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Post-Polio Clinics Directors Network
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Disclaimer: The following are unofficial notes which have not been read by or approved by the speaker.

Points of Discussion:

- Actual definition of Osteoporosis is when bones become weak and brittle and prone to fracture. Most common fracture sites, in order of severity, are hip, spine and wrist.
- Healthy bone looks like a sponge. The osteoporotic bone has a spider web configuration.
- Bone is the reservoir for calcium and phosphorus. When the bloodstream is low in calcium and phosphorus, it is taken from the bone.
- People gain bone density before the age of 35.
- It is critical to know what your childhood was like regarding exercise and calcium intake.
- Bone loss is accelerated in women through the menopausal years.
- Women start out with lower bone mass than men, smaller frames.
- Some unchangeable risk factors for osteoporosis are: race, heredity, light body frame, under the weight of 127 lbs. and age.
- Some of the changeable factors are: adequate calcium and vitamin D, exercise, lifestyle choices such as not smoking and avoiding high protein diets.
- Statistics for the first 12 months as a consequence of admission to a hospital for hip fracture are: Twenty percent die within the first six months; 50% walk using assistance; 25% require long-term care.
- Gold standard for diagnosing osteoporosis is the DEXA. Normal is anything above -1. Osteopenia is between -1 and -2.5 standard deviation. Full-blown osteoporosis is less than -2.5. Severe osteoporosis is -2.5 with a fracture (WHO and National Osteoporosis Foundation).
- Two tools used in clinics are height measurements and ultrasound. Loss of 1-1/2" would indicate that the patient may need further screening.
- Our Neuroscience Specialty Clinics use an Osteoporosis Evaluation Score Sheet. There are six questions relative to age, race, history of rheumatoid arthritis, past history of fracture, use of hormone replacement therapy (which helps against osteoporosis), and

weight. Depending on the score, a patient could be evaluated by use of a PIXI or ultrasound. This score sheet is not a substitute for clinical judgment.

- To prevent falls for post-polio patients, assess vision, balance, getting rid of throw rugs, toys and low-lying furniture. Also look at calcium intake. Patients should get 1,000-1,500 mg of calcium a day in split doses, 500 mg at a time; taking into account food (milk, dairy products, broccoli, soy) and calcium-rich juices.
 - New recommendations: Vitamin D intake of 800-1,000 mg/day and 15-25 minutes of direct sunlight.
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Question: Is there validity of the screening tool (DEXA) used in able-bodied populations and using it in a disabled population? It seems there is a need to really individualize, for example, when someone's DEXA on the involved extremity puts them in a category of osteoporosis. The real issue is not bone density but fracture risk. An able-bodied person might be at a greater risk for a fall than a disabled person.

You have to look at the fact that they don't lose any more bone in the future. You may want to look now and then check again in a year to make sure they are not losing any more bone.

Question: Is there any research that shows that all the usual treatment for ordinary persons with osteoporosis will help polio affected persons?

No, not aware of any research. Dr. Plank would go back to basics -- is patient getting enough calcium, can bone growth be stimulated, exercising the affected limb?

You have to look at the osteoporosis compared to a young, healthy male. If you have someone who is able, fit and working on balance, that affects risk of falls more than bone density at times.

We do know that someone with significant post-polio who has osteopenia in the involved extremity, has a high risk of fracture in that extremity.

Osteoporosis is greatly underestimated and undiagnosed. It will continue to get worse as the population ages.

Question: What are they looking at with the DEXA screening?

Lower spine, hip and wrist. We look at the beginning of our HOPE program and two years later. If a patient is on medication, they could get a DEXA every year to make sure their bone density is increasing.

Question: I wonder whether looking at a population of polio people if the bone density in the other extremity would be useful to give a history of their activity level, calcium intake when young, density of other bones might be a stronger factor in predicting fracture rates?

In post-polio patients, it would be wise to get both affected and unaffected limbs.

Not sure if insurance company would consider looking at both limbs over the years. That would yield great information.

Comment: Taking a little more practical approach, when it is evident the patient has osteoporosis, regardless of who pays, our clinic tries to avoid duplication and expense. In the majority of cases the patient is on medication and there is no need to repeat the test.

For patients who have not been diagnosed or treated for osteoporosis, we need to let the PCP know that if intervention is going to be instituted, the PCP needs to follow through on this.

Question: How often do you see osteoporosis in male post-polio patients?

It is considerably less but still seen especially in those who took steroids, family history, smoking, etc., with increased risk factors.

Comment: Someone with a very weak extremity and when it was at an early age, we see significant osteoporosis in those individuals. We'll see most of those folks who have not been treated for osteoporosis and they have weak bones in the extremity. We know that person will be at high risk for fractures and how can we modify that risk as we did in the able-bodied population?

Comment: If you analyze falls, it is a combination of poor judgment and failure to pay attention to a person's environment. Putting the responsibility on the individual is a good ploy in eliminating falls.

Dr. Plank will send the Clinics Directors a survey form regarding osteoporosis – levels of assessments, importance in their practice and follow-up for patients at risk.