking and avoid steroid use. We supplement patient with vitamin D and calcium, and we review those on a regular basis, and that includes the primary physician also being involved with the process. Medications, while it has been advised by the American Society of Clinical Endocrinologists that to use disulfonate or Prolia to help those patients who have possible 10-year fragility risk fracture above 20%. We tend to use these measures, although they're not very correct as you probably know. The DEXA scan, that only measures the cortical surface of the long bone. It does not measure the trabeculae, which is actually the more accurate one, to tell you if a patient had severe osteoporosis. There is a test for that, although that's very expensive and it's not widely used, and that's why everybody using the DEXA scan. However, using medication, including Esogene and Calcitonin and so forth are all done on an individual basis. After 24 months, the patients follow-up with their primary physician or continue to see us on a regular basis just to make sure they maintain their health.

DR. CHRISTOPHER R. McHENRY (Cleveland, Ohio): I had just a quick question and clarification. So osteoporosis is really defined by a T-score of minus 2.5 or less. And your mean bone mineral density scores were certainly not – were greater than that. So it appears to me that a large or a significant proportion of your patients here really didn't have osteoporosis. And can you clarify that these really truly are not all osteoporotic fractures.

DR. WASFIE: I think I touched on this briefly, because the DEXA scan as well as the other tests, they do not actually clearly define osteoporosis, per se. That's why kind of it's now more of an agreement between osteoporosis society as well as clinical endocrinologist, is that you base this now on a clinical of a patient 50 and above with a minor injury, fall, which is the most common. You had a very minimal injury which does not explain the reason why they have fractured femur or fractured pelvis and fractured vertebra, which are the most common three fragility osteoporotic fractures. The perfect one, or at least so far, we know is the measurement of the trabeculae, which called bone score – bone trabecular score, which is very expensive and is not widely used, but that will measure the actual – the osteoclast and osteoblast and within the long bone shaft, not the cortical, which is the DEXA scan, which usually measure.

☆ (Presentation given by Tarik Wasfie, M.D.)

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