More Research About Bisphosphonate Treatment in Polio Survivors

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About the time I was writing "Calcium, Vitamin D and Bisphosphonates. Oh My!" (*Post-Polio Health,* Vol. 27, No. 3) in response to the many questions PHI had received, another article of note was published.

Response of Postpoliomyelitis Patients to Bisphosphonate Treatment by a group of researchers from McGill University, Montreal, Quebec, Canada, was published in *PM&R (Volume 2, Issue 12*, Pages 1094-1103), the official scientific journal of the American Academy of Physical Medicine and Rehabilitation.

The design of the study, funded in part by the Polio Quebec Association, was a retrospective chart review. The review included 144 post-polio and 112 non-post-polio patients who had at least two bone mineral density (BMD) assessments on record.

The purpose was to compare the rate of change of BMD at the hip in post-polio patients treated with bisphosphonates to those post-polio patients who did not receive treatment, and to compare with non-polio patients treated with bisphosphonates. They also wanted to compare the fracture rate in post-polio people before and after treatment. For this, they used the charts of 32 post-polio patients who had been treated with bisphosphonates and had a history of a fracture.

Bisphosphonates Raise BMD Levels

After statistical analysis, the study concluded that the 54 post-polio patients treated with bisphosphonates had a greater rate of change (significant increase) in BMD than the 90 patients not receiving this treatment. The effect of bisphosphonates for post-polio people was similar to that observed in non-polio people. When looking at the 32 people with a history of fractures, evidence indicated that treated patients had a lower risk of fracture.

Bisphosphonates include: pamidronate (Aredia®) and zoledronic acid (Zometa®) given by intravenous infusion, and alendronate (Fosamax®), ibandronate (Boniva®) and risedronate (Actonel®) given in tablet form.

One of the researchers, Daria A. Trojan, MD, states, "Bisphosphonates are one of several treatment options for osteoporosis and fall/fracture prevention. Other treatments can include calcium and Vitamin D supplementation as necessary, safety and fall prevention strategies with muscle strengthening and balance training when possible, use of assistive devices and home modifications.

"Although the use of bisphosphonates appears to be beneficial in post-polio patients, a definitive recommendation regarding the use of these medications in post-polio patients cannot be made based on this study. However, the results are encouraging, and provide support for future clinical trials in the area."

FDA Opinion

A quick check of the U.S. Food and Drug Administration (FDA) website tells us that it continues to review data from published studies, and, because there have been conflicting findings, issued the following statement on July 21, 2011:

"At this time, FDA believes that the benefits of oral bisphosphonate drugs in reducing the risk of serious fractures in people with osteoporosis continue to outweigh their potential risks …" It "has not concluded that patients taking oral bisphosphonate drugs have an increased risk of esophageal cancer. It is also important to note that esophageal cancer is rare, especially in women."

In October of 2010, the agency described "… the risk of atypical fractures of the thigh, known as subtrochanteric and diaphyseal femur fractures, in patients who take bisphosphonates for osteoporosis." Information was added to the *Warnings and Precautions* section of the labels of all bisphosphonate drugs approved for the prevention or treatment of osteoporosis.

They continue, "These fractures are very uncommon and appear to account for less than 1 percent of all hip and femur fractures overall. Although it is not clear

continued, page 10

Morton Freilicher and his wife Yseult.

Honoring Morton Freilicher on His 80th Birthday

The Edouard Foundation recently acknowledged the exemplary life of Morton Freilicher by donating $5,000 in honor of his 80th birthday to support the activities of Post-Polio Health International.

Born in Brooklyn, New York, Freilicher received his law degree from Columbia Law School as a Harlan Fiske Stone scholar eight years after he contracted polio at age 17, which left him with total paralysis in his right arm and partial paralysis in his left arm, neck and diaphragm.

During his professional career, specializing in trusts and estates, he was a partner in the New York-based law firm of Phillips Nizer LLP. He authored a book on estate planning and taught as an adjunct professor at Fordham Law School.

After retirement, Freilicher donated his services to the work of the Edouard Foundation, which supports disaster relief, medical care and research and aid to the impoverished throughout the world.

Due to the effects of polio, he has used nighttime ventilation for more than 25 years. He says he credits his continuing survival to "staying active, exercising my usable muscles, benefiting from the nighttime ventilator, a wonderfully loyal wife and plain old-fashioned good luck!" ▲

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continued from page 3

if bisphosphonates are the cause, these unusual femur fractures have been predominantly reported in patients taking bisphosphonates."

And, lastly they report that "the optimal duration of bisphosphonate use for osteoporosis is unknown." Current data support fracture reduction efficacy through at least three years of treatment and, in some cases, through five years. Because of this data, many physicians suggest a "drug holiday."

Another unknown is how often should women be re-screened using BMD. A study, *Bone-density testing interval and transition to osteoporosis in older women,* (ML Gourlay, et. al.) published in the January 19, 2012, issue of *The New England Journal of Medicine* suggests that women with a very good baseline bone density at 67 may not need screening again for 5 to15 years.

What to Do?

So, how can an individual polio survivor decide what decision to make about bisphosphonate use?

Experts suggest that we individually educate ourselves and work with a trusted primary care physician. As we concluded in the first article, decisions can be guided by your individual fall risk and individual fracture risk, your response to previous therapies and your remaining life expectancy. ▲